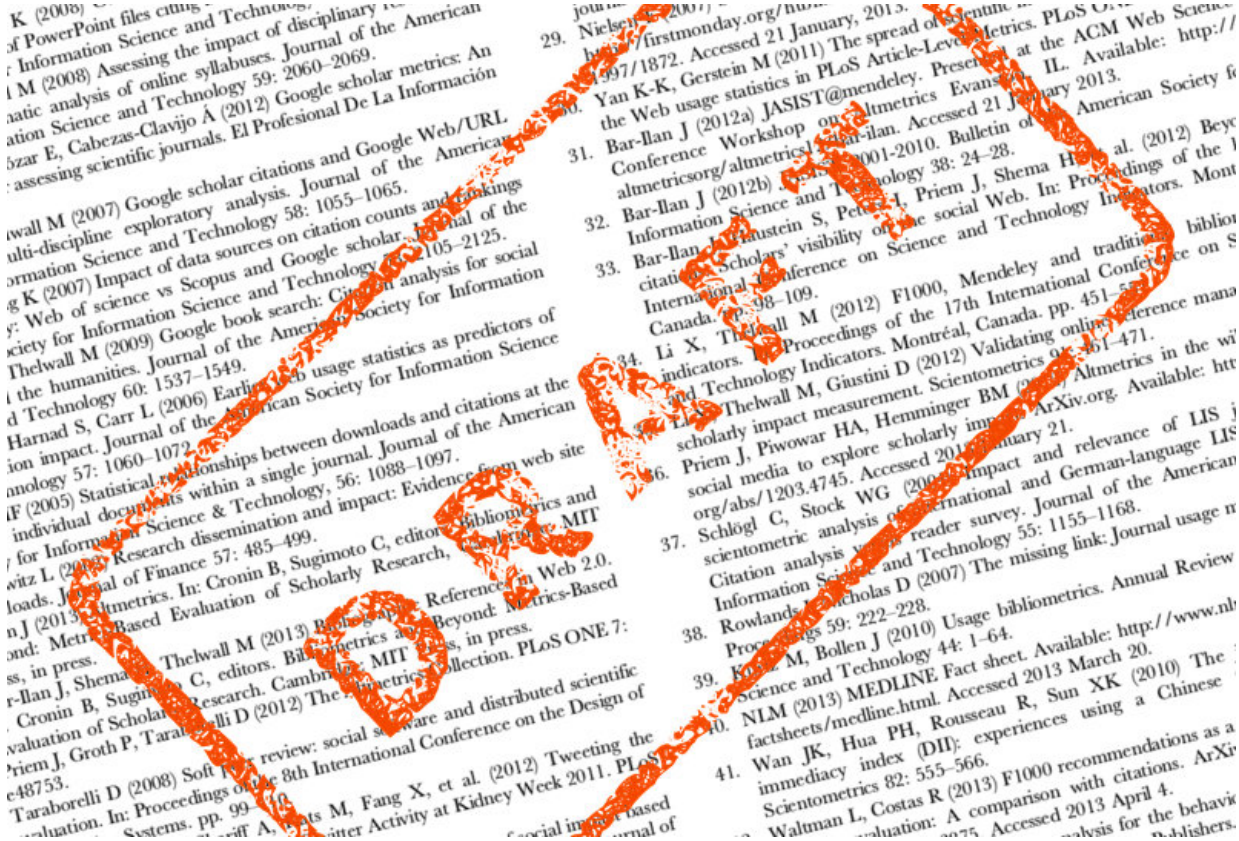
Chance discovery of forgotten 1960s 'preprint' experiment

November 16 2017



'Preprints' have long been used as a way for scientists to share their work prior to publication, however, they have not been without opposition. Credit: Finn Årup Nielsen, doi:10.1371/journal.pone.0064841 and OpenClipart-Vectors, Pixabay

For years, scientists have complained that it can take months or even

years for a scientific discovery to be published, because of the slowness of peer review. To cut through this problem, researchers in physics and mathematics have long used "preprints" - preliminary versions of their scientific findings published on internet servers for anyone to read. In 2013, similar services were launched for biology, and many scientists now use them. This is traditionally viewed as an example of biology finally catching up with physics, but following a chance discovery in the archives of Cold Spring Harbor Laboratory, Matthew Cobb, a scientist and historian at the University of Manchester, has unearthed a long-forgotten experiment in biology preprints that took place in the 1960s, and has written about them in a study publishing 16 November in the open access journal *PLOS Biology*.

In 1961, the National Institutes of Health in the USA set up what were called "Information Exchange Groups" (IEGs); researchers would send in their draft papers or discussion documents, which would then be duplicated and sent out to a list of subscribers. The system eventually involved over 3,600 researchers around the world and saw the production of over 2,500 different documents, on millions of pages of paper.

The experiment was shut down in 1967 following a sustained campaign by academic publishers and learned societies, just as physicists were discussing developing a similar kind of system. The growth in the IEGs and their possible extension into physics had provoked systematic opposition from journal publishers such as Nature and Robert Maxwell's Pergamon Press, as well as learned societies such as the American Association for the Advancement of Science (the publishers of Science magazine).

Vitriolic editorials were published in Science and Nature as a number of journals refused to consider articles that had been circulated as preprints. The publishers claimed that they were able to guarantee the accuracy and

probity of scientific findings, and that the widespread adoption of preprints threatened the existence of journals. Many researchers felt that the real issue was the potential threat to publishers' income and prestige.

The widespread circulation of preprints in physics really took off in the 1990s with the appearance of the World Wide Web and a server called arXiv. Biology continued to lag behind, and a further attempt to launch preprints in 1999 met with similar hostility from publishers and learned societies and was soon abandoned. It is only recently that biology preprints have been widely accepted by scientists and by journals.

This story, unknown to all but a few historians of documentation and some old-timer scientists, shows how publishers and academic vested interests have opposed the open circulation of knowledge in the name of money and prestige. It also shows how even old-style technology was able to bypass the traditional gate-keepers of science and the barriers they created.

More information: Cobb M (2017) The prehistory of biology preprints: A forgotten experiment from the 1960s. *PLoS Biol* 15(11): e2003995. doi.org/10.1371/journal.pbio.2003995

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