

My Acoustics Library

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Some people collect hubcaps. Some people collect porcelain. From the time of my college days to the present, I have collected books, and how I started collecting is serendipity. For some reason, I held onto the texts (and notebooks) from my days at Cooper Union, New York, NY, and the University of California, Los Angeles (UCLA), and would, occasionally, acquire a new or used book for the collection. One day in the early 1980s, I was taking care of Mark R. Gander's house, VP of Marketing for JBL Professional at the time. I noticed he had a couple of shelves filled with acoustics and audio books. I took a yellow pad and started to write down some of the titles; after noting about eight or nine titles, I wrote "All of them." After this revelation, trips to used bookstores became routine.

Now, the time to find a new home for my library is nigh, so I contacted *Acoustic Today* (AT) to place a classified ad. To make it interesting, the ad was in "web" Latin in the Spring 2021 issue (available at bit.ly/32ejMOR).

At its peak, my library had over 1,600 books from the 1820s to the present. After placing the AT advertisement, Arthur Popper, the editor of AT, said he thought that members of the Acoustical Society of America (ASA), and perhaps an institution, would be interested in knowing about the

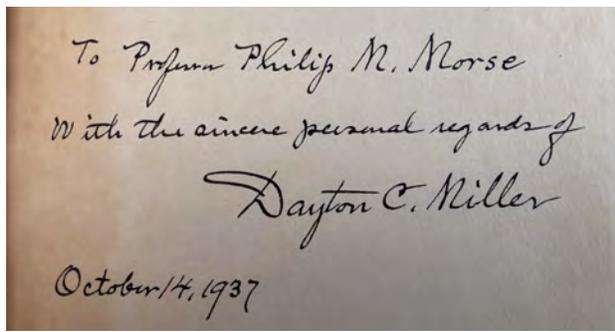
content of the library because there are so many historic and classic books on acoustics and related topics. He asked if I would write an essay about the library and how there came to be so many texts: what I collected, why, some stories of a few, and a picture or two (see **Figure 1**) that shows a portion of the library (note that all but the top shelves are doubled stacked).

So, this informal essay is an attempt to address the editor's curiosity. Throughout my career, I traveled quite a bit, and a nice way to spend some time while on the road was to check out the used bookstores in the various and sundry cities and towns that I visited. With my interests in acoustics, audio, perception, mathematics, physics, and more, used bookstores offered an education, in a sometimes-musty environment. The 1980s were a time when many engineers and academics who practiced during the Second World War and during the Cold War were retiring and "de-acquiring" their book collections, and I was able to add quite a few classic books to my own library during that time.

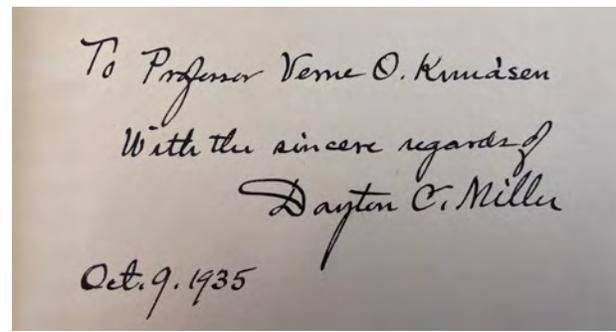
During the trips, I would go to Brattle Books in Boston, Massachusetts (see brattlebookshop.com) and The Strand in New York City (see strandbooks.com) as well as to stores in many other cities. I found my first copy of Wallace Clement Sabine's *Collected Papers on Acoustics* (1922) at Book City in Burbank, California (a review by Egan [1988] of the Peninsula Publishing reprint edition can be found at bit.ly/3ey1W01); Alfred Ghirardi's copy of Greenlees' *The Amplification and Distribution of Sound* (1939; see his brief discussion of the delicate matter of how to tell people they do not know how to use a microphone on p. 194; some things never change!) from Stevens Book Shop in Raleigh, North Carolina (via mail); one book by Dayton Clarence Miller from Philip Morse's library was found at Brattle Books; and another of Miller's books was acquired due to my being the ASA Los Angeles Chapter representative. There were other finds and surprises, but, sadly, these serendipitous moments are mostly gone.

Figure 1. Part of the library discussed in this essay.





To Professor Philip M. Morse
With the sincere personal regards of
Dayton C. Miller
October 14, 1937



To Professor Verner O. Knudsen
With the sincere regards of
Dayton C. Miller
Oct. 9, 1935

Figure 2. Dedications in two books (see text for details).

