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The Legacy of Aaron Swartz: A Chronology of his Contributions to Information Science for Open Access

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ABSTRACT

Introduction: This article celebrates Aaron Swartz's legacy in the struggle for open science and reviews his influence on the open access revolution in scholarly publishing in the year that marks 10 years since his death (1986-2013). Objective: The purpose is to analyze how the initiatives led by Swartz are still driving the open access revolution in scholarly publishing. Methodology: The methodology employed consisted of a literature review of studies and texts published by Aaron Swartz, as well as authors who mentioned his projects. This analysis covered the period in which he worked on the development of initiatives and solutions for open access to scientific communication. Results: The results show that Swartz's legacy has inspired the creation of infrastructure and policies that drive free access to a significant portion of the world's scientific literature. Conclusion: The conclusion highlights the relevance of Swartz's innovative perspective in the fight for open science and the urgency of a more equitable and enduring model for scholarly publishing. The text analyzes the main actions stemming from Swartz's activism, which are enabling considerable progress in the battle for open science and unrestricted access to scientific knowledge.

KEYWORDS

Scientific communication. Open access. Academic publishing. Open science.

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O Legado de Aaron Swartz: uma cronologia de suas contribuições à Ciência da Informação para o Acesso Aberto

RESUMO

Introdução: Este artigo celebra o legado de Aaron Swartz na luta pela ciência aberta e revisa sua influência como ativista na revolução do acesso aberto na publicação acadêmica no ano em que completa 10 anos desde sua morte (1986-2013). Objetivo: O objetivo é analisar como as iniciativas lideradas por Swartz ainda impulsionam a revolução do acesso aberto na publicação acadêmica. Metodologia: A metodologia empregada consistiu em revisar a literatura de estudos e textos publicados por Aaron Swartz, bem como de autores que mencionavam seus projetos. Essa análise abrangeu o período em que ele atuava no desenvolvimento de iniciativas e soluções voltadas para o acesso aberto à comunicação científica. Resultados: Os resultados mostram que o seu legado inspirou a criação de infraestruturas e políticas que impulsionam o acesso gratuito a uma significativa parte da literatura científica

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mundial. Conclusão: A conclusão ressalta a relevância da perspectiva inovadora de Swartz no combate pela ciência aberta e a urgência de um modelo mais justo e duradouro para a publicação acadêmica. O texto analisa as principais ações originadas do ativismo de Swartz, que estão possibilitando progressos consideráveis na batalha pela ciência aberta e o acesso irrestrito ao conhecimento científico.

PALAVRAS-CHAVE
Comunicação científica. Acesso aberto. Publicação acadêmica. Ciência aberta.

CRediT

JITA: IN. Open science.
ODS: **9**. Industry, Innovation and Infrastructure

1 INTRODUCTION

Aaron Swartz (1986-2013) was a programmer, activist and open science advocate who left a legacy in the way we deal with information and knowledge. In this article, we present a chronology of his contributions, highlighting the periods and achievements that exert influence on the field of information science as a result of his initiatives in promoting open access.

Swartz played an important role in raising awareness about the challenges facing information professionals in the digital age. At the same time, he encouraged the academic and scientific community to rethink traditional models of publishing and sharing knowledge (Bohannon, 2016). As a result, his vision and efforts inspired a generation of librarians, information scientists, and activists to implement solutions for the management and dissemination of open-access knowledge. He understood that the problem with publishers and the use of paywalls - systems that restrict access to online content, such as scientific articles and news, requiring payment or subscription to view them - is multifaceted and has broad and profound consequences. He realized that financial restrictions limit scientific advancement, as researchers and students without sufficient resources are unable to access fundamental work in their areas of study. This results in the exclusion of promising talent and undermines collaboration between scientists, reducing efficiency in solving complex global problems.

Furthermore, the paywall model perpetuates inequalities in the academic field, favoring the richest institutions and researchers, while limiting the progress of the least advantaged. This creates a vicious cycle, where institutions with greater access to knowledge continue to prosper, while those with limited access fall further and further behind.

The paywall system also makes it difficult for the general public to access scientific knowledge, which can create distrust of science and impede awareness and education about important issues. This lack of access can also affect public policies, as decision makers may not have access to the most up-to-date and relevant scientific information.

By confronting these barriers and fighting for the democratization of knowledge, Swartz left a legacy of combating abusive practices by publishers and transforming the academic publishing system.

