



The History of the Engineering Libraries Division, Part 1 - 1893 to 1960

Mr. Michael J White, Queen's University, Kingston, Ontario

The History of the Engineering Libraries Division of the American Society for Engineering Education, Part 1: 1893-1960

1. Introduction

The Engineering Libraries Division (ELD) of the American Society for Engineering Education (ASEE) will mark its fiftieth anniversary as a division in 2017. This important milestone is an appropriate time to reflect on the role and impact of librarians within ASEE and in engineering education more broadly. Since 1893, ASEE and its predecessor, the Society for the Promotion of Engineering Education (SPEE), has advanced the development of engineering pedagogy, learning and educational standards. Throughout most of ASEE's history, librarians have played an active role, first as individuals and then as an organized community within ASEE, in support of its goals and activities. This paper explores the history of librarians and libraries in ASEE from the founding of SPEE in the early 1890s through its modernization in the 1940s and rapid expansion in the 1950s.

2. Sources

Although there have been a number of articles¹ about the history of SPEE/ASEE and much written on the history and organization of engineering libraries, very little has been written about the role of librarians and libraries within SPEE/ASEE. An encyclopedia chapter on engineering libraries² written in 1974 by Homer I. Bernhardt, head of the Bevier Engineering Library at the University of Pittsburgh, provides anecdotal evidence of librarian involvement in SPEE in the 1930s and 1940s. However, some of his facts are inconsistent with information from other sources. The confusion may arise due to the fact that engineering librarians organized two separate groups with overlapping memberships in SPEE and the Association of College and Reference Libraries (ACRL) at about the same time in the early 1940s. It is also possible that Bernhardt relied too much on the fading memories of librarians he knew who were actively involved.

Other librarians who were members of SPEE/ASEE in the 1940s and 1950s have written little about their experiences. Johanna E. Tallman, head of the Engineering Library at the University of California, Los Angeles, joined ASEE in 1948 and was an active member through the mid-1950s. Her autobiography³, which she published in 1985 following her retirement from the California Institute of Technology, mentions ASEE only in passing.

The primary sources consulted for this paper include the *Proceedings of the SPEE*, which provide a record of the society's meetings, governance, organization, membership and discussions from 1893 to the present. The early volumes are rich sources of information because they contain lists of members, correspondence, meeting minutes and committee reports. The *Bulletin of the SPEE*, SPEE's official journal from 1910 forward, and its successor, the *Journal of Engineering Education (JEE)*, are excellent sources of information. The *SPEE/ASEE Yearbook*, which was published as a supplement to JEE contains lists of members, statistics and committee information. The *Proceedings of the American Library Association* also contain much information of interest, especially during the period 1900-1915. The ALA and SPEE proceedings

are especially valuable because they include transcripts of discussions that followed the reading of papers.

3. The Society for the Promotion of Engineering Education (SPEE)

SPEE was founded in 1893 during the International Congress on Engineering, which was held July 31 through August 5 on the grounds of the Chicago World's Fair, popularly known as the Columbian Exposition. Over the course of five days, engineering professors and deans of engineering schools gathered in the Memorial Art Palace, now home to the Art Institute of Chicago, to listen to papers and discuss ideas for improving engineering education. By the end of the meeting there was sufficient interest and enthusiasm for establishing a new association dedicated to the advancement of engineering education.

In the early 1890s the profession of engineering and the pedagogy of engineering education were very new. The American Society of Civil Engineers (ASCE), the oldest professional engineering society in the U.S., was only forty years old. Most professional engineering societies were much younger. The American Institute of Mining Engineers (AIME) formed in 1871, followed by the American Society of Mechanical Engineers (ASME) in 1880 and the American Institute of Electrical Engineers (AIEE) in 1884. A few engineering societies had dabbled in educational issues on a small scale. The success of the 1893 meeting demonstrated a clear need for a broad organized approach to engineering education development.

SPEE's first constitution⁴ was brief, consisting of just nine articles describing the basic framework of the organization, its governance, elections, members, dues, publications and meetings. Article 2 defined the criteria for membership, which was open to all persons "who occupy, or have occupied, responsible positions in the work of engineering instruction, together with other persons as may be recommended by the Council." The Council, SPEE's governing body, was composed of "members from twenty or more engineering schools of the United States and Canada." Only members of Council were eligible to serve as officers. SPEE members were required to pay a three dollar admission fee and annual dues of two dollars. In 1908, the SPEE Council approved a revised constitution that broadened membership eligibility to include "engineering practitioners and other persons interested in engineering education."⁵ Following this revision a number of publishers, journalists, practicing engineers, industrial managers, and librarians joined SPEE. By 1915, there were 24 journalists, librarians and publishers who were SPEE members.

Approximately 70 people who attended the 1893 meeting in Chicago became SPEE's founding members. Ten years later, the number of SPEE members had risen to 326; the top three occupational backgrounds were civil engineering (23 percent), mechanical engineering (16 percent) and electrical engineering (11 percent).⁶ Over the next few decades, membership continued to increase, reaching 1,589 in 1922.⁷ Membership was heavily concentrated in two regions. The North Atlantic Division, comprising all of New England, plus New Jersey, New York, and Pennsylvania, accounted for about 40 percent of the membership. The North Central Division, stretching from Ohio to Kansas, Nebraska and the Dakotas, also had about 40 percent of members.⁶

Attendance at annual conferences was not consistently recorded until 1900. Just 45 members attended that year. The number of attendees exceeded 100 for the first time in 1908.⁶ The first conference in 1893 had only sixteen papers, not including plenary addresses and committee reports. Ten years later the number of papers had only increased to eighteen. Surprisingly, a number of papers presented at these early SPEE meetings focused on library-related topics.

At the 1893 conference in Chicago, Mansfield Merriman, professor of civil engineering at Lehigh University, presented a paper on the “Training of Students in Technical Literary Work.”⁸ In it he argued that students in their final year of study “should make a thorough search over the literature which relates to his special [thesis] work.” and that students should be encouraged to write technical articles for engineering society publications and professional meetings.

Professor John B. Johnson, another civil engineer from Washington University in St. Louis, presented a paper on “Methods of Studying Current Technical Literature.”⁹ In it he observed that the “current literature on all technical subjects is becoming as vast as it is valuable. It is quite beyond the powers of any one person to even scan it all in any one field, much less read it.” Professor Johnson argued that “the mind of an engineer should be a workshop and not a warehouse. If he knows where to go for a piece of information when he needs it, until it is needed it is better out of his mind than in it.” He concluded with the suggestion that students be trained and encouraged to use indexes such as the *Descriptive Index of Current Engineering Literature*, first published in 1884 by the Association of Engineering Societies.

Engineering professors were also interested in the form and characteristics of engineering publications. At the 1895 conference, Ira O. Baker, professor of civil engineering at the University of Illinois and one of the principal organizers of the 1893 meeting, described specifications for the ideal engineering textbook, noting that many contemporary textbooks were poorly organized, over-burdened with information, and lacking in navigational tools that would allow students to quickly locate facts, formulas and subjects.¹⁰

Information management and retrieval was an increasing problem for engineering faculty and students. At the 1899 SPEE conference in Columbus, Ohio, Professor William T. Magruder of Ohio State University noted that “the day of the always up-to-date engineering encyclopedia has not yet arrived, the engineer is forced to either be his own walking encyclopedia, or else adopt some method of filing, in as accessible form as possible, the vast amount of information which is daily presented to his attention...”¹¹ His solution to nineteenth century information overload was a “catalogue and clipping case,” of his own design, for storing documents and clippings of various dimensions. With such a filing system, Magruder asserted, an engineering professor would be able to retrieve or send a student to retrieve “all the data he has on a given subject outside of bound volumes.”

