The Secret History of Open Source

Amid all the recent discussion of the open source movement, little work has rigorously explored the historical precedents for today's developments or attempted to separate the ideology of open source from the movement's own creation myths. These papers do both. T. Haigh uses the development of mathematical software libraries by the SHARE user group during the 1950s to show that all the formal characteristics of today's "free" software projects are as old as the programmable computer. Although the pragmatic motives and corporate organization of these early efforts clash with the "genius in a dorm room" image of today's open source movement, T. Haigh argues that the massive commitment made to open source by firms such as IBM shows a fundamental continuity. M. Haigh shifts the debate beyond western countries, to examine ways in which the reception of open source software and peer-to-peer file sharing in Ukraine have been influenced by its historical experience of communist party rule (which eliminated intellectual property but monopolized the means of mechanical reproduction) and the rival samizdat tradition (which privileged illicit information redistribution).

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Papers:

- The Corporate Origins of Open Source, Thomas Haigh, University of Wisconsin—Milwaukee
- Downloading Communism: Open Source and File Sharing as Samizdat, Maria Haigh, University of Wisconsin—Milwaukee

Thomas Haigh
The Corporate Origins of Open Source

My paper focuses on the role of SHARE in the development of mathematical software routines, for generic tasks such as matrix computation, elementary and special functions, and solution of differential equations. Creating these routines was laborious but brought little proprietary advantage, so firms realized they would benefit by pooling their efforts. I argue that by 1956 SHARE had many of the formal and informal characteristics of today's open source software projects, including a software library, distribution of standards for coding and documentation, mechanisms to support discussion between project members, mechanisms to report bugs back to the authors of routines, and mechanisms for users to contribute improvements back into a common code base. However, SHARE also demonstrated some weaknesses of this approach. Tacit mathematical knowledge was being embedded into software and rendered invisible. Programs varied greatly in quality, and many possessed subtle mathematical flaws. During the 1960s a SHARE committee attempted to adapt academic peer review methods to test and improve the library. This effort largely failed, and in the early 1970s SHARE was eclipsed by computer vendors, academic research groups and software companies as a source of high quality mathematical routines. Sources for the paper include archival

SHARE material at the Charles Babbage Institute and National Museum of American History and oral history interviews with surviving participants.

Maria Haigh
Downloading Communism: Open Source and File Sharing as Samizdat

I will explore the cultural meanings of file sharing in Ukraine. Ukraine, the second most populous of the former Soviet republics, had been named by the IFPI (International Federation of Phonogram and Videogram Producers) as one of the ten "priority countries" with "unacceptable piracy rates." IFPI and other industry and governmental bodies present piracy in straightforward terms as a crime, and emphasize links between music piracy and violent organized crime. In contrast, my argument is that file-sharing practices in Ukraine reflect distinctive features of its cultural heritage. They are not simply the result of a primitive stage of legal development. Until 1991, Ukraine was part of the Soviet Union. The USSR did not recognize the concept of intellectual property, particularly as it related to foreign and scientific works. Internally, however, Soviet authorities maintained a monopoly on the means of media reproduction. Xerox machines were banned, and as dissident culture developed from the 1960s onward the illicit reproduction of unsanctioned material was seen as an heroic act of resistance. Manuscripts were photographed, retyped or copied long hand and passed from person to person in a practice known as samizdat. To some Ukrainians, efforts to crack down on peer to peer networks appear less like the reasonable application of widely agreed principles of intellectual property and more as an act of imperialist hegemony. Changing that perception will be quite a challenge.