Module Code: INF6000
Registration Number 130118028
Family Name Suzanna
First Name Hall

Assessment Word Count 14,620
Coursework submitted after the maximum period will receive zero marks. Your assignment has a word count limit. A deduction of 3 marks will be applied for coursework that is 5% or more above or below the word count as specified above or that does not state the word count.

Ethics documentation is included in the Appendix if your dissertation has been judged to be Low Risk or High Risk. ✓ (Please tick the box if you have included the documentation)
A deduction of 3 marks will be applied for a dissertation if the required ethics documentation is not included in the appendix. The deduction procedures are detailed in the INF6000 Module Outline and Dissertation Handbook (for postgraduates) or the INF315 Module Outline and Dissertation Handbook (for undergraduates)
Open Access and Civil Disobedience: 
What is the relationship between hacktivism and the OA Movement?

A study submitted in partial fulfillment 
of the requirements for the degree of 
MA Librarinship

at

THE UNIVERSITY OF SHEFFIELD

by

Suzanna Hall

September 2015
Structured Abstract

Background. The literature reveals a tension between the current state of open access, its radical roots, and the rise of this new hacker politics and radical activism which is gaining momentum within scholarly communications.

Aims. This study aimed to examine the history of, and current opinions of, piratical open access, and whether this sits easily as a form of hacktivism that would be acceptable to the wider academic community.

Methods. Data from the internet, as representative of public opinion, was sought via the Open Access Tracking Project (OATP), a web-based link aggregator. This was analysed for content and opinions expressed. Building from this data and that uncovered in the literature review, five interview questions were devised. Potential participants were sought based on professional expertise, and whether they had previously worked with e-resources, institutional repositories or with open access more generally, and therefore have some direct personal knowledge. 10 individuals responded, and the interviews were carried out via phone and email. Using the philosophy of Michel Foucault as a theoretical framework, the phenomena and opinions were analysed.

Results. Most data sourced from the OATP expressed positive opinions of a form of electronic civil disobedience. However, there was notable division between the information professionals who responded. Around half viewed the hacking of scholarly content highly disfavourably, in line with music and film piracy, while the other half viewed it as an acceptable protest at unfair publishing practices or way of drawing attention to the problems experienced by librarians in this area.

Conclusions. It is concluded that hacktivism in this area draws attention to the problems with publishing practices, but is not likely to replace open access, as the illegal nature of the activity makes the hacked and distributed content difficult to
locate and therefore access. Pursuing legal means of scholarly sharing, and less restrictive licence and copyright agreements, without putting more power in the hands of the publishers, would help alleviate the current problems until viable long-term solutions can be found.
# Table of Contents

Introduction ............................................................................................................... 6  
Literature Review ......................................................................................................... 10  
Methodology .................................................................................................................. 14  
Background and Context ................................................................................................. 18  
  Part I: A Subversive Proposal - The Radical History of Open Access ..................... 18  
  Part II: Steal This Research Paper - Aaron Swartz, Biblioleaks and the rise of scholarly hacking ........................................................................................................ 24  
Results ............................................................................................................................ 34  
Discussion ....................................................................................................................... 42  
Conclusion and Recommendations ............................................................................... 52  
References ....................................................................................................................... 56  
Appendix A: Interview Questions .................................................................................. 66  
Appendix B: Ethics Documentation ............................................................................... 68
Introduction

“Information is power. But like all power, there are those who want to keep it for themselves. The world's entire scientific and cultural heritage, published over centuries in books and journals, is increasingly being digitized and locked up by a handful of private corporations.”

(Swartz, 2008)

Modern academic publishing is entering a state of change, forced into reform by its users. The digital age brought new opportunities for scholarly distribution to the rapidly-expanding industry, but also new problems, as the barriers to knowledge became more apparent when they were technological. In 2008, the activist Aaron Swartz penned the Guerrilla Open Access Manifesto, a searing indictment of the publishing practices of academic journals. In his opening sentence, Swartz lays out the central concern with modern academic publishing; it is locked up and it is expensive, putting it beyond the reach of most. For over a decade, open access activists have been battering at the doors, encouraging scholars and publishers alike to change their practices and funding models to make research freely available to all who need it. However another, less legal, form of activism is gaining traction within the academic community - a form of ‘hacktivism’, or piratical open access.

Traditionally, distribution of scholarly research was done by academic journals, which charged libraries subscriptions to receive the printed issues in a model not
dissimilar from the magazine industry. However, at the beginning of the digital age, journals began to move to an online format, and put paywalls up to block the content from anyone who did not have a subscription. Although journal prices were expected to decrease with the shift to a digital format, as electronic publishing is cheaper than print, the opposite happened; subscriptions to many titles have risen year on year, stretching the budget of many libraries. In addition, if libraries, no longer able to afford the costs, cancel their subscriptions they often lose all access to back issues of journals published during years that they had paid for access; such are the conditions imposed by the prohibitive licence agreements. With access to this content becoming ever more restrictive, and journal prices rising meteorically, beyond the budgets of many leading universities, those institutions, and the scholars within them, are beginning to revolt. The value that journals add to scholarly communications, they argue, is minimal. Academics write and peer-review the content unpaid; that the journal publishers have edited and distributed it is not enough, in the digital age, to merit them holding exclusive rights to the articles.

One response to this problem has been the Open Access Movement. The term “open access” was coined by the Budapest Open Access Initiative in 2002, who defined it as the “free and unrestricted online availability” of academic research (Budapest Open Access Initiative, 2002). The aim of the movement is to ensure that all academic research output is made available to be freely accessed online. To achieve this, two models have been proposed: Green, where authors self-archive their papers, and Gold, where journals make articles free to access at the time of publication and secure funding through other means. While this has been widely accepted amongst the academic community, and has been successful in making much journal content available for free online, there have been some issues and setbacks. There have been accusations against certain Gold OA publishers, who charge authors to publish, of predatory behaviour; they have been accused of
accepting articles with no academic merit, in order to make a profit. Additionally, some journal publishers have responded to authors self-archiving their papers by making their publishing policies more restrictive by enforcing embargo periods, often of over a year, before a paper can be archived, or sometimes prohibiting such activity altogether. Some journal articles may never be released from behind their paywalls, published before the push for open access started, under prohibitive publishing agreements. This means that the knowledge contained within these articles may forever be inaccessible to the public.

However, another sort of resistance to closed-access publishing has been emerging in recent years. Individual acts of resistance have been occurring online; activists, academics and students have been using their login credentials, or simply hacking into, the databases that hold these journal articles, and distributing their downloads on the internet. There have been notable incidences of mass-downloading from academic databases, including Aaron Swartz’s highly-publicised download of 4.8 million articles from JSTOR, and several large uploads of science literature to the academic torrent-sharing service LibGen by an unknown contributor (Cabanac, 2015), as well as smaller-scale but frequent and sustained file-sharing between researchers on social media platforms. This is most often a breach of licence agreements put in place by publishers, but many contend that this is an act of civil disobedience that makes important academic content available to the general public. These ‘hacktivists’ do not profit from their actions, but journal publishers may lose financial revenue if their content is made available for free on the internet. Rightly or wrongly, copyrighted academic articles are leaking out from behind their paywalls more and more, and being accessed for free on the internet. Millions of articles exist behind paywalls, and can only be accessed by those with subscriptions. Could the hacking of closed-access content therefore further the circulation of scholarly communications?
This new phenomena of illegally distributing scholarly content online shares some principles and aims with those of the Open Access Movement. Both believe in broadening access to academic content, and have issues with current academic publishing models, and there is some overlap between the proponents of both methods of furthering access to academic content. However, this kind of activity has also proved controversial amongst advocates of open access, and ‘hacktivism’, a portmanteau word combining hacking and activism, is a controversial term. It is usually defined as a form of electronic civil disobedience, and has been described as the “peaceful breaking of unjust laws” (Manion and Goodrun, 2000), a phrase Aarson Swartz would later echo in his Guerrilla Open Access Manifesto. Though the term was created to describe acts of hacking to promote non-violent social change, it has become associated with cyber-terrorism and crime. In terms of academic publishing, hacktivism has been connected to copyright-theft and violation of intellectual property laws, and there have been questions around both the legality and ethicality of such practices. Although hacktivism and open access have similar goals and aims, the relationship and intersection between the two movements is unstable and uncertain.

This research aims to examine the dyadic relationship between hacktivism and the Open Access Movement, and explore certain questions about the interplay of these two separate pushes for the freedom of academic research. Particularly, this research seeks to explore the opinions of information professionals and those concerned with the access to content, to discover whether this form of activism is ever acceptable or permissible, and if it could help further the aims of the Open Access Movement.
Literature Review

As the hacking and sharing of scholarly content is a relatively new phenomena, the literature examining the subject in detail is relatively sparse. However, following the high-profile case of Aaron Swartz, new attention came to this area. Swartz's actions, although not strictly speaking a form of hacking under its purest legal definition, have prompted questions about the legality and morality of further acts of hacktivism related to scholarly content, especially when such content has fallen into the public domain and is therefore not covered by copyright restrictions. Since Swartz's arrest, and events that followed on from this, there has been considerable renewed interest in the freedom of access to scholarly content, with many commentators questioning the ethics of traditional, closed-access journal publishing and examining alternatives, one of which is Open Access, and another is the illegal ‘liberation’ of articles published in closed-access journals.

Viewing Swartz's actions from an academic perspective, observers have expressed varied opinions on these actions, with some supportive of his aims and his motives, while others have been more openly critical of his actions and methods.

In support, Gould (2014), summarising Swartz’s case after his death, considers his case an act of civil disobedience in line with the philosophy of Hannah Ardent, who argued for the right to dissent and rebellion against power and authority. Swartz’s actions were, in this view, an act that attempted to democratise access to academic knowledge. The internet age, changing how access to information is perceived, is cited as the impetus for this kind of hacktivism; restrictive publishing policies, in this
context, have been criticised, with these barriers to access being compared to the Berlin Wall (Balaram, 2013). Atkinson (2014) stated that Swartz did legal wrong for public good. Some commentators agree with Swartz insofar as that public domain documents should be made more freely available (Sims, 2011), and that Swartz’s case highlights how commercial forces within academia restrict the freedom of information (Reichman, et al, 2014) and control and monitor users (Rubel and Zhang, 2015). Others go so far as to argue that Swartz’s actions help advance the open access movement through disruptive activism (Hockenberry, 2013).