The continuing problem of information management inspired engineering faculty to look to library science for solutions. In 1898, John G. D. Mack, professor of machine design at the University of Wisconsin, began collecting industrial catalogs, which he organized with the assistance of a librarian named Oliver Zimmerman.¹² By 1904, the collection had surpassed 3,000 volumes and was used heavily by students and faculty.¹³ In 1900, the *Engineering News*

reported that Lester P. Breckenridge, a professor of mechanical engineering at the University of Illinois, had adapted the Dewey Decimal System to organize mechanical engineering literature.¹⁴

4. The Committee for Technical Books for Libraries, 1901-1911

On the morning of Saturday, June 29, 1901, forty-four SPEE members gathered in a room at the Engineers' Society of Western New York in Buffalo for the Society's ninth annual meeting. The



Dugald C. Jackson, ca. 1910.¹⁹
Courtesy of the IEEE History Center.

president, Frank O. Marvin, dean of the School of Engineering at the University of Kansas, opened the meeting with an address on the "Cultural Value of Engineering Education." Marvin, like many of his peers, was keenly interested in literature, history and the arts and believed that engineering education should include a solid grounding in these subjects.¹⁵ He was also a strong supporter of libraries. In 1909, he established the first engineering library at Kansas and shortly before his death in 1914 he donated his entire professional library of 568 volumes to the School of Engineering.¹⁶

In the afternoon session, Professor Dugald C. Jackson, head of the Electrical Engineering Department at the University of Wisconsin, read a paper titled "A Neglected Opportunity in Technical Education" written by his colleague, Charles F. Burgess, an assistant professor of electrical engineering.¹⁷ A

member of SPEE since 1893, Professor Jackson was a well-known and respected engineering educator. Ten years earlier, in 1891, the president of the University of Wisconsin had personally recruited Jackson, who was then only 26, to become head of the new Department of Electrical Engineering.¹⁸ In 1907, Jackson moved to the Massachusetts Institute of Technology where he served as head of the Department of Electrical Engineering until his retirement in 1935. One of his graduate students was Vannevar Bush. In 1912, he established the Vail Electrical Engineering Library at MIT. Dugald was active in SPEE throughout his career, serving as president in 1906-07 and in numerous other roles well into the 1940s. He was the fourth recipient of SPEE's Lamme Award in 1931 and was honored with many other awards during his long career.²⁰ Jackson was also a strong supporter of libraries, believing that they were integral to the instructional and research programs of engineering schools.²¹

In his paper, Burgess expressed a concern that public libraries were failing to provide appropriate books for young people, artisans and industrial workers who had an interest in science and engineering. The main reason for this, he argued, was that few, if any, librarians had the technical knowledge and experience that would allow them to assess the quality of science and engineering books. At this time, few library schools offered courses in technical information and reference work. One exception was the University of Illinois, which provided fourth-year students in the library science program with an introduction to engineering literature through a series of lectures given by the heads of engineering departments.¹⁵

Professor Burgess also acknowledged that engineers lacked the perspective to recommend books that were appropriate for the general public. He proposed that SPEE should form a committee to prepare, in cooperation with “some of the leading librarians,” a list of recommended books for libraries.

The paper and following discussion made such an impression that the members present immediately approved a proposal to form a committee “to prepare lists of books on applied science and technology which are suitable for the use of libraries of all classes.” The Committee on Technical Books for Libraries was the fifth committee established since SPEE’s founding. The first four committees dealt with engineering school entrance requirements (1894), standardization of engineering symbols (1895), industrial education (1899) and statistics of engineering education (1900).⁶ The members then approved a second motion to invite the American Library Association (ALA) to appoint a committee to collaborate with SPEE on the project. In due course, Professor Burgess was appointed chair of the Committee. Other members included C. Frank Allen of the Massachusetts Institute of Technology, Charles B. Dudley of the Pennsylvania Railroad Co., Nathaniel W. Lord of Ohio State University, Nathan C. Ricker, Dean of the College of Engineering at the University of Illinois, William T. Sedgewick of the Massachusetts Institute of Technology, and Henry W. Spangler of the University of Pennsylvania.

A year later, at SPEE’s tenth annual meeting held in Pittsburgh, Professor Burgess provided an update on the Committee’s progress.²² He reported that the work of the Committee was too incomplete to make a full report but that its members had visited a “large number of libraries both large and small.” He noted that many libraries “are making progress in improving their technical departments in spite of the difficulties in evaluating the technical literature.”

In Boston a few weeks earlier, Professor Burgess had presented a paper at the ALA annual meeting on the role of public libraries in industrial and engineering education that was, he reported, well received.²³ In addition to discussing the selection of scientific and technical books, Burgess suggested that libraries might sponsor public lectures given by practicing engineers and engineering school faculty on topics of interest to industrial workers. He also suggested that libraries provide drafting tables and other drawing equipment so that students might practice technical drawing and industrial design. This idea may have been inspired by his visits to libraries, an increasing number of which were providing drafting tables and equipment, dark rooms, and even typewriters for their users.

In closing, Professor Burgess expressed regret that the list of technical books being prepared by SPEE was not yet ready for publication. However, he made a few general recommendations and praised specifically books published by the International Correspondence Schools (ICS) of Scranton, Pennsylvania. During the discussion following his presentation, Professor Burgess hinted at the possibility that ALA might be persuaded to publish the list. ALA president John S. Billings, the first director of the New York Public Library, responded to the suggestion positively, but noted that he did not share the professor’s views on the quality of ICS books. This brief exchange is interesting because it reveals the first professional disagreement between librarians and engineering faculty.

At SPEE's eleventh annual meeting held in 1903 in Niagara Falls, New York, which included a joint session with the American Institute of Electrical Engineers, Professor Burgess presented the Committee's inaugural list of 340 books and periodicals.²⁴ In his report, he noted that members of the Committee had visited many public libraries of various sizes including the Carnegie Library of Pittsburgh and the new public library in Providence, Rhode Island.

The Carnegie Library of Pittsburgh, which opened in 1895, established its Technology Department in 1902, the first in a public library. SPEE members who visited the Carnegie Library in 1902 and 1903 most likely met Harrison W. Craver, the Technology Librarian and first head of the department. Craver was an enthusiastic advocate for technology libraries and worked tirelessly to build up science and engineering collections at the Carnegie and other libraries.²⁵ His energy and vision led to his promotion to director of the Carnegie Library in 1908. In 1917, he became director of the United Engineering Societies Library in New York City. He would serve as ALA president in 1937-38.

During its first two years of operation, the Carnegie Library's Technology Department acquired U.S. and foreign patents, transactions of the major engineering societies, trade catalogues, and many books and periodicals. The library's annual report for 1903 noted that "more questions requiring a thorough knowledge of the engineering industries of the vicinity arise, and the Library is more frequently called upon for assistance by practicing engineers."²⁶ The Carnegie was also innovative in its use of the telephone for reference work. Within a few years, dozens of public libraries across the U.S. had opened technology and applied science departments.²⁷

SPEE's first list of recommended books was classified into twenty-five technology categories. In addition, each title was assigned one or more letter codes indicating its intended audience, as follows.

- A. "Books of elementary nature containing no mathematics and written in the simplest form; for boys, amateurs, and others having no previous knowledge of the subject.
- B. Books treating the subject from the popular standpoint and written in such a manner as to be of general interest.
- C. Books treating of details of practical application of science and engineering; suitable for city officials or others interested in municipal affairs, manufacturers, mechanics, artisans, students in manual training, and as a preparatory for more advanced work.
- D. Advanced books for engineers, designers, surveyors, etc."²⁴

Each entry included the author's name (often only the surname), title, publisher and price. Many were also accompanied by a one sentence description of the contents. The reaction to the report was mixed. Some members praised it while others questioned the inclusion of certain publications, including those of the International Correspondence Schools, and the omission of others. There was also a debate on whether to print the list in the proceedings or distribute it to members as a separate publication. SPEE eventually decided to do both.

The following year, at the 1904 meeting held in Saint Louis, Missouri. Burgess reported that several hundred copies of the list had been provided to librarians and other interested parties free of charge.²⁸ At the fourteenth annual meeting, held July 2-3, 1906 at Cornell University, the

committee presented its second list of books, which consisted of 494 titles.²⁹ The response of members was mostly positive. However, several members, including Professor D. C. Jackson, commented on the absence of certain titles from their subject areas. One member criticized the classification of civil engineering works and another questioned why the *Proceedings of the American Society for Civil Engineering* (ASCE) had been included but not the *Transactions of the ASCE*. Another member pointedly asked whether any librarians had been consulted by the Committee. Professor Burgess acknowledged that the committee could do a better job of reaching out to librarians, but noted that only a few had shown interest in the project. He also reminded the group that the original purpose of the list was to benefit small libraries with limited resources.

Following the Cornell meeting, Professor Burgess left the committee and in 1907 Arthur H. Ford, professor of electrical engineering at the State University of Iowa assumed the chairmanship. Burgess may have stepped down due to other commitments. In 1905 he founded the University of Wisconsin's Department of Chemical Engineering. The membership of the committee also changed significantly and by 1907 all of the original members had been replaced.

