providing “Research.” There are two entries for a number of organizations, with no clear delineation between them. For example, the National Library of Medicine (NLM) has two entries with different phone numbers, both having to do with AIDSLINE. A number of groups have no description at all, such as the Robert Wood Johnson Foundation and the American Civil Liberties Union.

The second and main section of the book provides entries for AIDS service organizations, first for each state and then for each county within a state. Preceding these entries is a poor-quality map that does not function effectively as a visual aid. The quality of the information provided and its relative completeness are, to put it mildly, less than adequate. This writer can only comment on those geographic areas I am familiar with, which limits it to the epicenter of the epidemic, New York City. There the lists are in no way complete, with many important groups omitted, like the Brooklyn AIDS Task Force and GMHC. Many groups are included for no apparent reason, such as for-profit home care services, pharmacies, and other groups, whose actual level of services provided to those affected by HIV/AIDS is not readily apparent.

The entries are grouped under large headings such as “medical services,” “home health care,” and “community services,” which provide a degree of additional access. But, as in the first section, the entry details can be misleading or wrong. The AIDS Treatment Data Network is simply listed as “Network.” The telephone numbers provided for the anonymous testing sites run by the New York City Department of Health are incorrect. There are no entries for either Staten Island or Dutchess County, areas with which this writer has enough familiarity to know that there are organizations that provide services in these locations.

The remainder of the book purports to provide a list of federal agencies and programs and of clinical trial and research sites. These sections suffer from the same faults as the preceding sections. The entries are cursory in nature and provide no information other than name, address, and telephone number. The State and City of New York receive a large amount of funding under the various provisions of the Ryan White CARE Act, so a further breakdown of responsibility and services provided would have been helpful. Although Margaret Hamburg, M.D., Commissioner of the Department of Health of the City of New York, is the person in charge of Ryan White Title I monies in the city, I do not think that she is the appropriate contact person for general inquiries, as she is listed here.

The remaining section provides nothing more than a list of clinical trial sites, a task much better accomplished by the AIDS/HIV Treatment Directory [1], compiled and published by the American Foundation for AIDS Research (AmFAR) or the Experimental Treatment Guide [2], published by the AIDS Treatment Data Network for the New York metropolitan area. The entries in the National Directory of AIDS Care, 1994–95 again are seriously incomplete and do not provide any information as to drugs currently being tested, protocols for trials, criteria for eligibility, or persons to contact, as do the AmFAR directory or the Experimental Treatment Guide. This section would not be helpful to the majority of people seeking clinical trial information.

Although there is a desperate need for the type of publication that the National Directory of AIDS Care, 1994–95 aims to be, it falls so short of the mark as to not truly be useful. Given the quality of the information presented here, I would be hard pressed to recommend its purchase, especially for general reference use. The average reader may not understand that this is not a definitive resource, and, given the reluctance some readers may have in discussing their HIV information needs, they might not be helped by using this publication. The better solution, especially for health sciences librarians, is to insist that NLM stay as up to date as possible with the information contained in the AIDSDRUGS, AIDSSTRIALS, and DIRLINE databases and to make them far more readily available, given that they are free; and to use the directories available.

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References


John Shaw Billings dominated every field of endeavor in which he was engaged. He is not only the “patron saint” of the organization and retrieval of medical information but has an acknowledged primacy in the development of the new modes of medical education, participating in the establishment of the Johns Hopkins School of Medicine at the end of the nineteenth century; the modernization of hospital design; the development and application of machine methods of census tabulation; the
scientific investigation of public health; and the creation of the New York Public Library System, with its dual mission of access to books through the lending libraries and a resource for research in its central library.

Carleton B. Chapman, M.D., himself a "renaissance man," began as a military surgeon, like Billings, in 1941, after graduation from Harvard Medical School. He was stationed in Egypt, the Middle East, China, and Indochina. After World War II, he specialized in cardiology and research, leading to a professorship at the University of Texas Southwestern Medical School. He then became dean of the Dartmouth Medical School and vice president of Dartmouth College. As president of the Commonwealth Fund, he was concerned with the overall development of medicine, and, as chair of the Department of Medical History at the Albert Einstein College of Medicine, he addressed the problems of medical ethics.

Order Out of Chaos is a modern, full-dress account of the achievements of Billings and represents ten years of research. It was welcomed with a reception at the New York Public Library on June 16, 1994. It is dedicated to Martin M. Cummings, M.D., the former director of the National Library of Medicine. In December 1994, a review had already appeared in Academic Medicine [1].