Meanwhile, other have been more critical of Swartz’s methods, although supportive of his underlying goals. Some have been quick to distinguish Swartz’s goals from piracy; his target was academic literature, and no other media (Glancy, 2013). Regardless of this, shortly after Swartz’s arrest, online activist Carl Malamud was critical of Swartz’s “back door” methods, concerned it was an ineffective form of activism and was also potentially dangerous (Schwartz, 2011), although Malamud himself is involved with attempting to release public domain court documents that the US government holds behind paywalls through similarly subversive means. Larry Lessig, while stating that he thought the punishment that Swartz faced was not appropriate to his crimes, does continue to say that he thinks Swartz crossed an ethical line (Wendy, 2011).

Additional instances of scholarly hacking, frequently happening in protest of Swartz’s treatment, provided new insights into the phenomena. Swartz’s death saw an outpouring of academics and activists sharing articles online via social media. While much of the literature on this subject feels this was a fitting tribute to Swartz, that generated many thousands of links to content (Acker, et al., 2013; Cutler, 2013) it has been noted that the sharing of PDFs, a filetype that Swartz was critical of, raises questions of the “complexity of what technologically ‘open’ means” (Kelly, 2013). Dewey (2013) also criticised this action as a form of “slacktivism”, as most of
the academics ‘liberating” their content had already published it in closed-access journals.

Following on from this, there have been various attempts to download copyrighted content from the publisher’s sites, and distribute it online, in a variety of formats, from PDFs to torrents. Dunn, et al (2014) describes a hypothetical ‘biblioleaks’ scenario, in which a large volume of academic literature is leaked onto the open web, and can be accessed by anyone online through an illegal file-sharing platform along the lines of Wikileaks. They believed that such a leak is be inevitable; even though OA publishing is growing rapidly, the motivations for a mass-leak of closed-access academic literature still remain, as the body of inaccessible, scholarly work is not just historic, and continues to grow as subscription-model publishers continue to operate. The author writes that this scenario would harm traditional publishers much more than OA ones. There is some evidence that this imagined scenario may already be a reality. Cabanac (2015) believes that ‘biblioleaks’ is already happening, and that a significant portion of scientific literature has been crowdsourced using the #icanhazpdf tag on Twitter and other social media platforms, such as Reddit Scholar, and uploaded to the academic file-sharing ‘shadow libraries’ LibGen and SciHub. While most authors acknowledge that this use of social media to crowd-source academic content and make it available to those who do not have subscription access is ethically and legally dubious, Gardener and Gardener (2015) recognise that it is an efficient way to access scholarly material which is quicker and less restrictive than interlibrary loans, and Mounce (2012) promotes the use of the tag on this basis. However, they also accept that this may have a negative impact on libraries, particularly usage figures. Bond (2013) takes this point further, believing that crowd-sourcing scholarly content actively harms academic libraries, as it means that libraries are unaware of what their users are requesting and therefore hampers
collection development, and a decline in legitimate journal usage could lead to a reduction of staff.

Overall, the consideration of open access piracy found in the literature focuses not on any legal implications, but on whether these actions are likely to change matters. Harvie, et al. (2013) compare this academic piracy to similar activity that the music industry combatted a few years ago; the authors write that home-taping and downloading from Napster did not kill the music industry, but instead drove costs down for consumers, and believe that article file-sharing could do the same for academia. However, although not openly supportive of illegal file-sharing, Beverungen, et al, (2013) note that this activity is unlikely to effect any real change as, when compared to the illegal downloading associated with the music industry, the academic version of this has been a relatively small-scale crusade, possibly due to the smaller academic community and the high-personal costs associated with such activity, that Aaron Swartz faced. To effect any change, this kind of civil disobedience must be pervasive and happen en masse; with this in mind, isolated acts of protest may not have much measurable impact on the publishing industry.

However, Peter Suber, a leading voice in the OA movement, has been more forthrightly critical of such actions in his personal blog, stating that “OA is not Napster for science. It's about lawful sharing, not sharing in disregard of law,” and that making an article open access should be a voluntary action on the part of the author. (Suber, 2013). He disapproves of vigilante or piratical actions in the name of open access, but offers no solutions if the copyright holders do not wish to make their content freely available.
Methodology

To assess the relationship between open access and hacktivism, this research set about exploring public and professional opinions of piratical open access, in contrast to opinions of gold and green open access or other methods of securing access to scholarly content.

To explore these questions, it was necessary to gauge the opinions and personal awareness of information professionals currently working in the area, alongside those of the wider online community. Librarians have been long-term supporters of open access and key advocates within the movement. As academic libraries and librarians are the most affected by the spiralling journal subscription costs, it is in their interests to ensure free and stable access to this content. However, the reactions from many quarters, as expressed in the literature review, indicate a preference for observing current laws and licensing agreements, or finding legal ways to challenge them, as opposed to violating them. Librarians are often required to draw the line between gatekeeping and sharing, so their opinions may help map out the future of scholarly hacking and its relevance to academic institutions.

There were two stages to gathering the data for this project. The first involved a thematic analysis of web and social media commentary of the topic. The data-gathering for this examination began by identifying ways to track public opinion through social media. This content was searched for using the Open Access Tracking Project (http://tagteam.harvard.edu/hubs/oatp), which is a project led by Harvard University to monitor news and comments about OA and associated issues and aggregates them on a searchable platform. A number of searches were conducted using the search interface, for various keywords associated with hacktivist action identified from the literature review: ‘hacktivism’, ‘piracy’, ‘vigilante’,
The first 500 links found were collected and 50 were selected at random using a random number generator, to ensure that a representative and unbiased sample was used for analysis. The links were then analysed and then evaluated based on a textual analysis of the content, as to whether they expressed positive or negative opinions of this kind of action.

An inductive model of thematic analysis was used to identify patterns and reoccurrences within the data corpus. As this research is an exploration of trends and opinions, it was necessary to ensure that any themes that emerged from this analysis were data-driven, and not preconceived. Further from this, themes were contextualised in reference to the literature, helping identify additional background and meaning for these trends. Building from themes identified from this data gathering, semi-structured interviews with information professionals were conducted.

Interviewees were identified based on their professional experience, and those most associated with open access, institutional repositories or access to e-resources were targeted specifically. Individuals were approached directly via their institutions, and participants were sought via the JISC mailing lists. This elicited eleven responses, from individuals at institutions across the UK and one respondent based overseas. These responses were mostly provided via email, but the interview was also conducted over the phone. While this means that the interview data is of a varying standard and format, due to the different mediums utilised, in practice it was found that some participants were as candid when expressing themselves via email as others were reticent when discussing the questions over the phone. Nevertheless, attempts were made to normalise this data, by grouping it under the question headings posed via email. Five open-ended questions were asked, designed to prompt discussion rather than specific responses (see Appendix A). The
questions asked were focused on their personal opinions in order to encourage a more individual and honest response. Because this study asked individuals to express their personally held opinions, and because of the potentially inflammatory nature of the topic, steps were taken to ensure all interview data was anonymised. Participants were numbered randomly, and all identifying information, including name, gender, age, location, job title and institution, was removed from the data. Generally, individuals were paraphrased in the results, to prevent them from being identifiable, but a small amount of direct quotation was used where appropriate. Each question was designed based on themes that had been identified in the literature and the first stage of data gathering, and ranged from a very general question about open access, that all respondents should have some knowledge of, and a question about how they would personally approach a described situation, to more specific questions about their opinions of closed-access publishing and acts of hacktivism.

Therefore, the data corpus for this research was comprised of interviews with information professionals and a thematic study of relevant online media (both news and social) on the topic. This project was assessed as low risk, as informed consent was sought from all interview participants and anonymity was assured. Ethics guidelines surrounding the use of social media in research were observed, and anything of a potentially sensitive nature expressed on social media was anonymised. The rationale behind this two-fold process is that the OATP’s focus is not specifically on hacktivism and, although may tangentially cover this phenomena, it primarily tracks mentions of open access in news media and web log posts. While this project presents the broadest possible view of the reach and impact of open access, it is difficult to track the piratical aspect of OA through it. It was necessary therefore to seek other opinions on the subject.
Building from the literature and identifying reoccurring themes, the writings of French philosopher Michel Foucault were utilised to provide a theoretical framework for approaching an analysis. The literature reflects a tension between hacker politics, open access and the current state of academic publishing. Foucault who, having written extensively on the relationship between power and knowledge and the role of the institution in the formation of empirical truth, provides a good theoretical lens through which to view the relationship between hacktivism, open access and traditional publishing models. For Foucault, all information that society produced must be carefully organised and he believes that these organisational systems are what produce objective truth and knowledge (1972; 1977a); however, Foucault was also highly critical of institutionalised knowledge. Foucault’s theories provide a way of considering the power structures at work in this relationship, and a method of assessing the nature of this relationship and its interactions. Other writers have applied Foucault’s theories to librarianship and library practices, most notably by Gary and Marie Radford (1992; 1997; 2005). Extrapolating from their work, I apply this perspective to academic publishing, the idea of the journal and to scholarly hacktivism more generally.

This information was be used to create an overview of public and professional perspectives of acts of hacking and disruptive protest when it relates to scholarly content, and provide a platform for some interpretation of this phenomena and its relation to current thinking about access to scholarly content.
Background and Context

“Information wants to be free. Information also wants to be expensive…that
tension will not go away.”

(Brand, 1987)

Part I: A Subversive Proposal - The Radical History of Open Access

Today, open access forms a part of the remit of most academic institutions. The majority of academic libraries have teams of open access staff, providing researchers with guidance and managing institutional repositories where academics can archive their articles. An open access requirement, that asks all authors to ensure their output is made open access in some format, is a part of the 2015 Research Excellence Framework (HEFCE, 2015). Even commercial publishers are beginning to embrace the idea; Taylor and Francis have been celebrating Open Access Week for the past few years, releasing some selected digital archives freely online (Informa, 2012) or holding a competition with a prize of 5 APC waivers (Peck, 2014), and Emerald Publishing temporarily made certain issues of journals available freely online in celebration of National Library Week (Price, 2014). On the face of it, it would seem that the Open Access Movement is winning the battle.

