

THE ORGANIZATION OF KNOWLEDGE AND BIBLIOGRAPHIC CLASSIFICATION
IN NINETEENTH-CENTURY AMERICA

Katherine M. Wisser

A dissertation submitted to the faculty of the University of North Carolina at Chapel Hill in partial fulfillment of the requirements for the degree of Doctor of Philosophy in Information Science in the School of Information and Library Science.

Chapel Hill
2009

Approved by

Dr. Paul Solomon (Chair)
Dr. Deborah Barreau
Dr. David Carr
Dr. Jane Greenberg
Dr. Stephanie Haas
Mr. Daniel Pitti

©2009
Katherine M. Wisser
ALL RIGHTS RESERVED

ABSTRACT

KATHERINE M. WISSER: *The Organization of Knowledge and Bibliographic Classification in Nineteenth-Century America*
(under the direction of Dr. Paul Solomon)

Bibliographic classification is culturally bound. This research examines the classification systems created for social libraries in the first half of the nineteenth century in the United States. Social libraries are defined as institutions that have voluntary membership and are dependent on membership fees. Seventeen classified catalogs were examined and their classification systems compared. This study explored the underlying warrant of these classification systems and compared the systems to Francis Bacon's organization of knowledge as published in *The Advancement of Learning* to identify the potential influence of the underlying warrant on the classification structures. Contextual influences of individual libraries and larger sociocultural influences on religion, fiction, and science were also considered. Of the 17 classification systems in the sample, 13 were comparable to Bacon's organization of knowledge, although the order of classes was not followed. Religion classes demonstrated a shift away from primacy, while the fiction class solidified its place in the libraries. Finally, changes in science classes demonstrate the immediacy of the environment on the development of systems. Further research is suggested on the utility of warrant as a component of discourse as well as its possible limitations.

ACKNOWLEDGEMENTS

Writing a dissertation is both a solitary and a collaborative event. It is solitary in that in the end it is up to the writer to digest and present original research. But it is collaborative in that there are those around the writer who provide essential support while pursuing the goal. My collaboration has been wide and far-reaching, and I am grateful for the variety of people that have contributed to my process. I could not have completed this dissertation without the support of my committee, colleagues, friends, and family.

I would like to thank first my committee for their support, including Deborah Barreau, David Carr, Jane Greenberg, Stephanie Haas, Daniel Pitti, and Paul Solomon. While I have felt since the beginning that my committee was wholly supportive of my success, each one at some point provided much needed cheerleading or on-the-spot advice. Special thanks goes to Deborah Barreau and Daniel Pitti who helped me keep a sense of humor in this past year.

I cannot thank my chair, Paul Solomon, enough for the time that he devoted to my successful scholarship. Without his unwavering confidence in my work, his critical eye, and his willingness to allow me to blather through new ideas, I would still be spinning over classification systems or worse. He also demonstrates the qualities of academic respect and citizenry. I am grateful to him for all that he has taught me.

While a committee provides the foundation for the doctoral dissertation, others made significant contributions to my process. The staff of Interlibrary Borrowing at Davis Library,

UNC-Chapel Hill provided me with the raw material to do the analysis. That effort made it possible for me to analyze more catalogs than I initially envisioned. The community of SILS has surpassed the expectations of support. Staff, faculty, and doctoral students alike were cheering me on through the process and made me feel that it was possible. In the past year, Evelyn Daniel has been a constant in my efforts and to that I am grateful. I have had too many friends professionally to name, but they have cheered me through this process as well and deserve many thanks for asking about my progress and putting up with my intensity.

Friends are an essential ingredient to any endeavor, and I am fortunate to have many. I would especially like to thank Jackie Dean, Carolyn Hank, Cassidy Sugimoto, Phil Edwards, and Stephanie Peterson for the tender care in my angst-filled moments and for the unyielding friendship during my crabbiest over the past year.

