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Meet Alexandra Elbakyan, the researcher who's breaking the law to make science free for all

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Javier Zarracina/vox

For years, there's been a battle in academia over access to knowledge. Proponents of the **open access movement** argue that science is a public good, often funded by taxpayers, and that locking it up behind expensive paywalls stalls scientific progress.

Opponents, particularly the publishers of journals, argue that there are all sorts of costs that go into publishing science and those costs need to be recovered. Without publishers, they argue, there would be no arbiters of science.

Enter Alexandra Elbakyan. Hailed as **a hero** by open access acolytes, she's on a mission to make the world's science accessible to all.

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In 2011, the Kazakhstan native quietly launched a site called Sci-Hub, **which now hosts 47 million academic papers**. To be clear, this isn't legal. Elbakyan doesn't own the copyrights to these articles; the publishers do. That's part of the reason the global journal publisher Elsevier took action against Elbakyan. A New York district court in October also ordered that the site be taken down; it returned shortly after with a new overseas domain.

In Elbakyan's view, it's not just publishers who are impediments to science access — copyrights should be abolished, too.

So far, the neuroscience researcher has managed to evade the law from her base in what is believed to be Russia. (She would not confirm her location.) In an email interview, I asked her about the legal challenges she's now facing, her guiding philosophy, and what she makes of Sci-Hub's critics.

Julia Belluz: People are calling you the "Robin Hood of science." What do you think about that?

Alexandra Elbakyan: Some people can argue that this is inaccurate, since Robin Hood was a robber and free copying of information cannot be equated to robbery. Copying is not the same as stealing, because the owner does not lose his possession.

But if the main idea behind Robin Hood is not robbery but social justice, then I agree.

JB: What inspired you to set up Sci-Hub?

"AFTER SENDING TENS OR HUNDREDS OF RESEARCH PAPERS MANUALLY, I WANTED TO AUTOMATE MY WORK"

AE: I was an active participant in online communities for scientists. These communities were based on forums — the now-outdated web technology that preceded social networks. What all students and researchers were doing there is helping each other to download literature behind paywalls. I became interested and very involved. Two years before, I already had to pirate many paywalled papers while working on my final university project, which was dedicated to brain-machine interfaces. So I knew well how to do this and had the necessary tools.

After sending tens or hundreds of research papers manually, I wanted to develop a script that would automate my work. That's how Sci-Hub started. The first users of the script were members of the online forum about molecular biology.

At first, there was no goal to make all knowledge free. The script was intended to make the life of the community easier, i.e., to make the process of unlocking papers faster and more convenient. The idea was partially inspired by anonymizer websites. An example is **anonymouse.org/anonwww.html**. Here, you can paste the link, and it will be opened via proxy server.

These websites are used, for example, to bypass internet censorship. I was actively using these websites, and then I thought — why cannot I do the same for research papers? A user can paste a link to the article, and it will be opened.

The fact that the script was intended to serve papers, and not to make all science free, was critical, because it allowed the website to grow continuously for several years. If I tried to download millions of papers quickly (as **Aaron Swartz** tried to do) and then spread them, I would have definitely failed from the start.

JB: You're quickly becoming a hero of the open access movement. What's your guiding philosophy here?

AE: There are two reasons I became inspired by open access. The first one is practical, because I myself did not have access to research papers I need. And the second is more philosophical. I like the idea of communism, and the idea that knowledge should be common and not intellectual property is very relevant. That is especially true for information. Research articles are used for communication in science. But the word "communication" implies common ownership by itself.

"AS A DEVOUT PIRATE, I THINK THAT COPYRIGHT SHOULD BE ABOLISHED"

Later I became acquainted with the works of **Robert K. Merton**, the founder of sociology of science. Back in the first half of the 20th century Merton noticed that common ownership of knowledge (i.e., communism) is one of the essential features of science that makes it work. He found the concept of intellectual property to be self-contradictory.

As a devout pirate, I think that copyright should be abolished. At least some corrections to the laws should be made that prohibit prosecutions or injunctions against free distribution of scientific knowledge and educational resources.

That is a different approach from the mainstream open access movement, which argues that publishing models, not laws, should be amended. But the idea is the same.

JB: What kinds of responses have you gotten to Sci-Hub?

AE: Plenty of elaborate responses I got are in Russian, because we have an active community here. I will translate a couple of them.

> I'm from I.M. Sechenov First Moscow State Medical University. It is a pleasure that wide spectrum of domestic publications are available at the university library. But if we consider foreign ones, all is limited to trivial PubMed access. The website is our everything.
>
> I study the evolution of IT with the emphasis on design principles, human-machine interfaces and etc. For this invaluable was access to articles on PIM, UI/UX, starting from historical examples such as MIT Dataland, VIKI, AUGMENT, HP NewWave, Xanadu, Raton Laveur and etc. and ending with current research. As result I became, I guess, the world-leading expert in this field. Thanks Sci-Hub for the help. I'm not going to forget it.

I also got lots of negative feedback that concerned mainly the ideas and philosophy behind the project, not the website operation itself. What is especially disliked is the relation to communism. There were plenty of politically motivated personal attacks. Since the project became popular there are haters too.

JB: What's the status of the New York legal complaint, and have there been any other legal challenges?

AE: We got an injunction from US court, an order to stop our activities. A few weeks ago I got an email that stated that another conference with court is scheduled for March, because our websites are operating despite receiving an injunction order. That means Elsevier is going to develop the lawsuit further.

JB: Are these legal challenges mostly from the United States?

AE: At the moment, the US is the only government willing to shut down the site.

JB: What do you think of the legal threats? Do you think you can run Sci-Hub indefinitely?

AE: My goal is not only to make the website run indefinitely, but also to make its operation perfectly legal.

JB: Who are the main users of Sci-Hub?

AE: When I created Sci-Hub, I expected the tool to be used mainly by the general public. But it turned out researchers themselves do not have access! When I once stopped the website for a week, I got an interesting response from a Russian researcher where she asked me, "When exactly is the website is going to be back? The work in my lab is stalled."

Most paper downloads are coming from China, India, Russia, Brazil, Iran, and recently the United States joined the club. According to Yandex analytics, most people are 18 to 34 years old. The website is often used by students for their research projects.

JB: You've cited the UN Charter ("to share in scientific advancement and its benefits") to justify the site. Can you expand on your argument for why the site should keep going?

AE: The UN article says that a person cannot be excluded from participating in culture and scientific progress. I think that paywalls are doing just that, effectively excluding many people. Subscription prices are very high; an individual person cannot pay them. To obtain legal access, he or she needs to join one of the few available research institutions.

But how easy is that for a disabled person, for example? Or another individual who does not conform to some standards, or simply is not ready to face the pressures that an academic career demands?

The Sci-Hub is used by many independent researchers, including myself. But even most institutions do not have subscriptions needed for research. My university was one of them.

JB: What would it take to shut you/the site down?

AE: Though it is not possible to shut down the website completely, it is possible to force it into the dark corners of the internet. All it takes is for a government motivated sufficiently to do that. Fortunately for us, the governments at this point are more interested in fighting terrorism than science, though both are defined as illegal.

Correction: This article originally misstated the date Sci-Hub launched its new domain.

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