However, this institutionalised acceptance of open access principles sits uneasily with the radical ideologies and history of the movement. There are concerns that a neoliberal implementation of the idea of open access would ultimately be harmful to the movement as it was originally envisioned. To understand this, we need to look at how the Open Access Movement began.
While the belief in freedom of knowledge and information has been a part of librarianship since the time of Ranganathan, open access is a relatively new idea that is linked to the rise of digital era. Although computer scientists had been sharing their research electronically since the 1970s, and physicists had been self-archiving their research on the arXiv server since 1991 (Butterworth, 2011), the practice only became more general following the invention of the World Wide Web, when the internet became more available to the public. Most journals on the internet in this early period were open access, either as the electronic version of a paid-for print journal, or as subsidised electronic-only journals (Harnard, 2011).

Identifying the internet as a tool for an individual to distribute scholarly content independent of publishers, Stevan Harnard, a cognitive scientist, penned the ‘Subversive Proposal’ online in 1994. Harnard proposed that the pre-prints of all scientific and scholarly research, that was not created for profit, should be self-archived online, and made freely available for those who would want to read it. This practice would later be named Green Open Access. Harnard expected that this might hasten the demise of academic print publishing, causing publishers to “arrange for the much-reduced electronic-only page costs […] or they will have to watch as the peer community spawns a brand new generation of electronic-only publishers who will.” (Harnard, 1995). For Harnard and many early proponents the purpose was clear. This was a rebellion against academic publishing; Harnard likened allowing publishers to put price tags on academic articles to a “Faustian bargain” (1995); necessary to ensure that research had the farthest possible reach, but unsavoury in the way that publishers profited from research that they had no hand in creating. The newly dawning digital age provided a fresh alternative for scholarly distribution: a free, unrestricted internet, that could remove all barriers to academic work and make it available at the click of a button. Harnard encouraged
authors to force a change in publishing and to force prices down, by performing small acts of civil disobedience. His proposal was an attack on, as well as a subversion of, the publishing practices at work at the time, which aimed to increase the accessibility and readership of academic knowledge by taking in online.

Unfortunately, the digital age did not drive down journal costs as Harnard had hoped. To the contrary, journal subscription costs have spiralled, well above the price of inflation, and, although now available online, the majority of academic knowledge is held behind paywalls. Subscription-based academic publishers charge billions of pounds per year for access to scholarship; in 2011 the industry generated approximately £6 billion (Van Noorden, 2013) and large commercial publishers report profit margins of over 30% (Cole, 2015; Van Noorden, 2013). Many universities are struggling to keep up with these spiralling costs. In 2003, Cornell University noted that, although the library budget had increased by 149% that year, “the number of serial titles purchased increased by only 5%—at a time when the number of serials published increased by approximately 138%,” due to the rising costs of current subscriptions (Cornell University, 2003). University libraries, dealing with this crisis, have had to cancel journal subscriptions and slash funding to other resources, such as print books, to maintain their access to big-name journal content. More recently, Harvard University, one of the richest academic institutions in the world, announced it could no longer afford the $3.5 million it had been paying in subscription costs to journal publishers, noting that costs had increased by over 145% in the last six years whilst the publishers had made large profits, and urged its academics to pursue open access publishing and self-archiving (Sample, 2012).

Instead of fearing this attack on their practices, however, commercial publishers have found a way to embrace and monopolise on this new idea. Instead of charging subscription fees to institutions to access online journal articles, some publishers
are now charging authors fees to publish articles in their journals. This payment model, which came to be known as Gold Open Access, meant that the journal administration costs were already paid for at time of publication, so access to these articles could be made free immediately and were therefore ‘born open’. This model has garnered some support from the academic community, notably from JISC and RLUK (Research Information Network, 2011), but has created far more controversy than self-archiving, due to the high costs involved and the problems that a pay-for-publication system can create.

As with subscription costs, the Article Processing Charges (APCs) are set by the journal and can be immensely expensive; the average APC that an author, or institute on an author’s behalf, could expect to pay per article for publishing in a Gold OA journal is between £1,457 and £2,364 (Research Information Network, 2011). However, journal publishers have not been transparent about the rationale for these costs and, consequently, these figures are unlikely to remain static. The costs involved in publishing an article seem to vary wildly, depending on the publisher and the journal, with the editor of Nature estimating the cost to produce each article in his journals at £20,000 to £30,000 (Van Noorden, 2013). As some publishers often offer Gold OA in place of an option to self-archive, any lack of transparency about the costs involved in publishing is extremely problematic. This pricing model has also provided an opportunity for unscrupulous and predatory open access journals to attempt to make money from academics and their institutions. Almost from the inception of the Gold OA model, new publishers and journals have appeared on the scene, with the intention of making profits from the authors of research papers by accepting article for publication irregardless of the standard of scholarship. The numbers of these publishers has risen steadily, from 18 in 2010 to 225 in 2013 (Beall, 2013). When an increase of accepted articles leads to an increase of income, it seems likely that this conflict of interest may lead to editorial standards to drop to
allow for a greater number of articles to be published. While this is difficult to trace across the major publishers, it is extremely apparent in predatory Gold OA journals, as many lack editorial boards, send out spam emails to academics and publish plagiarised articles (Beall, 2013). One notable case involved an academic who submitted a farcical paper to the International Journal of Advanced Computer Technology in retaliation to the hundreds of spam emails he had received from them; laced with profanity and containing no academic content whatsoever, merely the expletive-ridden seven-word title repeated again and again, the paper was accepted for publication with the instruction that the author “add some more recent references and do a bit of reformatting.” (Safi, 2014). In another case, a paper containing computer-generated nonsense, with added footnotes and graphs, was accepted for publication by Bentham Science Publications, after allegedly passing a peer-review (Basken, 2009). In both cases, the accepting journal then sent out an invoice requesting the publication fee be paid. In a larger-scale ‘sting’ of Gold OA publishers, Bohannon (2013) sent a bogus scientific paper, riddled with basic errors, out to 304 Gold OA journals; more than half accepted it for publication, once the author had paid the fee. These cases are illustrative of how this kind of reckless profiteering can be incredibly damaging to academia and scholarly communications. The impact that issues like these has had on perceptions of open access publishing has been profoundly negative and has led to questions about the practices and ethical standards of these journals. The original, radical idea of open access and the moral and ethical principles that have been a part of the movement since its inception, were perverted when it was monetised and moulded to serve commercial interests.

However, this radical spirit still exists inside the movement, and small acts of protest, resistance and subversion continue unabated. For some individuals, protecting the ideals of open access from co-option and modification by the
commercial sector involves a passive resistance and withdrawal of services. For example, Peter Suber, an important voice and long time proponent of the Open Access Movement, announced that he would no longer referee for publishers who had not “publicly disavowed the AAP’s position on the Research Works Act”, a bill that many considered harmful to the OA Movement (Suber, 2012). Related to the Research Works Act, over 15,000 academics have signed a statement boycotting the publisher Elsevier, who supported the act. The boycott stated that the signatories refused to publish in or peer-review any Elsevier journals, due to high subscription costs, prohibitive stance on open access and its support of the act (The Cost of Knowledge, n.d.; Flood, 2012). Another instance of similar action saw the entire editorial board of the Journal of Library Administration resign en masse in protest of the publisher’s licensing terms that left the author with little ownership of their work and would have made self-archiving difficult (New, 2013). Supporting open access has now come to mean enacting a silence, a refusal or a withdrawal when faced with publishers who seek to blockade or modify it, with one commentator stating:

Should we not withdraw our academic labour from all those presses and journals that do not allow authors, as a bare minimum, to self-archive the refereed and accepted final drafts of their publications in institutional open access repositories? (Hall, 2012)

This protest has had some limited success; Elsevier withdrew its support for the Research Works Act, without mentioning the boycott against it (Masnick, 2012). However, this passive, silent resistance is a far cry from Harnard’s call to arms over self-archiving in 1994. But the alternative to silence is action, and a new kind of activism is beginning to gain some traction.
The pursuit of open access has not been the only way that activists have been attempting to make scholarship accessible. The networked digital culture of the internet has provided a new generation with fresh options for opening up the closed domain of academia. With open access divided between two routes, and neither satisfactorily dealing with the problems of academic publishing, new solutions have been sought. And, for some, the only solution is piracy.

In 2011, Aaron Swartz, a computer programmer, political activist and leading voice in the Open Access Movement, was indicted for mass-downloading articles from the academic database JSTOR. Swartz had made use of the ‘open campus’ at Massachusetts Institute of Technology (MIT), which provides walk-in users with a free guest account to its subscription services, to access the subscription database of academic journals and books. Swartz set a program running to download the papers in bulk; before he was discovered and arrested, he had downloaded more than 4.8 million articles.

Swartz had been a long time campaigner for open access to scholarship and information, and also for internet freedom in general. In July 2008, aged just 21, he penned the widely-shared Guerrilla Open Access Manifesto. In this manifesto, Swartz attacks private institutions and publishers, such as Reed Elsevier, who he charges with having “locked up” the world’s scientific and cultural knowledge
(Swartz, 2008). Although he praises the Open Access Movement, calling its actions “valiant”, he does not agree that open access, in and of itself, provides the answer to the publishing problem, as while open access will help scientists and researchers ensure that their future output is made available online, anything that was published prior to this will remain behind paywalls. In Swartz’s words, “Everything up until now will have been lost. That is too high a price to pay.” (2008). The problem that Swartz lays out is that licence agreements with publishers only allow academics to self-archive their new work, if they allow self-archiving at all; the old copyright agreements still stand, and the large publishers still hold the right to charge for access to older articles published under old agreements. Even while the collection of ‘born open’ content continues to grow, everything that was published under subscription-access models would be left behind. As Swartz points out, this is a very large body of knowledge that may never be made publicly available. While some publishers are nominally supportive of open access in principle, and do occasionally release some older content freely online, this does not happen systematically or reliably. Rather, it is dependant on the whims of the publisher, who are under no legal obligation to make their content available for free. For example, the Health Inter Network Access to Research Initiative (HINARI), a programme that allowed many developing countries free access to scientific literature, was disrupted when five publishers decided to withdraw their content, which amounted to some 2,000 articles (Chatterjee, 2013). The resulting outcry led to the content being restored, but this incident is illustrative of the problem on relying on the good will of publishing corporations in making content available. Swartz’ manifesto was not just an indictment of this situation, it was also a rallying cry. He calls for researchers, students, librarians, anyone with access to subscription databases, to attempt to release its contents out on to the open web, by whatever means necessary. He writes:
We need to take information, wherever it is stored, make our copies and share them with the world. We need to take stuff that's out of copyright and add it to the archive. We need to buy secret databases and put them on the Web. We need to download scientific journals and upload them to file sharing networks. We need to fight for Guerilla Open Access. (Swartz, 2008)

Swartz’s beliefs and intentions were clear. He saw a moral obligation to access, download and make available as much closed-access content as possible. In his view, this was an act of civil disobedience, an ethically-justified action in the face of unjust laws. Three years after writing the manifesto, he acted on his promise to “take stuff that's out of copyright and add it to the archive.” (Swartz, 2008).