Finally, my family provided the foundation of my success in any situation. My mother never wavered in her support and belief in me, and while she has been gone for quite some time, her love still resonates. My in-laws continue to provide support and confidence in my endeavors. And my husband, to whom this work is dedicated, has made this possible for me. Without his love and support, I would be rudderless.

DEDICATION

For Bill, who weathers the storms

TABLE OF CONTENTS

LIST OF TABLES	xi
LIST OF FIGURES	xiii
Chapter	
PRELUDE.....	xiv
1. INTRODUCTION	1
2. CLASSIFICATION, WARRANT, AND DISCOURSE	16
The impulse to classify	19
Qualities of classification	25
Warrant in classification research and its connection to discourse	35
Discourse	55
3. SOCIAL LIBRARIES AND THE AMERICAN INTELLECTUAL AND CULTURAL LANDSCAPE	71
Forming and forging a new nation	72
Libraries in Colonial America	79
The circulating library	82
The social library in the new nation	87
Types of social libraries	94
The nature of social libraries	110

4.	SOCIAL LIBRARY CLASSIFICATION SYSTEMS	123
	The Library Company of Philadelphia	126
	American Philosophical Society	139
	Redwood Library and Athenaeum	144
	Charleston Library Society	150
	The New York Society Library	156
	The Library Company of Baltimore	163
	Salem Athenaeum	168
	Mercantile Library Association of the City of New York	171
	Mercantile Library Company of Philadelphia	176
	Mechanics' Society of the Library and County of Lancaster	182
	Providence Athenaeum	184
	Louisville Mercantile Library Company	189
5.	WARRANT IN SOCIAL LIBRARY CLASSIFICATION SYSTEMS	195
	Sir Francis Bacon	196
	Baconian warrant of social library catalogs	207
	Religion, fiction, and science	216
6.	CONCLUSION	231
	Future research	234
Appendices		
A.	SAMPLE CATALOGS	236
B.	CLASSIFICATION SYSTEM OF THE LIBRARY COMPANY OF BALTIMORE (1802).....	238

C.	CLASSIFICATION SYSTEM OF THE LIBRARY COMPANY OF PHILADELPHIA (1807)	239
D.	CLASSIFICATION SYSTEM OF THE LIBRARY COMPANY OF BALTIMORE (1809)	241
E.	CLASSIFICATION SYSTEM OF THE NEW YORK LIBRARY SOCIETY (1813)	242
F.	CLASSIFICATION SYSTEM OF THE AMERICAN PHILOSOPHICAL SOCIETY (1824)	243
G.	CLASSIFICATION SYSTEM OF THE CHARLESTON LIBRARY SOCIETY	246
H.	CLASSIFICATION SYSTEM OF THE LIBRARY COMPANY OF PHILADELPHIA (1835)	255
I.	CLASSIFICATION SYSTEM OF THE MERCANTILE LIBRARY ASSOCIATION OF NEW YORK (1837)	260
J.	CLASSIFICATION SYSTEM OF THE PROVIDENCE ATHENAEUM (1837)	265
K.	CLASSIFICATION SYSTEM OF THE NEW YORK SOCIETY LIBRARY (1838)	266
L.	CLASSIFICATION SYSTEM OF THE MERCANTILE LIBRARY COMPANY OF PHILADELPHIA (1840)	269
M.	CLASSIFICATION SYSTEM OF THE SALEM ATHENAEUM (1842)	272
N.	CLASSIFICATION SYSTEM OF THE REDWOOD AND ATHENAEUM (1843)	274
O.	CLASSIFICATION SYSTEM OF THE LOUISVILLE MERCANTILE LIBRARY ASSOCIATION (1843)	276
P.	CLASSIFICATION SYSTEM OF THE MERCANTILE LIBRARY COMPANY OF PHILADELPHIA (1850)	278
Q.	CLASSIFICATION SYSTEM OF THE LIBRARY COMPANY OF PHILADELPHIA (1856)	280