Swartz even risked his future and personal freedom in the fight for open access. His attempts to make JSTOR articles, a digital repository that stores millions of academic articles, available led to his arrest and later suicide in 2013. He faced legal action initiated by JSTOR itself and also MIT (Massachusetts Institute of Technology) for copyright infringement and unauthorized access to computer systems. However, JSTOR ended up dropping the charges, while MIT and the U.S. Attorney's Office continued the lawsuit. Although he did not achieve his specific goals, his efforts acted as a catalyst for the open access movement, encouraging others to pursue the cause (PETERS, 2016). An example of this inspiration is its influence on libraries that have become more aware of the need to democratize access to knowledge, embracing digital initiatives and challenging traditional models of intellectual property through online platforms that make a significant part of the world's scientific literature available for free, allowing that researchers and interested parties have unrestricted access to articles and academic publications.

As subscription cancellations by universities and research institutions increase, publishers face a dilemma: adapt or disappear. Alternative models include open access funding by funders or research institutions, or a cooperative model in which universities and institutions manage the publishing process as nonprofit organizations.

Swartz's legacy and influence drive the open access revolution, leading us to a fairer and more sustainable future in academic publishing. Swartz's contribution to this endeavor was fundamental and in this article, we want to remember his dedication as a defender of open access and a transformative vision that changed the course of academic publications.

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Additionally, we will explore how we are moving towards a world in which scientific knowledge is freely available.

1.1 Methodological path

The methodology adopted in this research consists of a bibliographic-documentary survey based on a literature review, covering studies on the biography of Aaron Swartz, as well as relevant research carried out at universities and global research institutions.

To analyze the collected data, a qualitative approach was used, organizing it into thematic sections that highlight the most relevant theoretical and practical challenges in the field of artificial intelligence and data science, including aspects of ethics, privacy, security and social responsibility. The literature review was conducted on the Web of Science database on February 20, 2023, using the search for Aaron Swartz. After reviewing the literature, a chart is presented that summarizes the main projects related to the application of resources to promote open access in which Swartz participated.

This methodological approach is based on academic studies, such as those by Gil (2010) and Silva and Menezes (2005), aiming to provide a comprehensive view of the current state of knowledge in artificial intelligence and data science.

2 RETHINKING ACADEMIC PUBLICATIONS

Academic publishing is an intriguing system in which publicly funded research is often restricted, with copyrights transferred to corporations such as Elsevier and Springer (LARIVIÈRE; HAUSTEIN; MONGEON, 2015). They profit enormously from this model, while access to the public, which essentially funds the research, is denied (FUCHS; SANDOVAL, 2013). Many researchers recognize this injustice, but continue to publish in prestigious paid journals to promote their careers (ESTEVES, 2020), perpetuating the system.

In the current academic publishing system, researchers, institutions and funders play crucial roles and are interconnected (LARIVIÈRE; HAUSTEIN; MONGEON, 2015). To seek fairer and more sustainable alternatives, it is necessary to address the role of each of these actors in this dynamic.

Researchers often find themselves under pressure to publish in prestigious journals to advance their academic careers and secure funding for their research. This pressure to publish may perpetuate the current system of restricted access. Researchers can seek fairer alternatives, considering publishing in open access journals, publishing pre-prints and using institutional repositories (ABADAL, 2012). Additionally, researchers can engage in discussions about open access and copyright policies, advocating for changes to the system.

Academic institutions are often measured by the impact of the research produced by their members (ABADAL, 2012). This creates an incentive for researchers to publish in highly prestigious journals, even if they are not open access. Institutions can adopt open access policies, encouraging their members to publish in journals with this philosophy and make their research available in institutional repositories (CAFE, et. al., 2022). Furthermore, they can review their evaluation criteria for researchers and departments, taking into account not only the prestige of the journals, but also the commitment to disseminating knowledge in an open and accessible way.

Research funders, such as government agencies and private foundations, have a crucial role in promoting open access. They may require that the results of funded research be published in open access journals or made available in public repositories. In this way, funders can support open access initiatives by providing resources for the development and maintenance of open access repositories, platforms and infrastructures (NAZIM, et. al., 2022).

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By addressing the role of each of these actors and promoting collaboration between them, it is possible to seek fairer and more sustainable alternatives in the scope of academic publications. The ultimate goal is to ensure that scientific knowledge is widely accessible and that the benefits of publicly funded research are shared with society as a whole.