Although it is unknown why Swartz targeted JSTOR, a not-for-profit company generally well-regarded by the academic community, it is likely due to the specific content of JSTOR’s archive. Much of JSTOR’s content is digitised copies of back-file journal issues, a great many of which are now so old as to be out of copyright. The material that Swartz downloaded was described by his lawyer as being “a bunch of, like, the 1942 edition of the Journal of Botany” (Day, 2013), so it is likely that most of his cache was comprised of public domain articles. However, this content was still held behind paywalls because JSTOR made this content digitally available, by scanning and uploading it and continuing to host it on their servers; this investment was the justification for their charging for it. In the view of many activists, this is knowledge that is in the public domain and should be publicly available and accessible. Swartz had previously targeted PACER (Public Access to Court Electronic Records), an online distribution service for legal and court documents that, because the copyright for the documents is owned by the state, under legal definitions, belong to the public. However, PACER charges users 8 cents per page
for access. Swartz accessed the system from a public library, downloaded almost 20 million pages, around 20% of the database, and uploaded them to the internet where they could be accessed for free. It seems reasonable to assume, based on his previous actions and statements, that this is what Swartz planned to do with his cache of articles.

Whatever his plans for the documents, Swartz’s large-scale download was a violation of the JSTOR terms of service, and strained their servers to the point that JSTOR went down for two days (Sims, 2011). Swartz’s laptop, which he had hidden in an unlocked cupboard at MIT, was recovered and video footage showing him covering his face was a bicycle helmet was used as proof of guilt. Swartz was arrested on January 6, 2011 and charged by federal prosecutors with eleven violations of the Computer Fraud and Abuse Act. He faced up to 35 years in prison and $1 million in fines.

Swartz was a well-known figure in the online community; aside from his activism, he had been involved with the creation of the website Reddit, widely refer to as “the front page of the internet” (Lamont, 2014). In response to Swartz’s arrest, many other activists came out in support of him and his actions. Greg Maxwell was one such individual. In response to Swartz’s arrest, the day after his indictment, Maxwell downloaded a large collection of pay-walled material from JSTOR and released it on the torrent-sharing website The Piratebay. Because all articles were from Philosophical Transactions of the Royal Society, one of the world oldest journals, and published before 1923, Maxwell felt that this out-of-copyright material should be freely available. Explaining his actions, Maxwell summed up by stating:

The portion of the collection included in this archive, ones published prior to 1923 and therefore obviously in the public domain, total some
18,592 papers and 33 gigabytes of data. The documents are part of the shared heritage of all mankind, and are rightfully in the public domain, but they are not available freely. Instead the articles are available at $19 each – for one month’s viewing, by one person, on one computer. It’s a steal. From you. (Maxwell, 2011)

Swartz committed suicide in 2013. His highly-publicised death brought further attention from the online community, many launching campaigns to release paywalled content out on to the open web in tribute. Fellow activist and friend of Swartz, Carl Malamud, echoed the Guerrilla Open Access Manifesto when, writing in memory of his friend, he stated: “It was a corruption of scholarship when the academy handed over copyright to knowledge so that it could be rationed in order to extract rents.” (Malamud, 2013). As a memorial to Swartz, Malamud launches the PACER Cup, an attempt to crowdsourse the contents of PACER, and upload every page to the Internet Archive, where it would be publicly accessible. Artist and poet, Kenneth Goldsmith, attempted to print Swartz’s cache of documents, as an act of protest as well as an artistic statement. Unable to access them, as this cache still forms part of an FBI investigation, he instead decided to print Maxwell's articles. These filled 250,000 pages, littering the floor and piled up in boxes, stacked haphazardly around the gallery space, located in Dusseldorf. The sheer volume of paper in Goldsmith’s installation, and his method of displaying it, serves to illustrate, not just how much Maxwell and, by extension, Swartz, stole, but also physically demonstrates how much scholarly content is held behind paywalls. Goldsmith named his installation the JSTOR Pirate Headquarters (Sugarman, 2014).

Swartz’s death also saw the launch of the Twitter hashtag, #pdftribute, in his memory. Launched by friends of Swartz in the days following the news of his death, the hashtag was designed to be used as a tool for mass-protest, uploading
copyrighted articles and releasing them for free on the web (Cutler, 2013). The idea spread, furthered by groups including Occupy Wallstreet and the hacktvist collective Anonymous, and within days there were thousands of tweets containing links to journals articles, often made available in violation of their copyright agreements. A website, pdftribute.net, that aggregates the content from Twitter, subsequently made this newly released content somewhat searchable. Although the use of the hashtag slowed after a few months of use, it is still in use and the aggregated site still received between 50-100 visitors a day some months after its launch (O’Connor, 2013). However, there was some criticism of the effectualness of the use of the hashtag, noting that for every legitimate academic article there were two “hacker manifests” (Dewey, 2013), and that an irregular and unsystematically released clutch of PDFs, of varying scholarly merit, could not take the place of broader and more focused attempts to make all academic research available in open access formats. Jonathan and Michael Eisen, both scientists and leading voices in the OA Movement, criticised the tribute as merely a “feel-good” action, that did not promote the wider and longer-term goals of the OA Movement (Eisen, 2013a), while others branded it as being an ineffectual and “toothless” form of advocacy unlikely to provoke any lasting social change (Dewey, 2013).

In spite of the Eisen brothers’ criticism of the ineffectuality of leaking PDFs, less than nine months after Swartz’s death, Michael Eisen resorted to illegally distributing closed-access PDFs to make a stand. Eisen downloaded and distributed copyrighted articles about the Curiosity Rover that had been published by NASA behind a paywall. In a statement on his website, Eisen argued that such content, created using publicly-funded research produced by the federal government, and therefore cannot legally be subject to copyright law, should never have been published in closed-access journals (Eisen, 2013b). A few days later, copies of the articles, which could now be downloaded for free, appeared on the Jet Propulsion
Laboratory NASA webpage. Eisen’s actions, in this specific instance, caused real change; the LA Times compared him to Aaron Swartz (Hiltzik, 2013).

Relatedly, the #icanhazPDF hashtag has been gaining momentum on Twitter for the past few years. The purpose of the hashtag is to help individuals request access to paywalled articles from someone who has access. Named for the popular cat meme, the idea was very much born of the digital area and modern views of utilising technology to enable scholarly sharing. This type of peer-to-peer sharing has been done via email and other social media channels before, but this Twitter hashtag has been in frequent use since at least 2010 (Zivkovic, 2011). The hashtag appears to have been created with journalists and bloggers in mind, who do not have institutional access to subscription journals, as a way for them to access articles that they may be writing about. However, in 2013, a study of users of the hashtag showed that it was more widely used by academics and students than it was by media writers or by members of the public (Liu, 2013). Although this is a phenomena found mostly in academia, it is difficult to ascertain how widespread the practice is.

Between April and August 2014, one study captured 1,238 publicly available tweets using #icanhazPDF, of which 824 were requests for articles, from 475 unique users (Gardner and Gardner, 2015). The average number of tweets per day that use the hashtag is around 3.6 (Liu, 2013). Although this use may seem comparatively tiny, it is common practice for the tweet to be deleted after the request has been fulfilled, which helps to keep the users anonymous, but makes the overall usage of the hashtag difficult to track (Zivkovic, 2012). The practice is prevalent enough that at least one big publisher, Nature, has addressed this issue, by offering their own modified version of article link sharing. The system allows subscribers to generate links to a screen-view version of any article of their choosing, which can be read but not copied, printed or downloaded, and share this link by email or on Twitter (Eisen, 2014). While this legally allows users to fulfil article requests, it simultaneously
keeps the content firmly in the publisher’s hands. This may discourage subscribers from illegally sharing PDF files, when a legal way of sharing them is on offer. As Nature has a relatively high number of #icanhazPDF article requests (Gardner and Gardner, 2015), this action can be perceived as an attempt at stemming the tide of illegal article sharing.

Sometimes, these actions even occur innocently. Many academics maintain profiles on networking sites such as ResearchGate or Academia.edu, where they also provide open access versions of articles they have authored. Unknowingly, many of these authors no longer own the copyright to the articles they have written and uploaded, having signed this right away upon publication. In other cases, they have retained the right to the pre-print of the article (before peer-review), but not the post-print or published version of the article, which is what authors often choose to upload. This action is usually not intended as an act of civil disobedience, although this may sometimes be the case, but frequently arises from the misunderstanding that an author may not necessarily own the copyright to an article that they wrote and wish to share. Elsevier issued 2,800 takedown notices in 2013 to Academia.edu, ordering it to remove articles that the publisher owned the copyright to (Solon, 2013).

The largest criticism of the effectivity of these actions, aside from the potential copyright infringement and legal issues arising from this brand of activism, has been that they often occur randomly and on a small scale. For a protest like this to be effective, it would have to be larger and more systematic, allowing for researchers to search for and access leaked articles as easily as accessing subscription or Gold OA content. Although the illegality of this activity should stand in the way of creating a more structured database of leaked journal articles, there have been attempts to create something along these lines. The rise of these ‘shadow libraries’ prompts
new questions about scholarly distribution, and the scale of the reach and breadth of illegal-sourced academic content. The Library Genesis platform (LibGen) hosted 25 million documents, amounting to almost 42 terabytes of data (Cabanac, 2015), most of which were academic articles under copyright. Around 29% of the content of this database was crowdsourced, added to LibGen by researchers and academics, who wrote the articles themselves, or downloaded them using their institutional subscriptions and uploaded them to LibGen, or articles sourced through #icanhazPDF requests and subsequently added to the LibGen database; the remaining 71% came from single mass-uploads of enormous caches of documents (Cabanac, 2015). LibGen covered 75% of all journal titles, with thousands of papers from subscription publishers including Elsevier, Wiley and Taylor & Francis, mostly published between 1954 and 2013 (Cabanac, 2015). This content could be searched and the PDFs of these articles could be readily downloaded. LibGen was a vast database of illegally shared content, the culmination of numerous act of hacking and leaking of scholarly content, that, if it had grown to the point where all historic journal content was leaked, could have changed the face of academic publishing. However, the illegality of sites like LibGen makes them vulnerable to legal pressure. LibGen was taken down in July 2015, and the operators, and those of SciHub, are being sued by Elsevier (Ernesto, 2015a). The site has subsequently reappeared, hosted on a different server, and may continue to operate until forced to cease.