The committee presented its third and final list of technical books at the seventeenth annual meeting held in New York City in 1909.³⁰ Present during the committee's report was a librarian, Edward F. Stevens from the Pratt Institute Free Library in Brooklyn, New York. The son of American missionaries, Stevens graduated from Colby College in Maine in 1889. After working in publishing for a few years, he enrolled in the library school at the Pratt Institute. In 1903, following a brief stint as a librarian at Yale University, he returned to Pratt to become head of the library's Applied Science Reference Department. The Pratt was a hybrid library, serving as both a public library for residents of Brooklyn and an academic library for the students and faculty of the Pratt Institute, which offered courses in, among other things, engineering, architecture, and library science. Stevens had become a SPEE member in 1908, along with ten other Pratt faculty and staff, probably in anticipation of the 1909 meeting, which was held at Columbia University, the Pratt Institute and the United Engineering Societies Building. Stevens was the first professional librarian to join SPEE.

The reaction of Stevens and other SPEE members to the committee's report was not positive. No specifics are provided in the published minutes, which simply state that "the discussion brought out the desirability of a careful revision of the report." The report was referred back to the committee for "revision and correction" prior to distribution to all SPEE members for further feedback. A second motion granted the committee permission to increase its membership as it saw fit with the suggestion that it should consult "practical" librarians and subject specialists within the ranks of SPEE.

A week later, in a presentation at the ALA annual conference in Bretton Woods, New Hampshire, Stevens elaborated on the list's shortcomings.³¹ He noted that the report "gave evidence of haste in preparation and of a disposition to compromise on the requirements of a task that had clearly grown beyond expectations."



Edward F. Stevens, ca. 1916. Courtesy of the Pratt Institute Archives.

Furthermore, Stevens claimed that the list provided little useful information that would help librarians select the most appropriate technical books for their libraries. He expressed the hope that the decision to send it back to the committee for revision would result in improvements but warned that “no instructions were given that would encourage us to expect our ideal in the outcome.”

Stevens then proceeded to highlight a number of lists, bibliographies and catalogues of technical books published by libraries such as the Carnegie Library of Pittsburgh and the John Crerar Library in Chicago. In fact, he noted that the Pratt Free Library had recently published its own list, *The Technical Books of 1909: A Selection*.³² Curiously, the Pratt list used readership codes very similar to the one Professor Burgess proposed in 1901. In his closing remarks, Stevens described the list as an “experiment and a possible initial contribution to a movement in the direction of

centralizing technical book recommendation for libraries in America.” He argued that “the responsibility is great, and should be assumed only by the most responsible. It would seem, then, to belong to the American Library Association to establish one day a censorship over books on a scale that will enable the buyer of technical literature everywhere to select intelligently and quickly, with the confident assurance of an authoritative official endorsement.”²⁹ The Pratt Free Library would publish several such lists over the next few years. In 1910, Stevens was promoted to librarian of the Pratt Institute Free Library. A year later, in 1911, he became director of the library school where he remained until his retirement in 1938. It is not clear how long he remained a SPEE member.

The following year, at the 1910 SPEE meeting in Madison, Wisconsin, the committee presented its “very complete revised report” to the Council.³³ The Council promptly disbanded the committee, with thanks, and referred the report to the Publications Committee with the power to make a decision regarding the publication of the list. George Harwood Frost, secretary of the Engineering News Publishing Co., who had joined SPEE in 1907 and probably attended the 1909 and 1910 meetings, gave a paper at the ALA conference in 1910 in which he suggested that SPEE would eventually publish the list.³⁴ However, a year later at the 1911 meeting in Pittsburgh, the Publications Committee unanimously decided not to publish the list “as it is practically impossible to do justice to the enormous number of technical books on the market.”³⁵

Thus ended SPEE’s first major initiative to support the work of librarians. Although some SPEE divisions, such as Civil Engineering, would publish lists of recommended books from time to time³⁶, there would be no further attempts to maintain an up-to-date list of recommended engineering and technical books for libraries. The Committee for Technical Books was conceived with great enthusiasm and energy, and its first list was a notable achievement. Undoubtedly, it inspired libraries such as the Pratt Institute Free Library and Carnegie Library to

compile and publish their own lists of recommended books. However, Professor Burgess and the other members of the committee clearly underestimated the time it would take to keep the list up-to-date. Committee members also lacked familiarity with the needs of librarians in terms of the kind of information that would be most useful in selecting books, which E. F. Stevens pointed out in 1909. The committee might have remedied this problem by reaching out to librarians and it is unclear why it did not do so, especially in light of Professor Burgess's acknowledgement at the 1906 meeting that several had shown interest in participating in the project. It is also clear that some SPEE members were uncomfortable with the notion that SPEE appeared to favor some publishers. Other SPEE members may have felt that the Committee overlooked books from their areas of specialization.

5. The emergence of engineering librarianship, 1910-1940

Just as SPEE's active involvement in book selection was coming to an end in 1910, librarianship was becoming increasingly professionalized and specialized. In 1909, John Cotton Dana, director of the Newark Public Library, and a group of librarians established the Special Libraries Association in order to address the needs of librarians working with special types of information or clientele. In 1911, the ALA Council established the Agricultural Libraries Section to promote cooperation and communication among librarians at land-grant colleges and universities, agricultural experiment stations and the U.S. Department of Agriculture. A significant number of land-grant institutions also supported engineering programs, so it is likely that many members of the Agricultural Libraries Section also had an interest in engineering topics.

One of the main obstacles to the development of engineering librarianship in the 1890s and 1900s was the dearth of professional librarians, especially librarians with backgrounds or interest in technical information. At engineering schools it was common for the library to be placed under the supervision of a retired or semi-retired professor, widow of a professor, secretary, graduate student or even a recent graduate of the engineering program.³⁷ Of course, this arrangement gave rise to numerous problems. Engineering school libraries were often poorly organized, incomplete and lacking the most up-to-date books and periodicals.

Another factor was the lack of information about engineering libraries. In 1912, W. D. Johnston, the chief librarian at Columbia University, attempted to fill that gap by conducting a review of engineering school libraries.³⁸ He noted that departmental engineering libraries were very common but increasingly managed by professional librarians: "The departmental library of the new type is primarily a librarian." The engineering libraries at the University of Michigan and Harvard University had the most volumes in their reference collections, about 8,500 each. The number of students per reading room seat ranged from 32 at the University of Missouri to 3.66 at the University of Pennsylvania. The University of Wisconsin had the largest number of current periodicals at 175. Annual expenditures on books ranged from \$350 at Worcester Polytechnic Institute to \$2,500 at the University of Iowa.

There was also much disagreement among engineering faculty about whether engineering materials should be housed in a library located within the engineering school or in the main library. Not surprisingly, a number of SPEE members believed that students were better served

by an engineering library located near their classrooms and laboratories. During a discussion on the design and layout of engineering schools at the 1911 SPEE meeting in Pittsburgh, Professor H. Wade Hibbard of the University of Missouri argued “that if we expect to get engineering students to make the most thorough use of the books in the engineering library, we must take the library to the students and not expect them to go off into some great central library building.”³⁹ He noted that engineering students at Missouri do not “care to go over into the general library to work among the women from the colleges of arts and sciences,” perhaps because they are often dressed in “less expensive” clothes suitable for working in the engineering labs. Public librarians also noticed that industrial workers who visited their libraries in search of technical information were often self-conscious about their dress. The librarian in charge of the Technology Department at the Providence Public Library made a point of reassuring workers that their clothes were absolutely acceptable.²⁷

In response, the author of the paper, Professor James M. White of the University of Illinois, acknowledged that departmental libraries were convenient and accessible, but argued that they give rise to inefficiencies and duplication. He also asserted that “students do less systematic work in the library by way of rushing into it to consult a book to get a bit of information between classes or while working in the laboratory, than they do if they go to the library, notebook in hand, to study up on certain subjects... If [the student] gets in the habit of going to the general library, he will go there, whereas, with a departmental library, he is inclined to think that the only information he can use and the only facts he can know are in the departmental library.”³⁹

Arthur Hamerschlag, director of the Carnegie Technical Schools, noted that “it is extremely difficult to get students to go to the [central] library for minor reference works and we have found it necessary to place in the department which requires reference books, such texts and reference literature as is important...”³⁹ He went on to explain that Carnegie was exploring the feasibility of installing a mechanical system to deliver books from the main library to other buildings on campus. It is possible that Hamerschlag was referring to a pneumatic tube system like the ones in use in large office buildings and some cities to deliver letters and small packages.