It is an account of Billings' genealogy; his education; his service as a surgeon in the Civil War; his assignment to the Surgeon General's Office, where he amassed and organized a world-class library, now the National Library of Medicine; his creation of the Index Catalogue [2] and the Index Medicus [3]; his subsequent contributions to modern hospital design at Johns Hopkins and his association with the creation of its curriculum as a modern academic medical school; his contributions to the mortality tables of the census; the introduction of punched cards and the machine processing of numerical data; and finally, his directorship of the New York Public Library.

Among previous biographies, we should mention those by Fielding H. Garrison [4] and Harry Miller Lydenberg [5] and the briefer accounts by Estelle Brodman [6], Frank B. Rogers [7], and Wyndham D. Miles [8]. What distinguishes this book is Chapman's meticulous examination of the primary sources, a careful chronology of events, and the examination of unresolved questions (e.g., the priority of the use of punched cards for tabulation of census statistics).

Was Billings first to suggest it to Hollerith? Among the interesting incidents is Chapman's observation that Billings and Hollerith worked together harmoniously. Billings did not join the Hollerith commercial venture and left an estate of less than $140,000, while Hollerith sold his company in 1911 for $1,200,000. Thus, Billings did not profit from his ideas.

Chapman does not shy from sensitive issues (e.g., Billings' anti-Semitism). In a letter to his wife about his rail trip to St. Petersburg, Billings writes that it had been "a sort of solitary confinement for I could not and would not talk to the two Jews who occupied the compartment with me for the first half of the way" (p. 211). Chapman finds that "the overtone of antisemitism is undeniable and recurs several times in Billings' surviving papers" (p. 211). No further instances are listed, however. Interestingly, in New York, Billings developed an ongoing, cordial relationship with Abraham Jacobi. Chapman also examines allegations of Billings' interest in erotica and does not find any convincing evidence of an interest in or a collection of such materials.

The book is especially useful in its exegesis of Billings' contribution to the statistical analysis in clinical research and the conceptualization of Billings' approach to public health and medical education.

Billings' personal life, however, remains obscure. In part, this is due to a paucity of documents. While Billings' letters to his wife, Katherine, were available, her letters to him apparently were not. She died shortly before him, but we are not told the cause of her death. There is a suggestion that she suffered great pain, and Chapman speculates that Billings may have endorsed euthanasia and aided Kathy's exit. They raised five daughters and one son, but, except for a short comment by his son, no other statements of members of his family are mentioned. We do not learn how his children fared. Even his illnesses are shrouded in uncertainty. As an archivist, I was intrigued by Chapman's note:

Billings' health records are, ironically, grossly inadequate. Only the New York Hospital, Cornell Medical Center, provided information about the reason for surgery in March 1913. Presbyterian Hospital (New York) sent a form demanding the patient's hospital number. A second request providing the patient's name, address, date of hospitalization, and attending surgeon, merely brought another demand for hospital number. Johns Hopkins Hospital reported that patients' records for the dates of Billings' admissions were en route to storage and that search under existing conditions would be very difficult . . . . In any case, it is not certain that Billings ever had carcinoma of the lip although the diagnosis of cholelithiasis plus episodes of common duct colic (in a word, gallstones) seems reasonable if not fully established [p. 398].

What remains is an assessment of Billings' place in the history of information retrieval and the transfer of knowledge. Billings grasped the need for current access to medical literature by means of recurrent timely compilations as well as comprehensive, retrospec-
mile bibliographies, as exemplified in the *Index Catalogue*. Although omissions are apparent to all who use the *Index Catalogue*, it remains an incomparable compendium for the study of medicine in the nineteenth and early twentieth century. Subject headings are often arbitrary, and an integrated cross reference system is lacking. A serious critique of the limitations of the *Index Catalogue* would have made a welcome addition to the book.

Billings realized the importance of the periodical as the primary vehicle for the transmission of scientific communication. What is so appealing is his catholic perspective of the library as a conveyor of information not restricted to bibliographic lists. Billings used a bibliometric approach to study the literature of medicine, its characteristics, and its uses. It is an enduring contribution, which is intellectually so appealing. Happily, it is his vision and the continued examination of this problem that has prevailed at the National Library of Medicine throughout its existence to this very day.

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3. **Index medicus: a monthly classified record of the current medical literature of the world. 45 v. Various publishers, 1879-1927. (Series 1-3).**
7. **ROGERS FB.** Selected papers of John Shaw Billings. Chicago: Medical Library Association, 1965. (Especially noteworthy for its elegant biography and a complete list of Billings' writings.)