These acts of hacktivism have had small successes; an increased awareness of prohibitive publishing, Michael Eisen’s release of NASA documents, a renewed commitments to scholarly sharing. Most notably, JSTOR acknowledged that the illegal downloading and sharing of its content by Swartz and Maxwell had impacted on its decision to released a large collection of public-domain articles freely online, but quickly added that JSTOR had already intended to release this content before
the breaches occurred (Masnick, 2011). However, does this kind of resistance form a part of a newer, radical sort of action against publishing companies, in lines with Harnard’s original Subversive Proposal? Self-archiving, which began as a resistance against journal publishers, had similarly disruptive beginnings, although was legally less contentious than this form of scholarly hacktivism. While the actions of these individuals can rarely be described as “hacking” in the purest sense, the practices remain ethically and legally dubious and are not wholly accepted by information professionals or people committed to open access.
Results

"I've never met an academic who wants their research behind a paywall."

Robert Swartz (cited in Mechanic, 2013)

The Open Access Tracking Project (OATP) sorts its content by tagging every link indexed by the project, allowing users to filter by subject. The tags often still comprise a large body of links, and a link may have several different tags, but usefully indicate how large a particular subject related to open access is. To explore the amount of commentary on the subject of scholarly hacking, several tags had to be examined as, due to the nebulous nature of the activity, there is no fixed terminology in use. In particular, the “oa.piracy” tag contains only 19 items, but the tag for “oa.guerrilla” contains 340 items; in practical terms, these definitions amount to the same thing. Keyword searches turned up further items on the subject that had been tagged differently; in total, this data set amounted to just over 500 items, of which 50 were analysed. In contrast, the “oa.green” tag contains 5573 items; this serves to show that the hacking movement is comparatively small, when compared to the wider focus given to more mainstream routes to freeing content.

The arguments for and against this sort of activism aggregated in the OTAP are varied and broad, with many focusing on quite different aspects of the argument. Some articles actively encourage users to break through paywalls and share articles freely online, while some argue for allowing scholarly sharing between users as a part of licence agreements. Many suggest that copyright is no longer fit for purpose, as under the current publishing models it does not provide any financial incentive for academics to create or innovate, and only provides publishers with an incentive to barricade their content. However, others take an opposite approach, encouraging
consolidation over disruptive action, while some are supportive of the aims of piracy but critical of the practice. The criticisms include the opinion that users ignoring copyright causes harm to publishers and libraries, and arguments against proceeding with mass-digitisation of print books to prevent the resulting electronic content from being hacked and disseminated for free. However, in spite of this disparity, the content studied revealed that much of the discussion about piratical or guerrilla OA, that has been tracked by the OATP, takes a positive view of such activity, with considerably fewer article condemning the practice than those that expressed a level of admiration. Of the 50 articles surveyed for this research, 39 expressed favourable sentiments about acts of piratical OA and/or scholarly sharing in violation of copyright or licence agreements. Only 11 expressed negative opinions about such behaviour and the impact that this might have on academia, libraries or publishers.

Figure 1: Positive and Negative opinions of piratical or guerrilla open access, on the OTAP

While bearing in mind that a majority of the data seemed to come from blog posts and reports, where academics discussed their objections to current publishing
models and practices, and this is therefore a specialised group, this still shows a strong backing for a radical activism.

The interviews conducted with information professionals revealed very different sorts of opinions. The results revealed a clear division between information professionals; one group were staunchly opposed to all forms of illicit activity and stood by copyright laws generally, another other group were more critical of copyright laws and of publisher’s practices to the point where they believed that distributing content illicitly could be justified, and a third group expressed no strong opinions one way or the other. (See Figure 2).

Figure 2: Positive, Negative and Undecided opinions of hacktivism, from interview data

The questions asked were open-ended, designed to prompt a discussion of particular aspects of open access and other routes to openness, rather than just enquiring about awareness of specific subjects. The first question that participants were asked about was their opinion of current models of open access, and whether OA could offer a complete solution to openness in academic publishing. All but one
participant reported that they were against Gold OA publishing, and the one participant who was in favour of it still preferred Green OA as a model. Participant 6 was particularly opposed to Gold as they saw it as another revenue stream for publishers, Participant 5 felt that such a model could contribute to a new serials crisis, Participant 11 felt APCs were “fundamentally wrong”, and Participant 10 agreed that Gold could potentially make existent problems with academic publishing, such as the cost involved with publishing an article, much worse. However, not all that were against Gold were in favour of the Green OA model either. Many preferred the Green model, but some felt there fatal flaws with it; in the view of Participant 6, it would require legislation to make Green OA work fully and Participant 4 felt that a Green vs Gold idea was a “false dichotomy”, stating that neither route would achieve total open access alone. This was especially revealing, as Participants 1, 2, 6, 7, 8, 9, 10 and 11 all went on to mention larger problems with academic publishing, specifically about the publishers control over the material, without directly being asked about it. The issues these participants highlighted stem from current academic practice that encourages researchers to publish in big-name journals with strong impact factors, which are typically subscription-access; Participant 1 states that this means that innovative OA initiatives, like the Open Library of the Humanities, cannot grow. Participant 2 was concerned that the current practices give publishers too much power, and that they now “have the whip-hand to overcharge for publication as they wish” and Participant 7 agrees that the power of publishers is the greatest barrier to the sharing of information. Participant 11 states that the concessions given to the publishing industry are the biggest flaw in open access, but Participant 4 goes even further to state that “the intrusion of the market and the profit motive into scholarly communication needs to be removed.” The high subscription costs that publishers can command, and the powerlessness felt by librarians forced to pay hand-over-fist for content with no way to negotiate any change, seemed to be a bigger problem for most individuals interviewed.
Given this resistance to conventional publishing practices, and profiteering on the part of publishers, it is perhaps surprising that there is a good deal of resistance to the idea of violating licence agreements or breaking copyright law. Although Participant 2 states that, from a user’s perspective, it can be hard to tell if online content has been uploaded legitimately or not, and both Participants 1 and 8 thought they had probably made use of illegal content as students, all agree that they would not make use of illegal content if they are able to identify it as such. Participant 1 goes further, believing that this kind of activism, if it occurs on a grand scale, has the potential to actively harm libraries, stating that “the more ‘hacking’ that takes place, the more is charged to legitimate users”. Participant 6 agrees they would never use illegal content either, and cannot support this kind of protest. On the other side of the debate, Participant 4 is supportive of anything that draws attention to the problems in access to scholarship, Participant 5 has no ethical problem with using academic content that has been uploaded illegally and Participant 7 has no problem with researchers circumventing paywalls. While Participant 9 finds the problem ethically tricky, they think that, under certain circumstances, locking research away from the public can be itself unethical, such as during the recent Ebola outbreak. A small minority would theoretically pursue such action themselves, if they needed access to paywalled articles. Only Participants 4, 5 and 10 said they would resort to using #icanhazpdf to source an article they could not access, and they would only do this after other avenues had failed. Others are distinctly more aware and cautious of the law in this area; for example, although Participant 8 would access articles found in ResearchGate for personal use, under no circumstances would they send them on to students, due to the likely illegal upload of the content.
There was a good deal of awareness of other incidents of leaked content. A majority - Participants 2, 3, 4, 5, 6, 7, 9 and 10 - were aware of Aaron Swartz’s case, with Participant 4 almost going for far as to call him a hero, Participant 9 agreeing Swartz “had a big point about the out of copyright material being locked away”, and Participant 5 saying that the case should be more widely known and comparing it to the case against Columbian student Diego Gomez, currently facing prison for sharing a PhD thesis online. Many, Participants 1, 2, 4, 7, 8, 10 and 11 also discussed instances of academics sharing their own articles online in violation of copyright agreements, and believe that this occurs when authors have not read the copyright agreements properly or do not understand the difference between copyright and intellectual property. Participant 10 is sympathetic to authors in this situation, who want to share their work, but are trapped in these agreements with big-name journals that they need to publish in because of the academic practices described above. Participant 7 is surprised that this is behaviour is treated permissibly by publishers, because if librarians were to do this in their institutional repositories they would likely face legal action.

Current copyright law was a vital issue for many respondents. Participant 1 reports that they are “aware of institutions receiving 6 figure fines and having access to publisher content switched off” for copyright violations, the threat of which provides the major impetus to obey the law. However, others are critical of copyright law; Participant 4 believes that copyright law is “absurd”, having not reformed enough to meet the demands of the digital age, to the point that “everyone who uses the internet breaks copyright law.” Similarly, Participant 7 states that copyright law is no longer fit for purpose, and Participant 5 likens copyright law in the internet age to trying to apply the highway code to the flying car. While many respondents agree that this type of activism is a copyright violation in the same vein as downloading music or films for personal use, Participant 9 disagrees; because article authors
make no money from their work, unlike filmmakers or musicians, this is different ethically. Participant 4 would address this issue by advocating for a global copyright exemption for scholarly work.

Participants were also asked about their opinions of JSTOR and other databases, who hold historic academic content, that is now out-of-copyright, behind paywalls on the basis that they digitised and host this content. Because this point forms a part of Swartz’s *Guerrilla Open Access Manifesto*, where he called for all public domain content to be added to the Internet Archive, and it is the area where many hacktivists claim legal justifications for their actions, it seemed important that opinion on this subject be gauged. On this topic, the majority of respondents felt it was legitimate for JSTOR and similar databases to attempt to recoup their investment by charging for this content, recognising that digitisation and hosting requires a significant financial investment. However, most commentators also felt that this content should not be prohibitively costly and these institutions should probably only charge for access to the content until their financial outlay has been recouped. Only two participants felt that this practice was unilaterally unacceptable, with Participant 5 calling such behaviour “neoliberal” and Participant 8 highly critical of JSTOR’s practices in general.