During the 1910s, engineering faculty were not only concerned with getting their students to use library materials in order to complete their assignments but also with inculcating life-long learning habits. In 1913, Professor George L. Sullivan of the University of Santa Clara, published a paper in which he made the argument that engineering education should be less focused on theoretical topics and more concerned with practical skills. Among these, he included use of the library, noting that “the use of a well-catalogued library is as important as the use of a laboratory in acquiring information.”⁴⁰

In the broader engineering community there was a growing awareness of the benefits of libraries and librarians. In 1911, the *Engineering News* published an editorial commenting on the recent donation made by the well-known civil engineer Elmer L. Corthell of his personal engineering library of 10,000 volumes to Brown University, his alma mater.⁴¹ The editorial argued that practicing engineers required access to more “engineering reference libraries,” including libraries at engineering schools. Librarians were also beginning to educate their engineer colleagues about library methods. Louis B. Krause, a corporate engineering librarian based in Chicago, published

several articles in the *Engineering Record* on the organization and use of engineering and technical literature.⁴²⁻⁴³ In 1915, the *Engineering Record* published another editorial that suggested that the creation of an association of engineering libraries would help to promote cooperation and standardization.⁴⁴ In May of the same year, representatives from twenty engineering and scientific societies, including F. L. Bishop, the secretary of SPEE, met at the Engineering Societies Library in New York City to discuss plans to create a universal classification system for technical literature.⁴⁵

A handful of engineering librarians joined SPEE in the 1910s. One of them was Ellwood H. McClelland, who succeeded Harrison Craver as head of the Technology Department in the Carnegie Library of Pittsburgh. McClelland joined SPEE in 1912 and would remain a member through 1950. He was an active contributor to SPEE and helped to index several volumes of the proceedings and journal.⁴⁶ Another librarian who joined SPEE around 1915 was L. D. Arnett of West Virginia University.

Although the Special Libraries Association had as members many librarians who worked in engineering firms and industrial settings, there was still no organized group of academic engineering librarians. In 1926, at ALA's fiftieth anniversary conference, Charles H. Brown of the Iowa State College Library presented a paper to the Agricultural Libraries Section in which he argued that libraries at agricultural colleges actually supported a broad range of programs including "engineering" and "road engineering."⁴⁷ Two years later, the Committee on Future Activities of the Agricultural Libraries Section issued a report, which was adopted, that officially expanded the Section's mandate to include "problems of land-grant colleges, such as engineering, home economics, science, etc., as well as agriculture."⁴⁸

In the mid-1930s, the ALA leadership became increasingly concerned about the proliferation of library organizations and the fragmentation of the profession. In 1938, Dr. Louis Shores, director of the Library School in the Peabody College for Teachers in Nashville, Tennessee, drafted a proposal for a new "pyramidal" organizational structure that featured five divisions based on library type and four divisions based on library function. The divisions by library type included (1) Public Libraries; (2) College, University, and Research Libraries; (3) School Libraries; (4) Special Libraries; and (5) Library Training. The Shores Plan placed engineering libraries in Division 4, along with agricultural, business and technology, law, medical and music libraries.⁴⁹

The Shores Plan was not adopted by ALA, but some reorganization took place in the late 1930s. In 1939, the leadership of the Agricultural Libraries Section surveyed its membership on whether the section should become a section within the Association of College and Reference Libraries (ACRL).⁵⁰ This precipitated an interesting exchange of correspondence between Jackson E. Towne, chair of the Reorganization Committee, and William N. Seaver, institute librarian at the Massachusetts Institute of Technology (MIT). Seaver expressed puzzlement at having received the questionnaire: "I suppose the institute is on your list because we happen to be a land-grant college, but we have no agricultural courses, and our affiliations are rather with other engineering schools and universities having engineering schools and colleges. Some postage could therefore be saved if you would remove our name from the mailing list." In response, Towne reminded Seaver that the Agricultural Libraries Section's mandate included engineering

libraries and encouraged him to return his survey, noting that if the section became a dues-paying section within ACRL, Seaver would be free to decline membership.

6. Humanizing the Engineer, 1920-1940

As we have seen, many of the early members of SPEE believed that engineering education should include courses in the liberal arts, languages and instruction in the use of the library and engineering literature. A number of engineering schools did include these subjects in their curriculums in the 1890s and 1900s. However, with each new invention and technological development the pressure to add new technical courses increased. Gradually, engineering programs became more and more focused on technical subjects. This problem might have been avoided by the adoption of specific criteria or guidelines for engineering education. However, SPEE, for the most part, left the development of such guidelines to engineering schools and other engineering societies. For example, in 1922 SPEE's Committee on Chemistry endorsed the recommendations of the Education Committee of the American Institute of Chemical Engineers, which included the following statement regarding information research skills.

“The Committee recommends that a course in “Sources of Information” be provided as part of the Chemical Engineering course. This should familiarize the student with patent literature, government reports, bibliographies, trade journals and catalogs, abstract journals, publications of societies, the resources of libraries, and the activities of scientific and technical societies throughout the world. A reading knowledge of a modern language should be required.”⁵¹

A few years earlier, in 1914, J. Martin Telleen, assistant professor of English at the Case School of Applied Science, provided a comprehensive overview of engineering literature and library collections in hopes of inspiring more engineering faculty to include such materials in their courses.⁵² However, most engineering schools failed to adopt formal requirements regarding library instruction.

Carnegie librarian Ellwood H. McClelland noted this problem in an article he wrote for *Engineering Education* in 1922.

“Perhaps one reason for the average student's apathetic attitude towards engineering literature, and his failure to grasp its importance, may be found in the fact that usually the work is not dignified by any definite place in the curriculum. When time is given for this work it is frequently in substitution for a class-room or laboratory period—apparently as an afterthought. Until the study of engineering literature is recognized to the extent of being installed in the regular curriculum, so that the student may understand it to be part of his require course and think of it in these terms, there is a sound psychological reason for his regarding it lightly.”⁵³

In the mid-1920s, growing public concern about the perceived erosion of quality in engineering education programs prompted SPEE to undertake a multi-year study of the problem. In 1926, SPEE issued its report, which recommended, among other things, that engineering schools include more courses on “humanistic” subjects and economics.⁵⁴ The issue continued to fester in

the late 1920s and early 1930s.⁵⁵ Even President Franklin D. Roosevelt criticized engineering schools for not doing more to train engineering students in social and professional skills.⁵⁶ A number of leading engineering schools including Carnegie, Cornell, MIT, Purdue, and Yale did revise their programs to include more non-technical courses.

In the late 1920s, SPEE began organizing summer schools in an effort to improve teaching and encourage curriculum development. The 1932 Summer School, which was held at Ohio State University and the Stevens Institute of Technology, focused on English instruction. One of the sessions was devoted to “Teaching Literature in Engineering Colleges.” The instructors included H. S. Leach, a librarian from Lehigh University.⁵⁷

In 1933, Columbia University began requiring its undergraduate engineering students to take a one-credit course called “Engineering Library Technique.”⁵⁸ A similar course at MIT was offered from 1935 forward.⁵⁹ At the 1937 SPEE conference held at MIT and Harvard, MIT librarian Ruth M. Lane gave a paper titled the “The Place of the Reference Librarian in Engineering Teaching.” A year later, Lane’s paper was published in the *Journal of Engineering Education* but with a slightly modified title, “Place of the Technical Library in Engineering Education.”⁵⁹ In it Lane described the role and training of the engineering librarian.

“In addition to collecting of source materials and new publications, and the preparation of the best facilities for their use, the librarian should interpret and teach the values of engineering literature, study student reader personalities, meet individual reading needs, and show how the spirit of research in reading always leads to breadth of professional knowledge... The librarian should be trained in library techniques and educational methods, and should possess a scholarly interest in following the developments of the specialized engineering field... The engineering librarian must become more and more a cooperating teacher.”

In 1938, ALA president Harrison W. Craver, director of the Engineering Societies Library, delivered an address on the “Role of the Engineering Library in Research and Education” at the inauguration of the new president of Vanderbilt University.⁶⁰ In closing his speech, Craver declared that “Because the library is an essential tool in research work today, and promises to be even more important hereafter, college students would profit immensely from more instruction in its use.”

7. Engineering librarians organize: The SPEE Engineering School Libraries Committee and the ACRL Engineering School Libraries Section, 1941-1950

In late June 1941, more than 4,200 librarians gathered in Boston for the American Library Association’s sixty-third annual conference. Although the weather was warm and sunny, the atmosphere at the conference must have been subdued. War had been raging in Europe for almost two years. Americans watched with increasing concern as Germany and its allies conquered country after country until only Great Britain remained. A pre-conference meeting on June 18 was devoted to the topic of the role libraries in national defense. On June 22, the fourth day of the conference, Germany launched a massive surprise attack on the Soviet Union. Many Americans believed that it was a matter of time before events forced the U.S. into the war.