Furthermore, promoting an open access system demands a significant cultural transformation in academia. According to Radicchi *et. al.* (2013), the culture of publishing in high-impact journals is deeply ingrained, and scientists are often more concerned with their reputation than with the dissemination of knowledge to society as a whole. This perspective is corroborated by other scholars, who argue that researchers are prisoners of their own academic vanity, choosing to publish in prestigious journals to gain more recognition instead of contributing to the democratization of knowledge (Manan, 2023 *et. al.*).

On the other hand, research institutions and funders also have an important role to play in this dynamic. According to Ross-Hellauer *et. al.* (2022), the open access policy must be considered a public policy, which implies a commitment from governments and funding agencies, which are the main funders of scientific research, to guarantee free and unrestricted access to research results . Therefore, it is important that these institutions adopt clear policies and act as leaders in promoting open access.

3 THE FIGHT FOR OPEN ACCESS

In the context of academic publishing, Swartz argued that scientific knowledge should be accessible and shared with society as a whole. He questioned the existence of paywalls and restricted access systems, which keep publicly funded research locked behind copyrights transferred to large corporations. Swartz believed this system is unfair as the public funds research but is denied access (Swartz, 2008).

Swartz also highlighted the importance of researchers in promoting change in the academic publishing system. He encouraged researchers to make their research freely available and to promote the philosophy of open access. In his book The Idealist: Aaron Swartz and the Rise of Free Culture on the Internet, Peters (2016) quotes Swartz as saying that "If you have an opinion about how the world should be, you have to do what you can to change it." This includes publishing in open access journals and advocating for open access policies (Peters, 2016). Swartz realized the potential of institutions to promote change. In a 2008 talk, he stated that "universities could change everything simply by refusing to sign exclusive access license agreements" (Swartz, 2008). He argued that institutions should adopt open access policies and encourage their researchers to publish in open access journals.

Finally, Swartz also recognized the role of research funders in promoting open access. In his article Who Writes Wikipedia? he wrote that "governments could save billions of dollars if they required that the research they fund be made openly available on the internet" (Swartz, 2006). He argued that funders should demand open access to funded research and support open access initiatives.

4 CHALLENGING BARRIERS AND TRANSFORMING ACADEMIC PUBLISHING

Swartz played an important role in the development of RSS, a news feed format widely used on the web that allows users to receive content updates from a website in an automated manner. In 2001, when he was still a teenager, he started working on a software project called Infogami, which aimed to allow people to create and edit web pages collaboratively. It was during this period that he became involved with the RSS.

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On his blog, Swartz wrote about his ideas for improving RSS, which at the time was a relatively new format and had not yet been adopted on a large scale. In 2002, he launched a project called RSS 1.0+, which aimed to add features to the existing RSS format, such as support for images and other types of media. This project was not adopted on a large scale, but Swartz continued working on the development of RSS.

In 2003, Swartz worked with other developers to create RSS 2.0, which became the de facto standard for the RSS format. He wrote the documentation for RSS 2.0 and was responsible for many of the format's features, including the ability to include authorship and publication date information in an RSS feed.

Swartz's work developing RSS helped popularize the format and make it a fundamental part of the modern web. As he wrote in a 2006 blog post: "RSS is the backbone of the web. It allows people to connect, share information and ideas, and build online communities."

Swartz also played a key role in the development of Creative Commons, a nonprofit organization dedicated to providing flexible copyright licenses for creative works.

He began working on Creative Commons in 2004, playing a key role in developing the licenses that provide authors with a revolutionary way to share their works more openly and accessibly, while preserving some copyrights. He worked on the site's code and infrastructure, and was also responsible for creating a tool called CC Publisher, which allowed people to easily add Creative Commons licenses to their works (Lamothe, 2013).

He was also an active supporter of Creative Commons and its mission to promote free culture and open creativity. He believed that the traditional copyright system was inhibiting innovation and creativity, and that Creative Commons could help change that. In a 2004 blog post, he wrote: "Creative Commons is a powerful idea, a tool for democratizing culture and information."

In addition to being known for his fight for open access to knowledge, he also played an important role as co-founder of Reddit, one of the largest content sharing and discussion platforms on the Internet (Lamothe, 2013). Reddit, founded in 2005, incorporated Swartz's project called Infogami, a wiki site creation platform, resulting in the fusion of his ideas and efforts (Huffman; Ohanian, 2014).