On the whole, the group of interview respondents are more observant of copyright law and licence agreements than those found indexed in the OATP. This is possibly due to their professional expertise; as librarians, they necessarily have a thorough understanding of the legal limits in this area, and while in work must often find themselves bound by licence agreements and curtailed by the threat of fines and loss of access. However, there are some notable exceptions to this trend, and the near universal disapproval of current publishing practices combined with misgivings
about the current models of open access, means that other options for facilitating access most soon be explored.
Discussion

“But there exists a system of power which block, prohibits and invalidates this discourse and this knowledge, a power not only found in the manifest authority of censorship, but one that profoundly and subtly penetrates an entire societal network. Intellectuals themselves are agents of this system.”

(Foucault, 1977b)

Hacktivism, in a broad sense, is gaining some traction within academia. Although few librarians are in a position to follow or foster such practices in any kind of official capacity, there exists an undercurrent of illicit electronic scholarly material alongside a general perception that current publishing models are harmful to scholarship.

The backlash against traditional publishing practices, coupled simultaneously with a respect for the restrictive licence agreements imposed by the model, is interesting, and suggests that journals, as they currently stand, are still viewed as a meaningful part of scholarly discourse. Although there are palpable problems with current publishing models, there is a resistance to the idea of allowing hackers to break into and dismantle this system in its entirety. Journal articles, published in traditional formats, are symbols of organisation and order, and constitute a meaningful arrangement of current knowledge. Modern journals collect and curate articles, arrange them, organise themed issues; some specialised titles select and publish only very particular articles, centralising that certain aspect of scholarship. They are navigable and searchable. The one thing that they are not is accessible; but could a drive to ‘liberate’ articles from these inaccessible enclaves deprive them of an aspect of academic integrity?
The power of piratical open access is dependant on where the academic value of the article content lies. Is it in the article itself, or as a part of a wider nexus, interlinked with the journal title publishing it and the other articles that form a part of the journal issue? Journal publication confers scholarship and legitimacy; articles have passed peer-review and a rigorous selection processes. Unpublished articles, even those written by well-known scholars, cannot claim to this status. If an article is exorcised from its journal, the place it was published, does that remove some of its academic value?

In terms of the philosophy of Michel Foucault, academic or scientific knowledge relies "on institutional support: it is both reinforced and accompanied by whole strata of practices such as pedagogy - naturally - the book system, publishing, [and] libraries" (Foucault, 1972, p. 219). Foucault believes that it is these systems that produce truth, objectivity and knowledge. Furthermore, Foucault argues that "the frontiers of a book are never clear cut: beyond the title, the first lines, and the last full stop [...] it is caught up in a system of references to other books, other texts, other sentences: it is a node within a network" (Foucault, 1972, p. 23). Isolated statements do not contain knowledge in and of themselves; they exist alongside other statements to form a collaborative body of knowledge. For scholarship to be legitimate, it must be supported by institutional systems and form a part of the network of academic literature. The individual text gains scholarly value and prestige from its place within a network, not on the basis of the individual knowledge it contains. The library is essential in this system; it is “more than a simple depository of texts to be accessed by users with information needs. It is a key institutional mechanism in both the preservation and control of discourse" (Foucault, 1972, p.260). The organisational systems of the library and, in this context, those of journals (arranged into issues and volumes), are an important part of the system that created objective truth. The authority of journal publishing
confers respectability and creates visibility. In Foucauldian terms, journals are a part of the institutional systems of objective knowledge, in which new knowledge may be organised and legitimised.

The act of hacking removes the text from its network, from its publisher, its database. In making the article accessible, it removes the ‘node’ from the ‘network’. Does this then destroy its value? Foucault would likely argue so. He states that “in every society the production of discourse is at once controlled, selected, organized, and redistributed according to a certain number of procedures” (1972, p.16), and he believes that it is these systems that produce truth and objectivity; the selection, organisation and redistribution is a necessary part of this process. The specific collection of articles in a journal, for Foucault, “are valuable and interesting because, together, they make up the discursive formation of this issue” (Radford and Radford, 2005) and if, separated, lose an intrinsic part of their collective significance. In some cases, removing articles from their organisational system leaves them isolated from a system of scholarship, adrift in a vast unnavigable, unnetworked internet, as in the case of the use of hashtags like #pdftribute and the cases of ‘data dumps’ of thousands of articles. This makes the content difficult to search, and the academic quality of the content can be especially variable; in the case of #pdftribute, a lot of links being shared are to news reports and blog posts. The noise and chatter on the hashtag makes its use for anything other than small acts of rebellion untenable. The network, of the library and the journal, is central in the preservation of, and control of, knowledge and truth.

All this serves to make academia an exclusive and impenetrable annex, cementing in academic practices that, many argue, are in need of reform. A number of interview participants in this study expressed concern about problematic academic practices, particularly those than compel authors, operating under a ‘publish or perish’ mandate imposed by their institutions, to publish in big-name, high-impact
journals, where their work will be perceived as being more influential. This practice is troubling for many reasons; aside from criticism levelled at questionable impact factors, this also narrows the scope of scholarly communications. Although, for Foucault, for something to qualify as academic discourse it must become a part of the network of knowledge, this also means that the structure of academia and, by extension, the journal publishers complicit in it, constrain what can said, how it can be said and where it can be said (Radford, 1992). This gives authors limited options about where they can publish, which allows journal publishers to effectively control the market, to force academics to surrender their copyright when they publish and to bind libraries into ‘big deals’ and restrictive licence agreements. Almost all discussion on this topic agrees that this system is unacceptable.

Although Foucault’s work covers a wide range of disciplines, such as psychiatry, sexuality, and prisons, his thinking is unified by his central concerns of the connectivity of power and knowledge. Foucault views power as a pervasive force within society and observed that “power produces knowledge … power and knowledge directly imply each other” (Foucault, 1977d, p.27). This seem especially pertinent to journal publishers, who hold the keys to the storehouses of knowledge. Some interview participants, particularly 2, 4 and 7, explicitly mentioned that publishers had too much power over scholarly communications and, throughout the interview data, a general opposition to publishers and publication practices was expressed by the information professionals, with 7 of the 11 participants mentioning that this is a larger problem for scholarly communications than open access. The power imbalance is caused by institutionalised academia, where researchers feel forced to publish in certain well-known journals in order to progress in their careers, and therefore unintentionally increase the power held by these journal titles. Under these circumstances, the relationship between power and knowledge, while productive insofar that research is created and disseminated, leads to the
repression of and exclusion of access to knowledge, due to the pervasive power wielded by the publishers. This control is not how Foucault envisions the dynamics of a successful power/knowledge relationship. However, Foucault was also critical of the university as an institution, and the power of institutions more generally. He identifies a disordered abuse of power within higher learning as a form of repression (1977c), and views the intellectual as a part of a system of power that blocks and prohibits knowledge (1977b). This stance is applicable to the current issues identified within academic publishing by the interview participants; it is the academics - Foucault’s intellectuals - who choose to publish their research in these publications, knowing that their work will be placed behind paywalls, blocking it from all but a few. The publishing practices of academia are, in this context, an abuse of power. Further more, Foucault writes that “institutions attempt to legitimate the current version of knowledge and truth by controlling the manner in which texts are ordered with respect to each other.” (1972, p.148). Although the organisation of texts helps inform and create knowledge, the institution also uses this to control and dictate knowledge. Given the abuse of power at work, is it acceptable to break down the institutionalised systems that propagate it, even if these are the ones that our understanding of objective knowledge depend upon?

The background literature, and the interviews for this study, suggest an uncertainty of the value that the journal publishing process adds to scholarly communications. Far from the Foucauldian view that they stand for and preserve knowledge, there have been instances of predatory behaviour and abuses of open access publishing that actively corrupt academia. Even in cases of traditional publishing models, there are those with misgivings that journals contribute very little, when compared with the academics who write and peer-review the content. If, in modern academia, journals do not actually add this perceived Foucauldian value, then sharing individual articles is justifiable and appropriate. In this regard, hacked content shares the same
anatomical structure as Green OA content, which, as a model, also divorces articles from their journal network to ensure that they are accessible elsewhere. While these articles are typically easier to search for, in institutional repositories and through Google Scholar, than content distributed illegally, the same level of intrinsic value is placed on the individual article itself. In some ways, even more so; as publishing agreements typically only allow the author to self-archive the pre-print of an article, not the final published version. Green OA strips out almost everything that the publisher adds to an article; does this article still, then, impart the same level of scientific or empirical knowledge?

Notably, Participant 7 in this study, while expressing no ethical issue with scholarly sharing, states that “sharing the information doesn’t diminish its intrinsic value.” Many students and researchers attempting to access a single article might agree, which explains the growing popularity of the #icanhazpdf hashtag on Twitter. #icanhazPDF has nine entries on the OATP, only one of which was markedly negative towards the concept. However, this negative view of the hashtag, because it focuses on the potential impact that this has on libraries, echoing views expressed by Participant 1, requires consideration. Because use of the hashtag bypasses the library, this could have an impact on how the library is run, meaning “that libraries don’t know which journals that aren’t in their current collection are in demand by its patrons. […] and your use of the journal your library is already subscribed to won’t be logged,” which could lead to cancellations (Bond, 2013). The organisational system of the library depends on users accessing knowledge via the network; if they use isolated articles, the system breaks down. Elsewhere, librarians have condemned the use of #icanhazPDF and online file sharing and instead promoted interlibrary loan services, for similar reasons (Gardner and Gardner, 2015). Librarians generally make up a very small percentage of the users of the hashtag (Liu, 2013), as reflected in the results of this study, where only 3 participants reported they might
use the hashtag or other forms of social media to attempt to find an article, with many others vehemently against sourcing content through such illegal methods. In many ways this suggests an idea of essentialism within user search habits; libraries have access to thousands of articles via their subscriptions, but, with the number of students and academics who have access to academic library collections making use of hashtags and shadow libraries to source their content, there seems to be evidence that the key articles are not necessarily included. This may be due to the ‘Big Deals’ libraries often find themselves locked into, forcing them to subscribe to journals that are not relevant to their university community in order to maintain subscriptions to big-name, indispensable journals, a practice that librarians and academics are highly critical of (Ball, 2004; Edlin, et al, 2004; Frazier, 2005). The requests made through this hashtag must necessarily be for single, specific articles; for the users of this hashtag, the complete journal issues simply are not necessary.

