
Extended catalogs, digitized image databases, intelligent retrieval, online document delivery, and distributed collections are all elements of what we have come to think of as the “virtual” library and constitute some of the topics discussed in this work. Those of us who are involved in trying to build “libraries of the future” need, if not a “how-to” guide, certainly some sort of outline of and tutorial on the activities that must be undertaken and the issues that must be considered in this building process. *High-Performance Medical Libraries* is a good step in that direction.

The book represents a survey of projects or case studies undertaken by a variety of libraries that, in effect, set the stage for the development of the virtual library. The case studies are written by authors recognized for their contributions to the field, and several of the chapters originated with papers presented at the Computers in Libraries 1992 Annual Conference held in Washington, D.C. The work consists of eighteen chapters divided into seven parts: “Integrated Advanced Medical Information Systems and Libraries,” “NLM: The Unified Medical Language and Semantic Network,” “Network and Resource Sharing,” “Document Delivery and Full Text Systems,” “The Extended On-line Catalog,” “Integrated Hospital, Corporate, and Society Libraries,” and “Computer Training Labs and Medical Education Software.”

Broering first describes the evolution of the National Library of Medicine’s (NLM) Integrated Advanced Information Management System (IAIMS) initiative. IAIMS, through its major role in enhancing medical libraries and its placement of them at the center of the transmission of medical information, can be seen as an organizing paradigm or framework for the development of the virtual library. The title of this book might well have been *High-Performance Medical Library*, as much of the material covered is related to the Dahlgren Memorial Library at Georgetown University. This is not a criticism. As Broering traces IAIMS developments at Georgetown: the Knowledge Network of Databases, Scholar Workstations, the Biomedical Information Resources Center for teaching, developments in system integration, resource sharing, the design of educational software packages, and so on, one sees that what has been accomplished has constitutes a prototype of the virtual health sciences library.

The two chapters written by Betsy Humphreys and Peri Schuyler and by Alexa McCray cover the Metathesaurus and the Semantic Network respectively. The chapters are clearly written and a welcome addition to the growing body of documentation for these knowledge sources; they certainly belong in any volume discussing virtual library concepts. They also serve to remind us that if there is to be integration of a variety of bibliographic databases, patient record systems, factual data banks, and knowledge bases, there must also be translation between query language and entry language to these systems.

Two chapters deal with infrastructure. The “administrative” part of networking and resources sharing is discussed by Trudy Gardner in terms of the Friends of LIS (FLIS), a group of librarians who have purchased the Georgetown University Library Information System (LIS). The activities of this group could help provide answers to some vexing questions that are now being raised. With the proliferation of health sciences resources on the Internet and with the increased availability through networking of both local and remote full-text databases as well as the more traditional online bibliographic databases, how does one design an institutional collection policy that allocates resources to both acquisition and access and, in fact, manages a “distributed” collection of this type? What sort of intellectual framework will encompass such a collection? Robert Larson notes, “It is necessary for hospitals and medical centers to automate their health sciences libraries with systems that can integrate easily to their clinical information systems” (p. 67) and then describes a model: LIS Net, a client-server architecture for the Georgetown LIS.

An electronic document delivery system for the physical delivery of the actual documents or their surrogates following the citation search, an experimental project to digitize the full text of articles in selected genetic and cancer journals, multimedia education projects at the National Library of Medicine, and library-based development of educational software are the topics of other chapters of the book.

Three chapters are devoted to what is coming to be the essential core of the virtual library: the management of information through what Helen Bagdoyan calls “the extended online catalog.” This is an evolutionary development of the online public access catalog (OPAC) and is characterized by features such as true authority control, powerful searching capabilities, links to other files, and access to external networks. This extended OPAC, applied to databases of indexed images, links catalog records to images, as described by Wilma Bass, and, at Washington University, manages access to the
databases associated with the Human Genome Project. Collaboration for resource sharing through library automation between Montefiore Medical Center and Albert Einstein College of Medicine and activities at the Upjohn Pharmaceutical Library are described. Iain Milne, of the Royal College of Physicians of Edinburgh Library, describes the use of automation at that institution and, in one cogent statement, describes the plight of many of the great historical medical libraries. "Library managers... have the difficult task of balancing the needs and limited resources of their parent body with their wider responsibilities as curators of a historic collection. ... Although regarded as a valuable resource by readers from outside the College, many of the members who actually paid for the library made little use of its services. Those who did, used the current material, which, ironically, was cut to save money" (p. 175).

In summary, the objectives set forth by Broering in her introduction have been met. This book represents a snapshot of the state of the art at a specific time in the development of medical libraries. Some of what is described here is being overtaken by events, but much of it still lies in the future of many libraries. Future volumes of this type (probably published electronically) should deal more with topics only hinted at in this book; one would like to learn more about integration as well as connectivity between different types of systems—clinical and scholarly, for example. This is work that is still in its infancy, relatively speaking, but increasingly evident, as any review of recent Symposium on Computer Applications in Medical Care proceedings will show. One would also like to learn more about libraries as publishers of locally developed institutional files, an activity exemplified by the rapidly proliferating gophers. High-Performance Medical Libraries is strongly recommended as a reference tool for librarians; I intend to consult it frequently.

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The editors of this two-volume collection of essays are unhesitant in proclaiming the Companion Encyclopedia "the best broad survey of the development of medicine and the healing arts as understood by medical historians today" (p. 4). The last six words of this statement are crucial to understanding the nature of this work.

Medical history has undergone considerable changes the last thirty years. The physician as historian, who for many years dominated medical history societies, has given way on membership rolls and publishers' lists to the "professional" historian, the doctorate in history with an academic appointment in the humanities or social sciences.

As a result, medical history is written differently now than it was a quarter century ago. The sometimes hagiographic "great doctor," "great discovery," "great period" approach to the interpretation of medical history has largely disappeared. As the field of medical history has become more professionalized and centered in university departments beyond the medical school, it has come to have less to do with medicine and more to do with the disciplines in which its new practitioners matriculated.

There are advantages and disadvantages to this transition. On the one hand, the field of medical history has been expanded to consider the effect of social, economic, and political history on medicine and has concerned itself with the roles of groups other than physicians in the delivery of health care. The new history has also taken into consideration those upon whom medicine is practiced, incorporating into the historical chronicle gender, race, and social group, until now largely left out of the picture. On the other hand, there are significantly fewer histories of the medical specialties, or of diseases and therapeutics—traditionally the most important contribution of the scientist and practitioner (i.e., the physician-historian) to the literature of medical history.

This is all to say that the Companion Encyclopedia of the History of Medicine is not what its title suggests it may be. It is not an encyclopedia in the ordinary sense. It is something more, and perhaps something less. The Companion Encyclopedia of the History of Medicine is a collection of seventy-two articles grouped under seven broad conceptual themes. Part Two, for example, entitled "Body Systems," includes seven essays with titles such as "The Anatomical Tradition," "The Microscopical Tradition," and "The Physiological Tradition." The sixteen essays grouped under the rubric "Theories of Life, Health and Disease" include contributions by Vivian Nutton on humoralism, Caroline Hannaway on miasmata, and Leonard Wilson on fevers. Part Four is devoted to alternative and non-western concepts of disease and medicine; and the fifteen essays on "Medicine, Ideas and Culture" range from medicine and architecture to pain and suffering.

The librarian therefore will not refer a client to the Companion Encyclopedia for a succinct biography