Questions about ownership permeate the history of computing. Some of their most common manifestations involve the ownership of individual machines, from mainframe leases to personal computer purchases. Some of their most unusual manifestations involve national debates on the scope of intellectual property (IP) rights. Connecting these questions are stories about the uses and limits of IP that highlight the importance of three forms of protection. First, patents grant a temporary monopoly over an invention in exchange for public disclosure. Second, copyrights protect creative works such as books and sound recordings. Third, trade secrets allow corporations a certain degree of secrecy in the way they treat their knowledge and undeveloped technologies.

The study of ownership presents a rich historiographic opportunity to analyze the interplay between IP and technology development. Although historians of computing have acknowledged the importance of this area by writing about topics such as software patents, the broader history of ownership and computing has been generally overlooked. This Think Piece examines how historians of computing can benefit from works produced by legal scholars and draw methodological guidance from scholarship on the history of ownership.

The historical study of ownership and computing can link these two families of work. IP is central to the problems and solutions that corporations, employees, and inventors faced in order to become and remain competitive in the industry. Business leaders, researchers, and their lawyers have exploited and tested IP rights; strived to protect information in light of employee mobility; and struggled to secure rights over machines, programs, and programmed machines. At the same time, legislators, judges, and bureaucrats have worked to craft and interpret American law in light of the challenges posed by computing technologies.

Regulating a Revolution
The historical roots of the relationships between computing and intellectual property are more than 100 years old. At the beginning of the 20th century, corporations such as Burroughs and Hollerith relied on the American patent system to ensure their growth in light of the federal government’s increasingly strict antitrust enforcement. During the following decades, punch cards, memory drums, and other machine components were the subject of several patents. Still, the most litigious and enlightening decades of this history coincide with the development of modern computing. For instance, Jay Forrester applied for a patent on his magnetic-core memory in 1951, was awarded the patent in 1956, and soon entered a legal conflict meant to determine the rightful inventor of the technology.

Beginning in the early 1960s, a series of patent applications forced the US Patent and Trademark Office to consider whether inventions that range from punch cards to hormones, a handful of scholars have stressed how specific technologies and their historical contexts are as important as the legal mechanisms that govern their ownership. In their hands, inventions, works, and knowledge are as illuminating as the patents, copyrights, and trade secrets that protect them.

Second, a much smaller group of works examines the historical interplay between technological development and IP law. Writing about inventions that range from punch cards to hormones, a handful of scholars have stressed how specific technologies and their historical contexts are as important as the legal mechanisms that govern their ownership. In their hands, inventions, works, and knowledge are as illuminating as the patents, copyrights, and trade secrets that protect them.

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The study of ownership and computing enables a reconsideration of several themes that are central to our discipline. It demonstrates that authorship is crucial to the historical study of hardware ownership. It also shows that the movement of employees between companies encouraged corporations to protect their proprietary information and that this protection was central to IBM's engagement with antitrust law during the 1970s. Finally, it demonstrates that software patents are not an isolated problem in the history of intellectual property law. Rather, they are evidence of a series of conflicts as old as computing itself.

References and Notes

1. Trademarks, the fourth major form of intellectual protection, have been less problematic in the history of computing.
3. This Think Piece is based on my upcoming doctoral dissertation, “Regulating a Revolution: Ownership and the History of American Computing, 1940–1981,” Dept. of History, Program in the History of Science and Medicine, Yale Univ.

4. For legal historians, this is a time during which strict antitrust enforcement and judicial attacks on the validity of patents discouraged businesses from patenting their inventions. For historians of computing, the same period is central to narratives about technologies that predate the widespread establishment of home computing.


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