Earlier in the spring, William Seaver of MIT, had invited engineering librarians and “others interested in applied science and technology” to meet at MIT during the conference to discuss the possibility of organizing an engineering school libraries section under the auspices of the Association of College and Reference Libraries.⁶¹ Although it is not clear how many librarians answered Seaver’s invitation, the meeting on June 24 was an apparent success. The participants drafted a petition and formed a committee to gather more information with the goal of presenting a detailed proposal for section status to the ACRL Board at the ALA midwinter meeting in Chicago in late December. Harold A. Lancour, the librarian from the Cooper Union Institute in New York City, emerged from the meeting as a leader of the group and chair of the Petition Committee.

Originally from Minnesota, Lancour earned a BA from Washington University in 1931. In 1935, he accepted the position of reference assistant at the New York Public Library. While working at NYPL, Lancour studied library science at Columbia University, completing a BS in 1936 and a MS in 1942. In 1938, Cooper Union offered him the position of librarian, which he accepted. Lancour’s interests were mainly history, literature, and art. In 1940, he had applied but was not selected for the position of librarian at the American Antiquarian Society.⁶² In 1942, he compiled a union list of American Art Auction Catalogues, 1785 to 1942 that was published by the NYPL.

On Saturday, October 18, a few months after the engineering librarians’ meeting at MIT, a group of approximately a dozen librarians met during the fall meeting of the New England Section of SPEE, hosted by the Thayer School of Civil Engineering at Dartmouth College in Hanover, New Hampshire, to discuss “plans for cooperation and organization.”⁶³ The host was Ruth Bristol of Dartmouth. Attendees included Natalie Nicholson of Harvard University; Louis T. Ibbotson of the University of Maine; Myra E. White of Northeastern University; Helen J. Moss of Yale; John B. O’Farrell of the College of the City of New York, Harold Lancour of the Cooper Union Institute; and Marguerite Chamberlain, William N. Seaver, Ruth M. Lane, and Ralph McNay of MIT.²¹

The program was called the “First Conference” of the Engineering School Librarians of New England, the first appearing on a SPEE meeting program. The morning session was devoted to the question of organizing a librarians group within SPEE. The main goals of the group were to improve engineering school libraries, address professional problems of librarians, and promote closer cooperation between engineering librarians and faculty. All the librarians present agreed to become members of SPEE and petition the New England Section to create a librarians’ committee, which was approved at the section’s business meeting that evening. Ruth Lane of MIT was elected interim chair and Natalie Nicholson was elected interim secretary. The attendees also discussed possible projects and collaborations based largely on the list of ideas drawn up at the June 24 meeting at MIT.

In the afternoon session, Professor emeritus D. C. Jackson of MIT addressed the group on “The Library in Engineering Education: How Can Its Usefulness Be Developed?”⁶⁴ Forty years had passed since Professor Jackson had first spoken on the role of libraries in engineering education at the SPEE conference in Buffalo.

In his remarks, Professor Jackson asserted that the library should be “recognized to be of importance equal to an important general laboratory” and that it is the “duty of the librarian to urge this view on the administrative officers” of the engineering school. Jackson noted that many engineering schools were failing to give adequate attention to the hiring and support of librarians, which was addressed in a recent report he authored called *Present Status and Trends of Engineering Education in the United States*.⁶⁵ A 1942 study of libraries of technical colleges sponsored by the Carnegie Foundation also highlighted the lack of institutional support for libraries.⁶⁶

Jackson also argued that engineering librarians should be active participants in the academic and research programs of their schools. They should teach undergraduate students, provide guidance to graduate students and conduct literature searches for researchers. An academic engineering librarian, Jackson asserted, should have an understanding of teaching methods and an interest in their development; knowledge of research methods and local research programs; and “sympathetic interest” in students.

Following the Dartmouth meeting, a number of engineering librarians from across New England, including three from MIT, joined SPEE in 1941. They were Marguerite Chamberlain, Eastman Librarian, MIT; Ruth McGlashan Lane, Vail Electrical Engineering Librarian, MIT; Natalie N. Nicholson, Librarian, Graduate School of Engineering, Harvard University; John B. O’Farrell, Technology Librarian, City College of New York; William Seaver, Institute Librarian, MIT; and Myra White, Librarian, Northeastern University.

At the ALA midwinter meeting in Chicago, held December 27-30, the ACRL Board discussed the petition to create a new section for engineering school librarians. For reasons that are not clear in the minutes, the Board decided to engage in further discussions with representatives from the group on December 30, the last day of the meeting. This effectively postponed a decision until the next ALA annual conference in Milwaukee in June 1942.⁶⁷

The Milwaukee conference took place on June 22-27 with only 2,300 librarians in attendance. In short order, the ACRL Board approved the creation of an Engineering School Libraries Section (ESLS), describing it as a decision of “first importance.”⁶⁸ Harold Lancour was selected chair. Other members of the Executive included Brother Aurelian Thomas, director of libraries at Manhattan College, William Seaver of MIT, Hilda Alseth of the University of Illinois, and Marvin Miller of the University of Arkansas. The constitution of the new section stated that its goals were “to promote library service and librarianship in engineering schools, encourage mutual cooperation with other organizations in the field of engineering education, and ... advance the standards of library services in engineering schools.”⁶⁹

As the ALA conference was winding down, SPEE members were gathering in New York City for the Society’s fiftieth conference, which was held at Columbia University, June 27-29. The Engineering School Libraries held a joint session with the English Committee. John O’Farrell of the City College of New York gave the main talk on “English Courses and the Technology Library,” which was followed by a discussion.⁷⁰ The pairing of the Engineering School Libraries with the English Committee suggests that the librarians’ group was too new or too small to

justify a full session. During the conference the English Committee requested and was granted division status by the SPEE Council. Although there is no mention of it in the conference proceedings, it is possible that the Council also granted committee status to the Engineering School Libraries during the meeting. The list of committees for 1942-43 published in the proceedings for 1942 includes the Engineering School Libraries. The first chair of the ESL Committee was John B. O'Farrell, Technology Librarian, City College of New York. Other members of the committee included Harold A. Lancour, Cooper Union; Ruth McGlashan Lane, MIT; L. Granville Meixell, Columbia University; and Natalie N. Nicholson, Harvard University.

Five librarians joined SPEE in 1942, all from institutions in New York and New England. William H. Hyde, a graduate of Oberlin College and Columbia University's School of Library Service, was the engineering librarian at Cornell University in upstate New York when he became an SPEE member. Abbie H. Metcalf, another graduate of Columbia and a former public librarian, was the engineering librarian at Dartmouth College. The remaining three were from New York City: Harold Lancour from Cooper Union; L. Granville Meixell, the engineering librarian at Columbia University; and Robert H. Whitford, technology-physics-chemistry librarian at City College of New York.

In the span of a year, academic engineering librarians had banded together and organized not one but two professional organizations. Unfortunately, the war pushed most organizational activities onto the back burner. Government restrictions on non-essential travel made conference planning problematic. ALA decided not hold conferences in 1943, 1944 and 1945. ACRL also suspended its meetings for the duration of the war. SPEE held conferences in 1943 and 1944 but cancelled its 1945 conference at the request of the War Committee on Conventions. This must have made it difficult to recruit new librarian members. Nevertheless, a handful of librarians did join SPEE in 1944 and 1945. By the end of 1945, two dozen librarians had joined SPEE. In 1943, Ruth M. Lane of MIT succeeded John O'Farrell as chair of the SPEE Engineering School Libraries Committee and served until 1947. Her four-year term is unusual and suggests that elections were not held in 1945 due to SPEE's decision to cancel its conference. There is no evidence that engineering librarians participated in SPEE national or section meetings during the war years.

