



There's No Place for "Robin Hood" in Science Research Publishing

Remember Napster? About 15 years ago, it was a well-funded startup heavily backed by prominent VCs from Silicon Valley. Its business model was to enable users to upload music they had purchased and then share it from Napster servers with the world. The sharing was, of course, a copyright violation straight up and clear.

For a while Napster was the darling of the Internet industry. This was baffling, because Napster presumed to be a sustainable, in the open, "legitimate" company with aspirations to go public when in fact its business model was based on distributing stolen property.

Not surprisingly, the music industry went after Napster. Napster lost in court and was shuttered pretty much the next day.

Fast-forward 15 years and shift focus to the scientific research publishing field. Now there's Sci-Hub, "a website that bypasses journal paywalls, illegally providing access to nearly every scientific paper ever published immediately to anyone who wants it." According to a [recent article](#), Sci-Hub, which reportedly is run by a woman named Alexandra Elbakyan in Kazakhstan, is trotting out much the same argument Napster did. Back then it was about how evil publishers were keeping all the money from music sales. Sci-Hub appears to believe it's the same today, only the evil publishers produce scientific journals.

In defending her site, the operator of Sci-Hub is not stating many relevant facts with regard to scientific papers. While authors do not receive royalties, journal publishers do when Reed Elsevier or other aggregators sell subscriptions to the journals and copies of the papers. These royalties go to support the peer review process and to operate the journal publishing program. Most journals would not be self-sustaining without these royalties, just as bands would not be self-sustaining if there were a way to access all of their music for free.

The cost of peer review is extremely high. Industry authority researchers are employed to do the peer reviews. Dozens of papers are reviewed for every one accepted, incurring the full cost of the review. Journals are often non-profits – they may break even on their revenues – so they are not huge money-making machines ripping off paper authors and researcher-users at institutions. The authors receive significant compensation in forms other than royalties for submitting articles. They are usually paid by their universities to do research and, as a requirement of their employment, must submit articles to peer reviewed journals. Also, they receive career advancement, reputation, research grants, etc. Successful authors who get their articles published by the peer-reviewed journals are not complaining.



Sci-Hub reportedly believes that the peer reviewed journal publishing model is in trouble and is being abandoned. This isn't true, at least not yet. The idea of open access has been around since the 1990s (remember "information wants to be free?") and has not taken firm root even though it is debated all the time. While there are some respected open access journals (for example, see NIH's PubMedCentral collection), many open access journals are dodgy; some are even charging authors to publish. Authors who can't get their work published in peer reviewed journals might succumb to this "pay to publish" business model. There is questionable quality control in these journals and the research published in them is suspect. The peer-reviewed journals enforce a measure of quality with their expensive editorial process of peer review, and that is why they survive long after the Internet made costless publishing technically simple and universally available.

The argument that poor researchers in Kazakhstan's universities can't afford to have the access to journal subscriptions is not very compelling. Kazakhstan has an air force that features 103 jet fighters including modern MIG 27s. For the price of one MIG 27, Kazakhstan could subscribe to 150 years of all of Reed Elsevier's journals for all the students and faculty at its main university system. Perhaps the young woman running Sci-Hub should have convinced her government to examine its priorities and cut back to only 102 jet fighters in order to fund all the research they need for their students and scientists before she embarked on distributing stolen property as a solution.

Sci-Hub will lose the case in court; they have no legal defenses at all. Their website will be driven underground and, sooner or later, the users/uploaders of Sci-Hub will find themselves being personally sued and prosecuted just like individual users of Napster did. (The clueless mother of a Napster-using teenager had a \$40,000 judgment against her in one celebrated case.)

Then Sci-Hub will pass into history along with Napster. Perhaps it will survive in some nether world playing hide and seek with police around the world, like Pirate Bay, but the first scientist from Harvard or another institution that loses his research fellowship or tenure-track teaching position because he contributed to Sci-Hub will send a chill through the research community that will cripple the site.

Interestingly, if Napster (and later Kazaa, the service that replaced Napster for a while) had not been shut down, iTunes, Pandora, iHeartRadio, Spotify, Google Play, or Amazon Music probably wouldn't exist today because those services would have been commercially impossible to sustain had Napster survived. And there likely would be far fewer independent bands around, as Napster would have made starting a band pretty iffy from an economic viewpoint.

Judged with the advantage of hindsight, all the Napster-fronted arguments about the common good were pretty much invalid – which means so too is Sci-Hub.

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