In spite of this, downloading and sharing articles online presents an ethical problem for many librarians. From a Foucauldian perspective, the library should be “a dynamic site for the possibility of new knowledge as well as a passive storehouse that provides access to individual facts” (Radford, 1992, p.408), but systems such as copyright law prevent librarians from feeling able to share journal content; passivity over dynamism. Perhaps because of this, for many interview participants and commentaries indexed in the OATP, copyright law is obsolete and is no longer fit for purpose. The digital age, which expanded the remit of libraries beyond print, out into the vast reaches of the internet, have made current copyright law appear outmoded. A lot of the academic content that can be found online is not wholly legal - as Participant 4 highlights, it is all too easy for a user to contravene copyright law when using the internet - but some interviewees found it difficult to resist sharing articles and other content found online with students and researchers, because uniting users with the information they’re seeking is a fundamental part of
librarianship. They consider the law unjust, and require new solutions to the problem with academic publishing to be sought to address this issue. To do this, systems of power propagated by institutions and academics must be broken down. For many commentators, online and offline, a solution to this is radical action, bypassing these systems. However, for other interviewees, a fear of the repercussions for violating copyright and licence agreements act as a deterrent against sharing copyrighted material, even that which has already been disseminated online. There is a certain paralysis reflected in the interviews, revealing professionals caught between action and inaction, between rallying against publishers and safeguarding licence agreements.

That is not to say that there are not those resistant to the institution. Foucault is quoted as once declaring "there exists an international citizenry that has its rights, and has its duties, and that is committed to rise up against every abuse of power, no matter who the author, no matter who the victims." (Foucualt, 1989, cited in Eribon, 1991). Attacking and confronting systems of power, and attempting to rebalance or redistribute it, is the aim of most hacktivists, but can piratical open access make a difference? Aaron Swartz became a high profile figure following his arrest, and a majority of professionals at least know the name. His case has increased awareness of the problems with access to research and scholarship amongst professionals and the public alike. He is indexed 183 times in the Open Access Tracking Project and, among the information professionals surveyed, 8 were aware of Swartz, with 4 of the participants having a great deal of knowledge about his case. However, although his name is readily deployed by internet commentators, and a few interview participants expressed admiration for him and his cause, some of the interviewees expressed the opinion that his brand of activism was not real activism, and thus they cannot support it. Yet, considered in a certain light, this hacktivism has been somewhat effective. In the previous millennia, when the
internet was new, it was not expected that any form of electronic civil disobedience could be effective (Wray, 1999), in so far as it could not catalyse and mobilise people to action. These acts happened in the dark, in the glow of computer screens, and may have received some media coverage, but prompted no further action. Some years on, and the outcomes of these actions of civil disobedience are very different. Swartz mobilised thousands, as evidenced by the #pdftribute campaign; a whole community of online activists rebel against perceived injustices. From a Foucauldian standpoint, Swartz was enacting “a struggle aimed at revealing and undermining power where it is most invisible and insidious” (Foucualt, 1977b, p. 208). In this view, could hacktivism be, in Foucauldian terms, then a “counter-discourse” (Foucault, 1977b, p.209), as it is a form of discourse against power, based around the struggle for the freedom of knowledge from outside the institution?

For a revolt to be effective, it needs to be organised. The problem with this kind of activism is that it is generally anarchic; it positions itself outside and in opposition to established structures of power. Open access began as a radical struggle against the power of publishers and, in some ways, its piratical cousin is continuing the same struggle. But open access made its greatest inroads when it was accepted by the establishment and worked within current copyright and legal boundaries. Although open access is not wholly accepted as a full solution to the issues with academic publishing, as it tacitly supports the abuses of power inherent in the system, as a subversion of the system piracy has very limited value overall. The fruits of hacktivists’ labours are usually “data dumps”, unloaded in uncatalogued and disordered file collections on the internet, or archived in such labyrinthine ways that specific content is difficult to locate and access. Even the shadow libraries, such as LibGen and SciHub, where content is as searchable as a mainstream library catalogue, present problems to the common user. The content of these collections is
distributed through torrents, and therefore requires a certain technical understanding to facilitate access, and the sites are often changing servers, moving around the landscape of the internet to avoid being shut down due to the illicit nature of their contents. Additionally, librarians and information professionals, as revealed by the interview participants, are understandably resistant to promoting this content, if they are aware of its existence, cautious of legal issues.
Conclusion and Recommendations

“We can only finally judge whether the activities of such supposed pirates are legal or not, legitimate or not, just or not, from some point 'projected into an indefinite future’”

(Hall, 2012)

Piratical open access exists in a complicated space between the freedom of information and the theft of private content. As a movement, it is amorphous and its ideological aims yield uncertain victories. Furthermore, because it is motivated by, in turn, a belief in the openness of knowledge and a prehensile, personal need for information, this kind of hacktivism is ethically difficult to unpack.

In many ways, as a movement, scholarly hackivism shares the same moral architecture as the Open Access Movement in its radical beginnings. If open access is about removing the economic barrier to research, then piratical open access has the same aim. In drawing wider attention to the problems with academic publishing, hacktivists encourage publishers, academics and librarians to face and address the issue. As a form of activism, this has had some success, impacting on publishing operations and challenging organisations like JSTOR and NASA. The ‘shadow libraries’ have gained access to, and provided means of access to, huge swathes of scientific literature, with a user base spread across the world (Ernesto, 2015b). Action like this makes the importance of access to journal content more visible to the wider public, and thus furthers the goals of OA Movement.

However, there are many criticisms of this kind of activism. There are concerns that piracy impacts negatively on libraries, and may force their subscription costs up,
indirectly making the problem worse. The Open Access Movement, in recent years, has aimed to work with publishers, who hold the legal rights to the content, in making it open, instead of working against them to ‘liberate’ it. Indeed, where this brand of hacktivism falls down is that it does not remove the legal barriers to research, which inevitably attempt to reassert themselves, as publishers file lawsuits and issue take-down orders. It is due to this that, even if all academic content were hacked and uploaded to shadow libraries, this still could not take the place of the push for legitimate, legal open access. Potential difficulties in locating and accessing this content and that the shadow library may be removed from the internet by legal action at any time prevent a mass ‘biblioleak’ being wholly revolutionary. Additionally, it is difficult to draw a line between hacking for public good and for doing out of personal interest. In general it seem that, when it happens covertly, with personal motivations, the act is not political, it is theft, but when it is discovered and defended, drawing attention to the problem, it is symbolic act of civil disobedience (Manion and Goodrun, 2000). This seems to be the point where those taking a stand against publishers and those just trying to access the material diverge. In a recent example, SciHub, a platform similar in aims and scope as LibGen, has been named in a law suit by Elsevier. However, instead of backing down, the site’s founder, Alexandra Elbakyan, is prepared to argue her case in court, claiming that Elsevier’s paywalls are themselves “illegal” (Ernesto, 2015b). Although this thinking does not justify every instance of piratical open access, this is illustrative of the moment an act of hacking is politicised, becoming one of civil disobedience.

This sort of illegal activity is demonstrative of the way the internet is now being used; social media is becoming an important tool in academia and, for the first time, we see scholarly communications crowd-sourced, fostering an online academic community. And, although this practice is illegal, it is key that for the library user,
“walking into a library and borrowing a book or downloading an article from a scholarly database involves the same immediate financial cost as downloading a pirated copy of a book: none.” (Greenhill and Wiebrands, 2012). The #icanhazpdf hashtag has proved popular because it is easier and quicker than accessing articles using legal means, like interlibrary loans. Individuals will use online content, whether it is legal or not, and will share content that they do have access to with friends and colleagues. Rather than resisting the tide, finding ways to make this legal would help open up certain elements of academic communications.

Some librarians and information professionals report that they will not generally share content found on the internet with library users because of its dubious legality, and will not download and share content they have subscription access to, out of fear of reprisals from publishers, who could impose fines and revoke access. If scholarly sharing was permitted in licence agreements, this would allow librarians and scholars to open up closed academic content. Although the publisher Nature is currently piloting a method of allowing subscribed users to share read-only versions of articles, this is just another way of restricting access to content; although it superficially permits article sharing, the publishers still have ultimate authority over it, and can rescind access at will. Pursuit of more flexible licence agreements and copyright agreements, giving subscribers greater control of what they have paid to access and how they can use it, will assist those who want to share scholarship without having to depend on the good will of publishers.

Most agree that publishers hold too much power over scholarly communications, and therefore over academia, and to be effective, publishing reform must redress this imbalance of power. Open access, in itself, does not appear to be doing this, particularly in the case of Gold OA. Asking publishers to give up their position in the market and the power they wield over scholarly communications is, from their
perspective, an unattractive prospect they are unlikely to agree to, which is why some feel it is necessary to bypass publishers and their regulations in order to force their hand. However, this practice is unlikely to be successful in securing reform in the long-run; in Peter Suber’s words, open access should be constructive, not destructive (2013). Although hacktivism in this area draws attention to the problems and injustices of academic publishing, its further attacks on the practice are often reactionary and have the potential to harm libraries as much as they harm publishers. Solutions other than open access are clearly necessary to solve all the problems with academic publishing, and a reform to copyright law and to licence agreements would help manage the current issues, nullifying much of the illegality surrounding piratical open access, while new solutions to the problems in scholarly communications are sought.
References


Beall, J. (2013). Predatory publishing is just one of the consequences of gold open access. Learned Publishing, 26(2), 79-84.


Day, E. (2013, June 2). The boy who wanted to do good. The Observer. p.8


60


Zivkovic, B. (2012, December 8). #ICanHazPDF ettiquete: don't thank senders, don't use hashtag to announce sending, delete tweet after receiving PDF [Twitter post]. Retrieved from: https://twitter.com/BoraZ/status/277621081219678209
Appendix A: Interview Questions

1) Do you consider Open Access a viable solution to the problems with academic publishing?
   Would this solution be Gold or Green OA? Are there alternatives?

2) What is your opinion of incidences where paywalled academic content has been hacked and disseminated freely online?
   For instance, have you ever used articles online that may not have been uploaded legitimately, and was this useful to you? Or is this just copyright violation in the same vein as illegally downloading music and films?

3) Are you aware of any specific incidences of the illegal distribution of subscription-based journals or other paywalled scholarly content?
   For example, are you aware of Aaron Swartz, Michael Eisen or Greg Maxwell? Are you aware of academics uploading their papers online in violation of their agreements with journal publishers?