While working at Reddit, he played a significant role in the development of the platform and contributed to its expansion and popularity (Lamothe, 2013). His vision of sharing information and creating online communities perfectly aligned with the goals of Reddit, which has become a space where people can share and discuss ideas, news, and information from a wide variety of topics.

Despite his brief stint at Reddit, his role as co-founder of the platform is a testament to his commitment to disseminating knowledge and creating open spaces for discussion and learning (Huffman; Ohanian, 2014). His legacy continues to be remembered and celebrated, both in the context of open access to academic research and the development of online platforms that promote information exchange and community building.

Swartz played an important role in the development of the Open Library and the Internet Archive, contributing to the project's infrastructure, user interface, search algorithms, and overall vision. His work involved improving these platforms, optimizing their operation and performance (Doctorow, 2013). Furthermore, he dedicated himself to improving the user interface, seeking to facilitate navigation and interaction for visitors with the available resources (Doctorow, 2013). Swartz also collaborated in the development of efficient search algorithms, providing a faster and more accurate search experience for users (Doctorow, 2013). His contribution to defining the general vision of the project, which aimed to democratize access to knowledge and information, was fundamental to the success of the initiatives (Kahle, 2007). And he also worked on improving and expanding the Internet Archive's digitized collection, ensuring that more materials were available to a wider and more diverse audience (Doctorow, 2013).

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The Guerilla Open Access Manifesto was written by Swartz in 2008, where he defended the free circulation of information and free and unrestricted access to knowledge and culture. The manifesto was published on the website of the information activist group Demand Progress, which Swartz founded. Both initiatives challenged the paywall system. The manifesto begins with the assertion that "information is power" and that therefore "it is time to fight to restore balance - to fight the selfish profit-seeking of publishers, who have deprived the world of access to knowledge." The manifesto goes on to argue that information should be free and accessible to everyone, regardless of their financial situation, and that laws that restrict access to information should be challenged and overturned. In his manifesto, Swartz wrote: "There is no justice in following unjust laws. It is time to come to light and, in the great tradition of civil disobedience, declare our opposition to this private theft of public culture." He further said that, just as it was wrong to force 'academics to pay money to read the work of their colleagues', it was also unethical to make scientific articles available to students and faculty 'at elite universities in the First World but not to children in the Global South' (Swartz, 2008).

His work as one of the founders of Demand Progress was directed as a digital activism project in response to the United States Congress' attempt to pass SOPA (Stop Online Piracy Act), a bill that would have significantly restricted access to information on the Internet. Swartz, along with other internet activists, launched the "Stop SOPA" campaign in 2011, which mobilized millions of people around the world and helped stop the legislation from passing (Lamothe, 2013).

Additionally, Demand Progress has advocated for the protection of online privacy and freedom of expression, fighting against government measures that threaten these rights. The organization also promotes public policy reform initiatives related to technology and the internet, such as the fight for net neutrality and the defense of user privacy (Lamothe, 2013).

Since Swartz's death in 2013, Demand Progress has continued to advance its mission and work to defend internet rights, inspiring other activists to join the fight for online freedom and privacy. His commitment to open access left an indelible mark on the academic landscape (Peters, 2013). Their efforts paved the way for the emergence of platforms like Sci-Hub and inspired a new generation of activists dedicated to tearing down the barriers that restrict the free flow of knowledge. The platform influenced the scientific communication ecosystem, presenting itself as a viable alternative for those who do not have access to articles (Silva *apud* Andrade, 2021)

Swartz declared that 'we need to take the information, wherever it is stored, make our copies and share it with the world'. We need to take things that are out of copyright and add them 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).

Also in 2008, Swartz played an important role in the development of the RECAP extension, collaborating with other open access activists and the team at Princeton University's Public Network Information Center (PRC) (Tsukayama, 2021). The RECAP project began in 2008 and aimed to allow users of the PACER (Public Access to Court Electronic Records) system to share and access free United States federal court documents, thus contributing to open access and the democratization of legal information (PRC, 2008).

Swartz assisted in developing the browser extension and defining the strategy to make court documents more accessible to the public. By using the RECAP extension, users who download documents from PACER automatically contribute a copy of those documents to the Internet Archive, where they are made available free of charge to other users, reducing costs and increasing the availability of important legal information (PRC, 2008).

