Critical Point Collecting books

An important document collection is about to transform the history of physics holdings at the Niels Bohr Library, says Robert P Crease

“I failed retirement,” Dave Wenner told me.

Even among collectors of physics books – a quirky bunch – the 72-year-old Wenner is unusual. He grew up in Cocoa, Florida, near the Kennedy Space Center, and nearly became a physicist. Intimidated by “scarily smart” and more focused peers, however, he opted instead for a business career. But after retiring in 2003 from decades as a management consultant, he decided to relearn the subject. Diligently. He hired a physics postdoc as a tutor and spent six to eight hours a day studying different areas of physics, in the process identifying and beginning to collect key documents.

“Most book collectors focus on trophies or special areas,” Wenner explained. “I went broad.” He began by breaking up physics into areas, eventually down to sub-fields and individual topics, such as the physics of weather. Proceeding section by section, he pinpointed 3700 key documents. Cultivating book dealers and conducting daily Boolean Internet searches, Wenner was able to purchase 3500 of these. Several documents in his collection he has never seen for sale, such as Emmy Noether’s 1918 offprint announcing her famous theorem linking symmetries and conservation laws – a result that is foundational for modern high-energy physics.

Last year, satisfied that his collection was essentially complete, Wenner began preparations to sell the collection and started putting the finishing touches to his 800-page self-published book History of Physics: the Wenner Collection. The book is remarkable not just for its list of key physics documents, but also for Wenner’s descriptions of the historical context of each. He has now agreed to sell his collection for $5m to the Niels Bohr Library of the American Institute of Physics (AIP), where it will significantly transform the library’s holdings.

Collective thoughts

Most book collectors start out less deliberately. In the 1930s, for example, the Canadian industrialist Stillman Drake (1910–1993), who was fascinated by the history of science, acquired books for some time before realizing that his collection had a theme: Galileo. After decades of collecting documents, translating them, and writing about the Italian physicist and astronomer, Drake dropped out of industry and, aged 57, received his first academic appointment as a full professor at the University of Toronto. He eventually donated his collection to what is now the Thomas Fisher Rare Book Library in Toronto, helping to make it a major destination for historians of science.

On a recent visit I saw an original copy of Galileo’s Dialogo (1632); a copy of Niccolò Tartaglia’s Nova Scientia (1537), which had probably been owned by Galileo and contained intricate drawings that had been cut on woodblocks to print; as well as a copy of Ptolemy’s Geography, also probably once in Galileo’s possession.

Another important collection was assembled by Bern Dibner (1897–1988), a Ukrainian-born American industrialist and founder of the Burndy Company, which manufactured electrical components. Enchanted by Leonardo da Vinci, whose seamless integration of science and art resonated with Dibner’s own passions, Dibner began collecting da Vinci material, soon expanding its scope to include the history of electricity, then the history of science and technology. In 1941 Dibner founded the Burndy Library in Norwalk, Connecticut, where his company was headquartered, to house his collection. It focused on the early history of electricity, and included books and manuscripts by pioneers such as Galvani, Volta and Franklin. In the 1970s Dibner sent a quarter of the books, totalling about 11 000, to the Smithsonian Institution in Washington, DC, to form the nucleus of the Dibner Library of the History of Science and Technology. The Smithsonian has added to the collection, which now has about 35 000 books and 2000 manuscripts. In November 2006 the rest of the Burndy Library – 67 000 volumes’ worth – arrived at the Huntington Library in San Marino, California, in a caravan of six tractor-trailer trucks with hidden GPS locators in case the cargo was hijacked.

I asked Huntington Library curator Dan Lewis about the value of collections such as Dibner’s in an age of digitization. Four things, he said. First, not everything is digitized; digitization is labour-intensive, costly, often poorly done, and useless without accompanying metadata. Second, there’s historical value in being able to consult books in context; that is, together with other books that authors read and to which they were responding. “[Third], there’s evidence in the physical object that can’t be replicated online. Notes. Watermarks. Erasures and crossovers. Smells. Cracks in woodblocks that can date when a book was printed.” Finally, Lewis said, there’s an experiential element. “An online exhibit of the books Newton owned is not as engaging as a collection of those same books. There’s no substitute for originals!”

The critical point

But I heard the most dramatic argument for preserving such collections from Greg Good, director of the AIP’s Center for History of Physics. Good did his graduate work with Drake in Toronto, and is a driving force behind the library’s efforts to acquire Wenner’s collection; he is spending the next few months trying to raise the funds needed to purchase and transport the material to the Niels Bohr Library (donate.aip.org/helphistory). I asked Good if book collections were still valuable for historians in the Internet age.

“Absolutely!” Good replied. “Having everything that our culture has produced on the cloud is a prescription for a new Library of Alexandria catastrophe. You are putting all your faith in one system.” The contents of the most famous library of the ancient world were, according to legend, accidentally destroyed by a fire. Apart from providing physics historians with insurance against a possible e-pocalypse, Good also notes that the collection would substantially enhance the breadth of the Niels Bohr Library’s existing holdings, and extend its depth by two centuries – making the library that much more valuable for historians of the physical sciences.

Wenner may have failed retirement, but historians of physics should rejoice.

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Valuable insights Some of the books in Dave Wenner’s history of physics collection.