4) If you needed to access an article that was behind a paywall and inaccessible, how would you go about accessing it? How would you advise others about accessing it?
   For example, would you:
   - Request an interlibrary loan through your institution
   - Search Google Scholar, academic.edu, and other web sources
   - Ask a colleague at another institution to send it to you
   - Place a request on Twitter or other social media source

5) If a publisher has digitised and made available out-of-copyright content, would you consider it right for that content to then be paywalled?
   Although content in many databases, such as JSTOR, is no longer under copyright, because the publisher has gone to the expense of making this content available, many consider it right that they recoup their costs by charging a subscription to this
content. Many others consider this unethical. What is your opinion?

Participants were also asked if they had any other comments to add.
Appendix B: Ethics Documentation

Ethics Application

Consent Form

Approval Letter
## Section A: Applicant details

**Created:**  
Sun 17 May 2015 at 15:56

**First name:**  
Suzanna

**Last name:**  
Hall

**Email:**  
s hall11@sheffield.ac.uk

**Programme name:**  
MA Librarianship

**Module name:**  
Dissertation

**Last updated:**  
22/07/2015

**Department:**  
Information School

**Date application started:**  
Sun 17 May 2015 at 15:56

**Applying as:**  
Undergraduate / Postgraduate taught

**Research project title:**  
Open Access and Civil Disobedience: What is the relationship between hacktivism and the OA movement?

## Section B: Basic information

### 1. Supervisor(s)

<table>
<thead>
<tr>
<th>Name</th>
<th>Email</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stephen Pinfield</td>
<td><a href="mailto:s.pinfield@sheffield.ac.uk">s.pinfield@sheffield.ac.uk</a></td>
</tr>
</tbody>
</table>
### 2: Proposed project duration

Proposed start date:  
*Wed 1 July 2015*

Proposed end date:  
*Tue 1 September 2015*

### 3: URMS number (where applicable)

URMS number  
*not entered*

### 4: Suitability

Takes place outside UK?  
*No*

Involves NHS?  
*No*

Healthcare research?  
*No*

ESRC funded?  
*No*

Involves adults who lack the capacity to consent?  
*No*

Led by another UK institution?  
*No*

Involves human tissue?  
*No*

Clinical trial?  
*No*

Social care research?  
*No*

### 5: Vulnerabilities

Involves potentially vulnerable participants?  
*No*

Involves potentially highly sensitive topics?  
*No*
Section C: Summary of research

1. Aims & Objectives

The aim of this research is to uncover public and professional opinions of hacktivism when it relates to scholarly content.

Looking specifically at the issues surrounding academic publishing, this study will explore the relationship between hacktivism and the Open Access movement. Examining data gathered on the public and professional perspectives on the subject, this study will discuss the role of hacktivism in the promotion and propagation of the Open Access movement and whether a disruptive form of advocacy is productive or problematic.

Objectives include:
To identify and analyse patterns and similarities between the perceptions of hacktivism held by involved parties.
To analyse the relationship between hacktivism and Open Access and identify interactions, comparable ideologies and tensions.

Using the ideas of Michel Foucault as a theoretical lens, to assess this relationship.

2. Methodology

There will be two stages to gathering the data for this project. The first will involve a textual, thematic analysis of web and social media content. This content will be searched for using the Open Access Tracking Project (http://tagteam.harvard.edu/hubs/oatp), which monitors news and comments about OA, and the PDF Tribute page (http://pdftribute.net), which aggregates the Twitter posts that used the #pdftribute tag used in honour of Aaron Swartz, as well as using Twitter analytics to track other related content on social media, such as the #canhazpdf tag that is being increasingly utilised to gain access to paywalled content.

I will use thematic analysis to identify patterns and reoccurrences within the data corpus. The data will be stored and arranged within the NVivo software.

Building from the emerging themes, semi-structured interviews with information professionals and people connected with the Open Access movement will be conducted. This resulting data will be coded and analysed using the method described above.

This information will be used to create an overview of public and professional opinions and perspectives of acts of hacking and disruptive protest when it relates to scholarly content. Using the work of philosopher Michel Foucault, particularly his ideas on the relationship between power and knowledge and the role of the institution in the formation of truth, as a theoretical lens, the relationship and interaction between hacktivism and Open Access will be examined and discussed.

3. Personal Safety

Raising personal safety issues? No

Personal safety management

- not entered -
Section D: About the participants

1. Potential Participants

Potential participants will all be information professionals working within higher education organisations. They will have some professional responsibility within their organisation for Open Access, e-resources or copyright, such as the manager of an institutional repository.

2. Recruiting Potential Participants

Participants will initially be approached via email. The research question, its context and aims of the research will be given to them to allow them to make an informed decision about whether they wish to participate.

2.1 Advertising methods

Will the study be advertised using the volunteer lists for staff or students maintained by CiCS? No
- not entered -

3. Consent

Will informed consent be obtained from the participants? (i.e. the proposed process) Yes

A consent form will be distributed to all participants, detailing the scope of the research and how their contribution will be used, before any interviews commence but after the participants have agreed, in principle, to partake. Anonymity for all participants will be guaranteed. The option for all participants to withdraw from the research project, at any stage upon request, will be given.

4. Payment

Will financial/in kind payments be offered to participants? No
- not entered -

5. Potential Harm to Participants

What is the potential for physical and/or psychological harm/distress to the participants?

None.

How will this be managed to ensure appropriate protection and well-being of the participants?

N/A

Section E: About the data

1. Data Confidentiality Measures

All data gathered from interviews will be anonymised as far as possible, with names, places of
work, job title, gender, age, and anything else that may arise during the course of the interview that might identify the participant, removed or obscured.

Because the other data involved in this project is gathered from Twitter and other social media platforms, and is publicly available, there should be no need to anonymise this data. However, as these platforms have sometimes been used to distribute copyrighted, pay-walled content, and there may be potential legal ramifications associated with such actions, usernames utilised on social media platforms or any identifying details will not be included.

2. Data Storage

All data will be stored in password-protected files on a the university research data server, operated by the school specifically for the storing of research data.

Access to the data will be restricted to myself and my supervisor, Stephen Pinfield.

The control and analysis of the data will be restricted to myself, allowing for input from my supervisor.

The data corpus will be destroyed at the end of the project (01/09/2015), however it may be reported in future publications or presentations.

Section F: Supporting documentation

Information & Consent

Participant information sheets relevant to project?
No

Consent forms relevant to project?
Yes

Consent Forms

- Ethos_Consent_Form.docx
  (Document 011615)

Additional Documentation

- Dissertation_Proposal.pdf
  (Document 011616)
  Dissertation Proposal, originally submitted to Information School 20/06/2015

External Documentation

- not entered -

Official notes

- not entered -

Section G: Declaration

Signed by:
Suzanna Hall
Date signed:
Sat 11 July 2015 at 13:51
Open Access and Civil Disobedience: What is the relationship between hacktivism and the OA movement?

Researchers
Suzanna Hall (Researcher) s.rhall1@sheffield.ac.uk
Stephen Pinfield (Supervisor) s.pinfield@sheffield.ac.uk

Purpose of the research
The objective of the research is to examine public and professional opinions of “hacktivism” where it relates to academic research articles and other scholarly content. Hacktivism can be defined as the act of hacking for political or ethical reasons.

Who will be participating?
We are inviting information professionals working at higher education institutions who have some responsibility for Open Access, e-resources or copyright attached to their role.

What will you be asked to do?
We will ask you to answer some questions relating to your knowledge and opinions about the research question. You do not have to have any specialist knowledge about the research topic.

What are the potential risks of participating?
The risks of participating are the same as everyday life. Although every care will be taken to anonymise all data, there is a small risk of this being violated.

What data will we collect?
You will be asked open-ended questions via email or phone interview. All audio will be transcribed. Only the transcriptions will be used for the coding process.

What will we do with the data?
Data will be stored in password-protected files on a private computer and on the secure university sever. It will not be kept in cloud storage or on external devices that could be subject to loss or theft.

Data will be analysed for inclusion in my dissertation, after the completion of which it will be destroyed. Anticipated completion date is 01/09/2015. The data will under no circumstances be made available for any future research, but the completed dissertation may be adapted for publication.

Will my participation be confidential?
We intend to keep all participants anonymous, so we will not disclose any personal details, such as your name, age, gender, place of work or job title. No audio recordings will be kept after they have been transcribed and any email exchanges will be deleted. We will make
efforts to ensure that any identifying details that may be inadvertently revealed during interview are obscured. However, data like this can be difficult to anonymise totally, so please bear this in mind.

What will happen to the results of the research project?
The results of this study will be included in my master’s dissertation which will be publicly available. Please contact myself or the School in six months if you wish to receive a copy.

I confirm that I have read and understand the description of the research project, and that I have had an opportunity to ask questions about the project.

I understand that my participation is voluntary and that I am free to withdraw at any time without any negative consequences.

I understand that I may decline to answer any particular question or questions, or to do any of the activities. If I stop participating at all time, all of my data will be purged.

I understand that my responses will be kept strictly confidential, that my name or identity will not be linked to any research materials, and that I will not be identified or identifiable in any report or reports that result from the research.

I give permission for the research team members to have access to my anonymised responses.

I give permission for the research team to re-use my data for future research as specified above.

I agree to take part in the research project as described above.

Participant Name (Please print)
Participant Signature

Researcher Name (Please print)
Researcher Signature

Date

Note: If you have any difficulties with, or wish to voice concern about, any aspect of your participation in this study, please contact Dr Jo Bates, Research Ethics Coordinator, Information School, The University of Sheffield (ischool_ethics@sheffield.ac.uk), or to the University Registrar and Secretary.
Dear Suzanna

**PROJECT TITLE:** Open Access and Civil Disobedience: What is the relationship between hacktivism and the OA movement?

**APPLICATION:** Reference Number 004185

On behalf of the University ethics reviewers who reviewed your project, I am pleased to inform you that on 22/07/2015 the above-named project was **approved** on ethics grounds, on the basis that you will adhere to the following documentation that you submitted for ethics review:

- University research ethics application form 004185 (dated 11/07/2015).
- Participant consent form 1010599 version 1 (01/07/2015).

If during the course of the project you need to **deviate significantly from the above-approved documentation** please inform me since written approval will be required.

Yours sincerely

Matt Jones
Ethics Administrator
Information School