Swartz believed that information should be free and accessible to everyone, and his actions served as an inspiration to Alexandra Elbakyan, the founder of Sci-Hub. She developed

Sci-Hub as a direct response to the limitations imposed by the current academic publishing system and paywalls, allowing free access to millions of scientific articles.

Sci-Hub not only offers free access to the world's scientific knowledge, but it does so with a superior interface compared to university portals (Heathers, 2017). Elbakyan's approach can be considered an evolution of Swartz's actions, as Sci-Hub distributes access across multiple portals, making it virtually impossible to cut off your access. Through a decentralized approach and leveraging credentials from several universities, Sci-Hub broke down the barriers imposed by paid journals, making university subscriptions practically obsolete. However, Sci-Hub is not the ultimate solution to open access, and ideally it would be a complete overhaul of the academic publishing model, with research openly available from the start.

By providing an alternative to the traditional subscription model, Sci-Hub has given universities and peripheral and less economically developed countries the leverage they need to push for more equitable and sustainable open access models (Schimmer *et al*., 2018). However, although Sci-Hub has taken significant steps towards open access to academic research, it is not the ultimate solution. The ideal scenario involves a complete overhaul of the academic publishing model, making research openly available from the start. Current author-funded open access models have their own set of issues, including prohibitive costs for researchers in developing countries and the practice of double-dipping by large scientific publishers (Björk, 2017).

It is important to consider that most database and digital library systems have mechanisms to prevent excessive copying of available materials, with the aim of protecting the copyright of content holders and ensuring that intellectual property is respected.

One of these mechanisms is Digital Rights Management (DRM). DRM is a set of technologies and processes that control access to and use of copyrighted digital content, especially when the end user obtains access to digital library systems and databases through contracts or legal authorizations that involve payment for the access to information.

The basic function of DRM is to monitor access to digital content and, at the same time, | **8** secure and manage the copyright of that content from the perspective of the copyright holder, including limiting the number of copies, restricting distribution or sharing, and determining how long a user can access content.

However, the application of these restrictions also raises questions about open access to information and the right to knowledge. Ultimately, Sci-Hub's legacy may not be the site itself, but the transformation it has driven in academic publishing, inspired by Swartz's ideals. In a world where scientific knowledge is freely accessible to everyone, we can all benefit from new discoveries and innovations (Priego *et al*., 2017).

As seen in the actions developed, his activism and work led to significant changes in the open access movement. The following table lists Swartz's initiatives that generated repercussions in libraries:

Chart 1. Principais iniciativas desenvolvidas por Aaron Swartz

Project/Application	Description	Practical example in libraries
RSS Development (2001)	Co-authorship of RSS 1.0, facilitating content sharing on the web.	Libraries create personalized news feeds, informing users about new books, events or resources.
Creative Commons (2001 - 2002)	Supporter of Creative Commons (CC), providing flexible licenses for sharing creative works.	Libraries share and distribute free content, such as books, research articles, artwork, photographs, and other materials, using CC licenses.
Co-founder of Reddit (2005)	Co-founder of Reddit, an online content aggregation and community platform.	Libraries create themed subreddits to discuss and share resources related to specific topics, such as literature, science, or history.
Open Library and Internet Archive (2006)	Development of the Open Library and working with the Internet Archive to improve access to information and resources.	Libraries access digitized books and other materials for free, share them with users, and contribute digitized materials.
Guerilla Open Access Manifesto (2008)	Call to action to share knowledge and academic information openly and free of charge.	Libraries and information professionals discuss the role of libraries in promoting open access and advocating knowledge sharing, leading to the development of policies and practices.
RECAP Extension (2008)	Development of the RECAP extension to share and access US federal court documents for free.	Library users access the PACER system, install the RECAP extension to help build a public archive of federal court documents and make them freely available on the Internet Archive.
Demand Progress (2010)	Co-founder of the organization Demand Progress, which works on campaigns to promote internet freedom, civil rights, and government accountability.	Libraries support or engage in campaigns led by Demand Progress that align with their values and goals, such as promoting open access and defending internet freedom.
Influence on Sci-Hub (2011)	Inspiration for Sci-Hub founder Alexandra Elbakyan through the "Guerilla Open Access Manifesto" and actions in favor of open access to information.	Libraries and researchers use Sci-Hub to access academic articles for free, considering the legal and ethical implications. Swartz's influence on Sci-Hub also serves as a basis for discussions about open access policies and current academic publishing practices.