The ACRL Engineering School Libraries Section was able to recruit a large membership fairly quickly. By the spring of 1943, more than half of the directors of academic engineering libraries in the U.S. had joined the section.⁷¹ Eager to contribute to the war effort, ESLS appointed a Committee on War Time Serials, led by William Seaver of MIT, to compile a union list of issues received by U.S. libraries of European scientific and technical journals. Since the beginning of the war, delivery of issues of European journals had become intermittent. In the late summer and early fall of 1942, the Committee compiled a preliminary list of 800 titles. ESLS abandoned the effort when it learned that the Library of Congress was working on a similar project.⁷²

In the summer of 1943, Harold Lancour entered the U.S. army and served for about 18 months, including a brief stint in Europe. During his absence, Brother Aurelian Thomas served as acting chair of the ESL section. ESLS compiled a directory of members, which was vital for obtaining a portion of the dues ESLS members' paid to ACRL.⁷³

ALA held its first post-war conference in Buffalo, New York in June 1946. The ACRL Engineering School Libraries Section's program consisted of one session, a panel discussion, chaired by Harold Lancour of Cooper Union. Panelists included Cornelia Graham of Clemson College, William H. Hyde of the Illinois Institute of Technology, Jackson E. Towne of Michigan State College, and H. Dean Stallings of the South Dakota State College.⁷⁴ The topics of discussion were engineering library techniques, services, collections and attitudes.

The ACRL Engineering School Libraries Section's program at the 1947 ALA conference in San Francisco, chaired by William Hyde of the Illinois Institute of Technology, was more substantial.⁷⁵ Topics included the "Handling and Indexing of Miscellaneous Publications in Engineering School Libraries" and the "Library Catalog in the Engineering School Library." A second session held on July 4 at the San Francisco Public Library was devoted to a report by Dorothy M. Crosland of the Georgia School of Technology on her recent trip to Europe to investigate the current status of European scientific and technical journals.⁷⁵

At the 1948 ALA conference in Atlantic City, New Jersey, engineering librarians heard a debate on training requirements for engineering librarianship. Dr. Herbert Goldhor of the University of Illinois Library School argued against specialized training while Dr. Vernon Tate of MIT argued the opposite point of view. According to the conference report, the session "brought out stimulating ideas on a topic of vital interest, evoking a lively question and discussion period from the [35] engineering librarians and library educators present."⁷⁶

Of course, the question of specialized training for engineering and technology librarians had been discussed for more than fifty years. In 1949, the ACRL Engineering School Libraries Section published a comprehensive directory of engineering library staff.⁷⁷ This directory provides an interesting snapshot of engineering librarianship in the middle decades of the twentieth century. In 1950, there were 40 librarian members in ASEE, eighteen men and twenty-two women. Of the several hundred staff listed in the ACRL ESLS directory, thirty-two were also members of ASEE. Twenty-two ASEE librarians had BS degrees in library science; seven were graduates of Columbia University, five from Simmons College and four from the University of Illinois. Fourteen had MSLS degrees and five had second masters; one had a PhD and one a law degree. Only three ASEE librarians, all men, had engineering degrees.

In 1949, ALA held regional conferences in lieu of a national conference. The ESLS appointed seven members to serve as representatives to regional planning committees, but it is unclear if any engineering library programs were planned. The experiment proved unsatisfactory and the national conference was reinstated for 1950.

There were major changes within ESLS. Several of its founding members had moved on to retirement or other careers. In 1947, William Seaver of MIT retired after a twenty-two year career as the Institute Librarian. Also in 1947, Harold Lancour completed his Ed.D. at the Teachers College at Columbia--his dissertation was a plan for the remodeling of the Cooper Union Library--and left Cooper Union. He would spend the rest of his career as a professor and administrator. He served as assistant director of the Library School at the University of Illinois and then as the first dean of the Graduate School of Library and Information Science at the

University of Pittsburgh, a position he held until 1971. Lancour retired from the ACRL ESLC Executive Committee in 1949 having served four years as chair and three years as director.

The significant overlap in membership between the Agricultural Libraries and Engineering School Libraries Sections gave rise to problems in conference scheduling. After the 1948 ALA conference, some members requested that ALA not schedule ALS and ESLS sessions at the same time. At the 1950 ALA midwinter meeting, John Moriarty of Purdue University proposed a merger of the Agricultural Libraries and Engineering School Libraries Sections.⁷⁸ The leadership of the two sections commenced discussions and a joint session was held at the 1951 ALA conference in Chicago. The membership approved a formal merger of the sections and in 1952 the Pure and Applied Sciences Section (PASS) came into being.

During the post-war period, the ASEE Engineering School Libraries Committee was also active. Librarian membership increased from 28 in 1946 to 40 in 1949. The Committee hoped to recruit enough members to support its application for division status.⁷⁹

The ESLC and English Divisions held a joint program at the 1949 ASEE meeting in Rochester, New York.⁸⁰ Engineering librarians also organized programs at the New England Section meetings in 1947 and 1948. At the 1947 meeting, which was held at Norwich University in Vermont, John B. O'Farrell presented a paper on mechanical engineering collections and Francis P. Allen of Rhode Island State College discussed occupational and career information resources.⁸¹ At the 1948 meeting, hosted by Northeastern University in Boston, librarians discussed a survey of library instruction in engineering schools, illustrated lectures, and the maintenance of the library-faculty relationship.⁸²

8. ASEE Engineering School Libraries Committee, 1951-1960

The merger of the ACRL Agricultural Libraries and Engineering Libraries Sections left the ASEE's Engineering School Libraries Committee as the only organization focused on academic engineering librarianship. During the 1950s, the librarian community within ASEE continued to grow. The number of librarian members peaked in 1954 at 57 and then declined to about 46 by the end of the decade. Of course, there was considerable overlap between librarians who were members of ASEE and the ACRL's Pure and Applied Sciences Section (PASS). In 1952, PASS lobbied ASEE to appoint a group of its members to the ESLC.⁸³

The membership of the Engineering School Libraries Committee was fairly stable during this period, with about twelve members. (See Appendix B for biographical sketches of the ESLC chairs from 1942-1960.) Long-serving members on the committee included Dorothy M. Crosland of the Georgia Institute of Technology, 1946-1961; Madeline Gibson of the Michigan College of Mining & Technology, 1947-1961; John Moriarty of Purdue, 1951-1961; Jeannette Poor of Cornell, 1951-1961; Ira Tumbleson of the Newark College of Engineering, 1952-1961; and John B. O'Farrell of the City College of New York, 1942-1951.

Engineering librarians organized programs at several ASEE national conferences and a number of section conferences. In the ESLC annual report for 1954-55, John Moriarty noted that ESLC

programs had been held at several section conferences during the preceding year.⁸⁴ Several librarians published articles in the *Journal of Engineering Education*.⁸⁵⁻⁸⁸

In addition to organizing programs at conferences, librarians were participating in ASEE in other ways. In October 1955, Edwin McClintock of the University of Illinois became the editor of the *Journal of Engineering Education* following the unexpected death of the incoming editor.⁸⁹ McClintock joined SPEE in 1939 and was active in the English and Social-Humanistic Divisions. He was not a professional librarian, having earned a BA from the University of Virginia in 1936. Following graduation he found work at the university, holding appointments as instructor, associate professor and acting head of the English Department in the School of Engineering. After receiving training at the Library of Congress, he established a new Engineering and Science Library and served as its head until moving to Illinois in 1955. He was a member of ESLC from 1954 through 1959. John Moriarty of Purdue also joined the editorial board of JEE in November 1960.

9. Discussion and further research

The professors who founded SPEE in the early 1890s and built the organization in the first decade of the twentieth century clearly appreciated the role of libraries and librarians in the education of young engineers. Some SPEE members, such as Professor Mack of Wisconsin, collaborated with librarians as early as 1898. As the history of the Committee on Technical Books for Libraries demonstrates, SPEE members were interested in working with librarians on projects of mutual interest. However, the Committee's failure to consult librarians, partly due to a lack of librarian members in SPEE and the chair's failure to follow-up with librarians who had shown interest in the project, ultimately derailed it.

In the 1910s, engineering librarianship emerged as a specialty and engineers turned to librarians for help in solving problems such as the classification of technical literature. From 1908 forward, a few librarians joined SPEE. Most notable of these was Ellwood McClelland of the Carnegie Library of Pittsburgh, who remained a member until 1950. As engineering collections in academic and public libraries grew, so did the perceived need for an engineering library association. The ALA's Agricultural Libraries Section tried to address that need in 1928 when it broadened its scope to include engineering.

Although a number of SPEE members valued the expertise and knowledge of librarians and what they could do for engineering students, it was only in the 1930s that librarians began to have a more visible role in SPEE. Engineering schools, responding to concerns about perceived weaknesses in engineering education, added more non-technical courses, including courses in library instruction. In the early 1940s, two groups of academic engineering librarians organized, one in ACRL and the other in SPEE. Although ACRL Engineering School Libraries Section lasted only about ten years, the ASEE Engineering School Libraries Committee continued into the 1950s, creating a solid foundation for later successes in the 1960s and beyond.