Mark, Jesse Klapholz (a friend in Philadelphia, Pennsylvania, who also had a large collection), and I were always on the hunt for the Holy Grail (at least for electroacousticians): Harry Olson's *Acoustical Engineering* (1957). I obtained my first copy from Stevens Book Shop. We also jointly prepared a paper about acoustics and books (Shaw et al., 1994).

Some of the texts from my library are often cited in contemporary papers and to find and read them (not always from cover to cover) was illuminating, instructional, and, yes, sometimes inspirational, especially when I later met and got to know the authors at ASA and Audio Engineering Society (AES) meetings and in more informal settings. Many works in the collection are by colleagues too numerous to name due to space constraints.

Among some others I got to “know,” I have several editions of *Fundamentals of Acoustics* by Kinsler and Frey (1962), the textbook I used in Richard Stern's UCLA Engineering Acoustics 153A class; *Noise and Vibration Control* by Beranek (1971), the textbook for William C. Meecham's (a founder of the Institute of Noise Control Engineering) Acoustics 153C class; and *Theoretical Acoustics* by Morse and Ingard (1968), the text for Meecham's Acoustics 253A class; and books by Lamb (1965) and Knudsen (Knudsen, 1932; Knudsen and Harris, 1954).

The D. Van Nostrand Bell Telephone Laboratories series in my library includes texts by Bode (1945), Mason (1942), and Schelkunoff (1943), all of whom are authors whose work and texts are foundational. These communication theory texts are seminal works in their field and even include acoustics. There is Fletcher's *Speech and Hearing* (1929) and *Speech and Hearing in Communication* (1953). McGraw Hill had

its own collection that included seminal texts in electrical engineering and acoustics (including one by Beranek, 1954).

In electroacoustics, my library includes works by Hunt (1954), Olson (1957), Leach (1998), Rossi (1988), Kleiner (2013), and Eargle (1981, 1 of his 10 books; more at bit.ly/3uA2etb).

My interest in acoustics books led to some work for *The Journal of the Acoustical Society of America* (JASA) and the *Journal of the Audio Engineering Society* (JAES), including book reviews (Shaw, 2001), some time with the Books+ Committee of the ASA, and presently as the JAES associate editor for book reviews. My 35 years as a book reviewer added many texts to the library.

Beranek was the author of many books that I was introduced to in some acoustics courses at UCLA. I met Beranek at ASA meetings and had a collegial relationship with him and was honored to present an invited paper about his books for the special session honoring him at the Spring 2004 ASA meeting (Shaw, 2004).

On a 1986 visit to Brattle Books, I noticed a thin volume, *Sound Waves: Their Shape and Speed* (Miller, 1937). When I opened it, I saw an inscription (see **Figure 2, left**). Well, this was astounding! I knew that Morse (1976) was alive and I wrote to him, noting that the text may have been “borrowed.” He affirmed it was, and I returned the book to him. A short time later, I received a signed copy of the ASA reprint of *Vibration and Sound* (Morse, 1936). I wrote to Morse again in late August to thank him and to let him know that I was going to be in Boston. I received a letter from his attorney informing me that Morse had passed away. So when I was in Boston, I visited the attorney and told her the tale of *Sound*

Waves: Their Shape and Speed. In February 1987, I received a package with *Sound Waves: Their Shape and Speed* and a letter noting that Morse's daughter had searched the last of the unopened boxes of books "and has found the enclosed book which we gladly return to you."

In 2004, I received a call from James Knudsen, one of Knudsen's grandchildren, who found me on the ASA Regional Chapter web page, informing me that the family was donating Knudsen's home to UCLA. He assumed I did not know his grandfather. I replied that not only did I know of his grandfather but had also taken classes in the building named after him. So I went over to the house and found many boxes of personal papers, bibles, awards, medals, letters, and files from his time at UCLA as well as some boxes of books. A report of this can be found in *Acoustics Today* (Shaw, 2011). Anyway, the upshot is that the UCLA Archives accepted all material except the books. These resided in my wine cellar for many years until Steven Garrett from Penn State University, University Park, came to visit; we were graduate students together at UCLA and have kept in touch over the years. He suggested that Knudsen's books come to Penn State and join those of Harris (1979), the coauthor of *Acoustical Designing in Architecture* (Knudsen and Harris 1954). I informed the family of this; they agreed and added that I could select one book to keep. I selected a thin volume, *Anecdotal History of the Science of Sound* (Miller, 1935). The inscription is seen in **Figure 2, right**.

I could go on about how the library and reviews led to my proofreading a contemporary text on electroacoustics (I learned a lot of things that I thought I knew) and the preface to a reprint edition of a classic two-volume room acoustics text, my commemorating a mentor's books at his memorial, and "live" presentations as well as more tales from musty places, but I have more than run out of space. And, yes, the library has found a home; the university will be announcing details later this year.

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