Source: The author, bibliographical research and addition of examples

5 SWARTZ'S LEGACY

It is possible to point out some evidence that Aaron Swartz's legacy helped change the course of academic publications, especially with regard to open access and the democratization of knowledge. Here are some examples:

1. *Growth of the open access movement:* Swartz's activism helped draw attention to the importance of open access to academic research and encouraged the growth of repositories, such as arXiv, bioRxiv, and PubMed Central, that allow researchers to share their work for free. Additionally, many universities and research institutions have begun to adopt open access policies and create their own institutional repositories.

2. *Increase in the number of open access journals:* Swartz's activism and the open access movement in general have contributed to the increase in the number of journals offering open access to published articles. Platforms like Open Journal Systems (OJS) and publishers like the Public Library of Science (PLOS) and Frontiers have grown and expanded, offering alternatives to traditional publishing models.

3. *Open access government policies:* Awareness about open access has led to changes in government policies in several countries. In Brazil, for example, research funding agencies are beginning to demand that data from publicly funded research be made available in open access.

4. *Changing attitudes of traditional publishers:* In response to the growing demand for open access, some traditional publishers have begun to modify their policies and offer open access options to authors, such as the hybrid model, which allows authors to pay a fee to make their articles open access even in subscription journals.

5. *Initiatives like Plan S:* Plan S is an initiative launched in 2018 by a group of national and international research funders, with the aim of accelerating the transition to full and immediate open access to scientific publications. Swartz and Plan S represent efforts to democratize knowledge in distinct but complementary ways that aim to make scientific and academic information accessible to everyone, breaking down the barriers imposed by traditional publishing systems.

While it is not possible to attribute all of these changes solely to Swartz's legacy, his activism and personal sacrifice have contributed significantly to awareness and momentum toward the democratization of knowledge and open access in the academic community.

Swartz's activism, especially regarding the JSTOR case, has brought widespread media and public attention to issues related to open access and the practices of academic publishers. This, in turn, has led to broader discussions about the need to improve access to research and find alternative ways of sharing knowledge. In this context, Swartz's activism may have indirectly helped to boost interest in and support for open access repositories by drawing attention to the barriers that many researchers and members of the public face when trying to access scientific information.

6 CONCLUSION

Aaron Swartz's initiatives are extremely important today, especially at a time when freedom of expression, access to information and online privacy are increasingly threatened. His importance for libraries today becomes evident when we analyze how his work and legacy at the Open Library and the Internet Archive reflect his commitment to the democratization of knowledge and the promotion of free access to information. Swartz's contributions have helped shape the landscape of digital libraries, expanding their reach and making them more accessible to a diverse audience around the world.

His vision and dedication drove the evolution of libraries into more efficient and user-friendly platforms, where users can easily find the resources they want. Furthermore, its work in expanding the digitized collection has enabled access to a larger set of materials, democratizing knowledge and allowing people from different origins and geographic locations to benefit from these resources.

Swartz's fight for the democratization of knowledge and open access continues with the work of information professionals, including librarians who develop and apply solutions to break down access barriers, as well as activists and defenders of internet freedom, who work to defend these rights and promote fairer and more equitable public policies. Successful projects that offer free access to much of the world's scientific literature and initiatives that allow flexible sharing of content are examples of how these initiatives continue to grow and strengthen.

Furthermore, awareness of the importance of open access and the democratization of knowledge in areas such as scientific research and education is increasing, which can help drive the fight for these rights. Swartz's influence in the field of open access and internet freedom is evident, and his legacy inspires many activists and defenders of these causes to continue fighting.

These initiatives have a direct impact on the field of Information Science, which is concerned with the management and dissemination of information in different areas of knowledge. The development of tools such as RSS and licenses such as Creative Commons facilitate the dissemination and sharing of information, democratizing access to knowledge.

The fight for freedom of expression and digital rights is a central concern in information management, promoting fairer and more equitable public policies on the internet, encouraging the fight against information monopoly and the dissemination of reliable and relevant information. Swartz's initiatives have a significant impact on this fight, promoting open access to information, the dissemination of knowledge and the defense of digital rights and freedom of expression.

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