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Appendix A: Engineering School Libraries Chronology, 1893-1960

- 1893 August The Society for the Promotion of Engineering Education (SPEE) is founded by a group of faculty and deans of engineering schools at the International Congress on Engineering in Chicago.
- 1901 June At the SPEE conference in Buffalo, New York, Professor Dugald C. Jackson of the University of Wisconsin presents a paper written by Charles F. Burgess that argues that SPEE should compile a list of technical books in order to help librarians select the best works for their collections. SPEE establishes the Committee for Technical Books for Libraries with Burgess as Chair.
- 1902 June Professor Burgess presents a paper at the ALA annual conference in Boston describing the goals and activities of the Committee for Technical Books for Libraries. ALA President John S. Billings suggests that ALA will publish SPEE's list of recommend books when it is ready.
- The Carnegie Library of Pittsburgh establishes a Technology Department, the first in a public library. Members of the SPEE Committee for Technical Books visit the Carnegie Library and other libraries.
- 1903 June At the SPEE conference in Niagara Falls, New York, the Committee for Technical Books for Libraries presents its first list of recommended books. The list is included in the SPEE proceedings and distributed free-of-charge to libraries.
- 1906 June The Committee for Technical Books for Libraries publishes its second list of books. Professor Burgess steps down as chair and is replaced by Arthur H. Ford of the State University of Iowa.
- 1908 Edward F. Stevens of the Pratt Institute Free Library in Brooklyn, New York is the first professional librarian to join SPEE.
- 1909 June At the SPEE conference in New York, the Committee for Technical Books for Libraries submits its third list of books. E. F. Stevens and others present question the quality and comprehensiveness of the list. It is sent back to the Committee for revision.
- E. F. Stevens presents a paper at the ALA conference in Bretton Woods, New Hampshire in which he disparages the SPEE book list and argues that librarians are best qualified to make book selection recommendations.
- John Cotton Dana and a group of librarians found the Special Libraries Association (SLA).

- 1910 June At the SPEE conference in Madison, Wisconsin, the Committee for Technical Books for Libraries presents its revised list of books and disbands. The SPEE Council refers the list to the Publications Committee for consideration.
- 1911 June At the SPEE conference in Pittsburgh, the SPEE Publications Committee declines to publish the revised list of books.
- The ALA Council creates the Agricultural Libraries Section in order to facilitate cooperation and communication among librarians at land-grant colleges and universities, agricultural experiment stations and the U.S. Department of Agriculture.
- 1912 Columbia University librarian W. D. Johnston publishes the first survey of academic engineering libraries in Columbia's *School of Mines Quarterly*.
Elwood H. McClelland, Technology Librarian at the Carnegie Library of Pittsburgh, joins SPEE. He remains a member for 38 years.
- 1915 May Representatives from 20 engineering societies including SPEE meet at the Engineering Societies Library in New York to discuss plans for creating a universal classification system for technical literature.
- December An editorial in the *Engineering Record* calls for the creation of an engineering library association in order to promote cooperation and standardization.
- 1922 E. H. McClelland publishes an article in *Engineering Education* called "Instruction of Students in the Use of Technical Literature: An Unexploited Phase of Engineering Education".
- 1926 June At ALA's fiftieth anniversary conference, Charles H. Brown of the Iowa State College Library presents a paper in which he argues that libraries at so-called agricultural colleges actually support a wide array of programs including engineering.
- 1928 June The Agricultural Libraries Section expands its mandate to include engineering and other subjects taught at land-grant institutions.
- 1933 Columbia University begins requiring engineering students to take a one-credit course called "Engineering Library Technique".
- 1935 MIT begins offering a course on library research to engineering students.

- 1937 June Librarian Ruth M. Lane of MIT presents a paper at the SPEE conference at MIT called “The Place of the Reference Librarian in Engineering Teaching”.
- 1938 R. M. Lane publishes an article called “Place of the Technical Library in Engineering Education” in the *Journal of Engineering Education*.
The Shores Plan for reorganizing ALA proposes the creation of a section for engineering libraries. The plan is not adopted.
- 1941 June During the ALA conference in Boston, about two dozen librarians meet at MIT to discuss plans for organizing an engineering school libraries section within ACRL. Harold Lancour of the Cooper Union Institute becomes chair of the Petition Committee.
- October A dozen engineering librarians attending the fall meeting of the SPEE New England Section at Dartmouth form the Engineering School Librarians Committee of New England. Ruth M. Lane of MIT is elected chair and Natalie Nicholson of Harvard is elected secretary.
- December At the ACRL midwinter meeting in Chicago, the ACRL Board defers making a decision on the petition to establish a section for engineering school libraries.
SLA approves the Engineering-Aeronautics Section, formerly known as the Electrical Communications Section, within the Science-Technology Group.
- 1942 June At the SPEE conference in New York, engineering librarians hold a joint program with the English Committee. SPEE establishes the Engineering School Libraries Committee. John B. O’Farrell of the College of the City of New York is elected chair.
At the ALA conference in Milwaukee, the ACRL Board approves the Engineering School Libraries Section. Harold Lancour is appointed chair.
- 1943 The war curtails many ALA, ACRL and SPEE activities. Ruth Lane becomes chair of the SPEE Engineering School Libraries Committee and serves through 1947. Harold Lancour enters the U.S. Army in July and serves for a brief period in Europe.
- 1945 22 librarians are members of SPEE.
- 1946 At the first post-war ALA conference in Buffalo, the ACRL Engineering School Libraries Section holds its first program.
SPEE changes its name to the American Society for Engineering Education (ASEE).

- 1947 June At the ALA conference in San Francisco, the ACRL Engineering School Libraries Section holds a two-session program.
- October The ASEE Engineering School Libraries Committee holds a session at the ASEE New England Section's annual meeting.
- 1948 June At the ALA conference in Atlantic City, the ACRL Engineering School Libraries Section's program includes a discussion about training requirements for engineering librarians.
- October The ASEE Engineering School Libraries Committee holds a session at the ASEE New England Section's annual meeting.
- 1949 June At the ASEE conference in Rochester, the Engineering School Libraries Committee and the English Division hold a joint program.
- ALA holds regional conferences in lieu of a national conference. It is not clear whether engineering librarians organize programs at the regional conferences.
- The ACRL Engineering School Libraries Section publishes a directory of engineering school library personnel.
- 1950 June Engineering librarians organize a program at the ASEE conference in Seattle.
- December John Moriarty, director of libraries at Purdue University, proposes a merger of the ACRL Agricultural Libraries Section and Engineering School Libraries Section.
- 1951 June The ACRL Engineering School Libraries and Agricultural Libraries Sections hold a joint program at the ALA conference in Chicago.
- Engineering librarians organize a program at the ASEE conference in Lansing, Michigan.
- 1952 The ACRL Engineering School Libraries Section and Agricultural Libraries Section merge to form the Pure and Applied Sciences Section (PASS).
- 1953 June Engineering librarians organize a program at the ASEE conference in Gainesville, Florida.
- 1954 February Librarian membership in ASEE peaks at 57.
- 1955 October Edwin McClintock, former head of the Engineering & Science Library at the University of Virginia and a member of the Engineering Schools Library Committee, becomes editor of the *Journal of Engineering Education* (JEE).
- 1960 John Moriarty joins the JEE editorial board.

Appendix B: Biographical Sketches of Chairs of the SPEE/ASEE Engineering School Libraries Committee (ESLC), 1942-1960

Except where noted, the following biographical information was obtained from the *Directory of College Engineering Library Personnel*, published in 1949 by the Engineering School Libraries Section of the Association of College and Reference Libraries (ACRL).¹



No photo available.

John B. O'Farrell (1942-43)

John O'Farrell, the technology librarian at the City College of New York (CCNY), joined SPEE in 1941 and was appointed chair of the Engineering School Libraries Committee (ESLC) in 1942. He earned a BS degree from CCNY in 1934 and BS in library science from Columbia University in 1937 and a MA degree, also from Columbia, in 1940. He was a member of the ESLC from 1942-51. During the Second World War he taught mechanical engineering and physics courses at CCNY. In 1954, he accepted the position of head technology librarian at the U.S. Naval Air Missile Test Center at Point Mugu, California. He remained a member of ASEE through 1956. His publications include *The Use of the Literature by Chemical Engineers: A Condensed Guide*,² and several articles on engineering collections and libraries.³⁻⁴



Ruth M. Lane, ca. 1950, courtesy of the MIT Museum.

Ruth McGlashan Lane (1943-47)

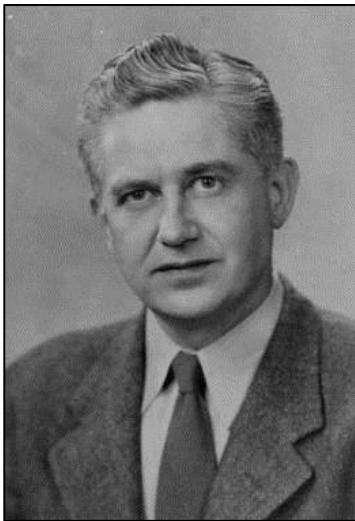
Ruth McGlashan Lane was the Vail Electrical Engineering Librarian at the Massachusetts Institute of Technology (MIT) from 1922-25 and 1935-53. In 1937, she presented a paper on "The Technical Library in Engineering Education"⁵ at the SPEE annual conference held at MIT. She joined SPEE in 1941 and was elected chair of the Engineering School Librarians Committee of the New England Section. She also served as chair of the ESLC from 1943-47. Ms. Lane graduated from Wellesley College in 1908 and earned a BS in library science from Simmons College in 1922. A lifelong learner, she earned a MEd degree from the Harvard Graduate School of Education in 1939. She continued to serve on the ESLC through 1949. After retiring from MIT in 1953, she remained a member of ASEE until 1958. Her publications include a classified list of MIT electrical engineering theses from 1902-40⁶ and *Project Biblio: Storage and Processing of Information: A Guide to the Literature of Electrical Engineering and to the Use of an Engineering Library*, which was published by MIT in 1956.⁷



William H. Hyde, ca. 1950, courtesy of the University Archives & Special Collections, Illinois Institute of Technology.

William H. Hyde, Jr. (1947-49)

William Humphrey Hyde, Jr. joined SPEE in 1942. He graduated from Oberlin College in 1925 and then studied library science at Columbia University, completing a BS in 1929 and a MS in 1948. His first professional position was assistant librarian at the New York University Club, where he worked from 1929-36. From 1939-45 he was the engineering librarian at Cornell University. In April 1945, Mr. Hyde became librarian and professor of library science at the Illinois Institute of Technology in Chicago. He served as ESLC chair from 1947-49 and as a member in 1949-50 and 1952-53. He was also active in the ACRL Engineering School Libraries Section, serving as chair from 1946-47 and as a member of the Executive Committee in 1948-50, and several other committees in the 1950s. His publications include articles on the role and organization of engineering libraries.⁸⁻⁹



Edward A. Chapman, ca. 1946, courtesy of the Archives & Special Collections, Rensselaer Polytechnic Institute.

Edward A. Chapman (1949-51)

Edward Chapman joined ASEE in 1946, shortly after accepting the position of librarian at the Rensselaer Polytechnic Institute in Troy, New York. He attended the University of Michigan where he completed a BS in mechanical engineering in 1930 and a MS in library science in 1935. In the late 1930s he worked as a library consultant for the Works Project Administration (WPA). During the Second World War, from 1943-45, Mr. Chapman was the chief of the Copyright Administration Section in the Office of the Alien Property Custodian in Washington, DC. He served on the ESLC from 1946 through 1954, as chair from 1949-51. He was also active in the ACRL Engineering School Libraries Section and served on the Executive Committee in 1948-49.



No photo available.

George S. Bonn (1951-53)

George Bonn became an ASEE member in 1949 when he was a librarian at the Northwestern University Technological Institute in Evanston, Illinois. He studied chemical engineering at Ohio State University, earning a BS degree in 1935 and a MS degree in 1936. He received his MS in library science from the University of Chicago in 1949 and moved to the Rice Institute (now Rice University) in Houston shortly thereafter. In 1956 Bonn moved to New Jersey to work as an adjunct professor in the Graduate School of Library Service at Rutgers University. In October 1958, he was appointed chief of the Science and Technology Division of the New York Public Library. In the early 1960s, he was a professor in the University of Hawaii's Graduate School of Library Studies and then moved to the Graduate School of Library Science at the University of Illinois at Urbana-Champaign. He was a member of the ESLC from 1951 through 1955.



Johanna E. Allerdig, ca. 1937.¹⁰

Johanna E. Tallman (née Allerdig) (1953-54)

Johanna (Jo) Allerdig joined ASEE in 1948, three years after she was appointed head of the Engineering Library at the University of California, Los Angeles (UCLA). Ms. Allerdig was born in Germany in 1914 and immigrated with her family to the U.S. in 1923.¹⁰ She graduated from the University of California, Berkeley in 1936 with a BA in French and went on to earn a certificate in librarianship in 1937. Following graduation, she worked as a technical reference librarian at the Los Angeles Country Public Library. In July 1942, she accepted the position of assistant librarian in the Pacific Aeronautical Library, a research library established in October 1941 by the Institute of the Aeronautical Sciences and aircraft companies located in southern California. Ms. Allerdig remained head of the Engineering Library at UCLA until 1963, when she was promoted to Coordinator of Physical Sciences Libraries. In 1961, she was appointed as a lecturer in the UCLA School of Library Service.¹¹ She served on the ESLC Executive Committee from 1949-54. Ms. Allerdig was an active member of many library organizations. She served as the first president of the Librarians Association of the University of California, Los Angeles (LAUC-LA), which was formed in 1967. She was also active in the Special Libraries Association, serving as president of the Southern California Chapter, and on the board of directors of ACRL and the American Libraries Association

Council. She was active in the ACRL Engineering Libraries Section, serving as chair from 1949-50, and as chair of the Cataloguing Committee and as a member of the Publications Committee. In 1973, she became director of libraries at the California Institute of Technology. She retired from Caltech at the end of 1981 and published her memoirs, *Check Out a Librarian*, in 1984.¹⁰ Ms. Allerding remained a member of ASEE through 1955. Her numerous publications include several on technical libraries¹² and the role of libraries in engineering education.¹³



John H. Moriarty, date unknown, courtesy of the Purdue University Libraries.

John H. Moriarty (1954-1956)

John Moriarty served as director of libraries at Purdue University from 1944 until his sudden death in 1971. He joined ASEE in 1951 and immediately became a member of the ESLC. He attended Columbia University where he earned a BA in 1926, and a BS and MS in library science in 1933 and 1938, respectively. During his college years he worked as a junior assistant in the United Engineering Societies Library in New York City. From 1939-41, Mr. Moriarty was the assistant to the director of libraries at Columbia. He then moved to the Library of Congress where he was the assistant director of the Acquisitions Department from 1941-44. He was also active in the ACRL Agricultural Libraries Section and Engineering School Libraries Section. He served as chair of the Agricultural Libraries section in 1948-49. In 1950, he proposed merging the two sections. The membership of both sections supported the idea and the Pure and Applied Science Section (PASS) came into being in 1952. Mr. Moriarty remained an active member of ASEE through the mid-1960s. In 1960, he joined the editorial board of the *Journal of Engineering Education*.



Ira A. Tumbleson, ca. 1954, courtesy of the Van Houten Library, New Jersey Institute of Technology.

Ira A. Tumbleson (1956-58)

Ira Tumbleson joined SPEE in 1943. He graduated from the Nebraska State Teachers College in 1928 and went on to earn a BS in library science at the University of Illinois in 1930 and a MS in library science from the University of Michigan in 1937. While at Michigan he worked as an assistant in the Physics Library. From 1930-40, Mr. Tumbleson worked at the Queens Borough Public Library, first as a senior assistant and then as acting superintendent of the Science, Technology and Business Division. In 1940, he moved to the Newark College of Engineering (NCE), which is now the New Jersey Institute of Technology. In addition to overseeing the library, he taught evening classes in English from 1942-45. His entry in the NCE yearbook for 1964 notes that he did much to modernize the library.¹⁴ He served on the ASEE ESLC from 1951 through the early 1960s. He was also an active member of the ACRL Engineering Schools Library Section, serving on several committees.



No photo available.

Jeannette Poor (1958-60)

Jeannette Poor joined ASEE in 1946, the year after becoming the engineering librarian at Cornell University. She graduated from Simmons College with a BS in 1937. Ms. Poor worked from 1937-42 as an assistant in the Cataloging and Classification Department of the John Crerar Library in Chicago. In 1942, she moved to the Engineering Department of the RCA Victor Company in Harrison, New Jersey, where she remained until 1945. She was heavily involved in the design and construction of Cornell's new engineering library in the mid-1950s.¹⁵

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