R.	CLASSIFICATION SYSTEM OF THE MECHANICS’ SOCIETY OF THE CITY AND COUNTY OF LANCASTER (1858)	285
REFERENCES.....		286

LIST OF TABLES

Tables

1.	Date and proceeds of 1807 catalogs purchased from the Library Company of Philadelphia	11
2.	Expenses and amount to produce the 1835 catalog of the Library Company of Philadelphia	12
3.	Sample cities and number of circulating libraries	85
4.	Subject analysis of circulating library catalogs, 1765-1860	86
5.	Number of social libraries founded, 1781-1860	91
6.	Libraries in regions before 1876	92
7.	Social libraries by type and region before 1876	96
8.	Types and characteristics of social libraries	109
9.	Hours of operations from library regulations	115
10.	Social and public libraries in existence, 1850, 1875, and 1900	119
11.	Libraries whose catalogs comprise the sample by date of founding, with date of sample catalogs and corresponding number of volumes	125
12.	Synopsis and actual order of classes in the 1809 Library Company of Baltimore catalog	167
13.	1855 catalog of the first Providence Athenaeum and 1837 catalog of the second Providence Athenaeum	187
14.	A comparison of the Providence Athenaeum (1837) and Louisville Mercantile Library (1843) classification systems	191
15.	Superclassing comparison to Bacon's organization of knowledge for 13 classification systems	210
16.	"Strict" social library superclass comparison	213
17.	Athenaeum superclass comparison	213

18.	Philadelphia libraries superclass comparison	215
19.	New York libraries superclass comparison	215
20.	Comparison of religion or theology classes in sample classification systems	218
21.	Comparison of fiction classes in sample classification systems	221
22.	Catalogs from sample libraries owned by other sample libraries	228

LIST OF FIGURES

Figures

1. Sample page from Cutter's listing in *Public Libraries in the United States of America* (1876)124
2. The changing location of classes between the synopsis and the actual arrangement of the catalog at the Redwood Library and Athenaeum, 1843149
3. Francis Bacon's chart of human learning201
4. Example of superclassing for the Providence Athenaeum (1837) classification system208

PRELUDE

15 September 1853 was a warm fall day in New York City. Eighty-two men were gathered that Thursday at New York University's "smaller chapter" for a landmark first-ever meeting of librarians in the United States. Over a year in the planning, this meeting brought together representatives of the most prominent libraries of the day, with few exceptions, to exchange techniques, philosophies, and strategies. This free exchange of ideas foreshadowed the American library movement that began 23 years later and helped define American libraries.

The Library Convention of 1853 was instigated by Charles B. Norton in early 1852. His intention, "having the great object in view of consolidating the agencies of various libraries in the United States, which he thinks can be done to the mutual benefit of all parties..."¹ was circulated in his *Norton's Literary Gazette and Publisher's Circular*. He indicated that this idea had been discussed for some time, but that for it to be a success, it needed endorsement by leading American Librarians. Charles Coffin Jewett, then the librarian of the Smithsonian Institution, was easily acknowledged as the person essential to success.² It is not wholly clear where the idea came from, but it is clear that there was a small community of librarians who considered a convention to be useful. In the 15 July 1852 *Norton's Literary Gazette*, Norton notes:

¹ *Norton's Literary Gazette and Publisher's Circular*, 15 January 1852, v. 2, 19.

² Michael H. Harris, ed. *The Age of Jewett: Charles Coffin Jewett and American Librarianship, 1841-1868* (Littleton, Colo.: Libraries Unlimited, Inc.: 1975), 33.

Laying aside the reading of papers on Bibliographical topics, which might be made of much interest, there are a great many points in regard to the management of libraries, the purchase and arrangement of books, the formation and publication of catalogues, the delivery of books, their protection from mold, worms, and other injury, &c., on almost all of which there exists a difference of opinion, or at any rate in regard to which there is a difference of practice among Librarians. Indeed, we have hardly ever known Librarians to agree upon these minor matters, so that a little discussion could not fail to elicit various observations and suggestions from one and another, by which all might be benefitted, even if they were not brought to unanimous opinion.³

Norton goes on to note that this convention will be useful for the seasoned librarian, “but there are many more Librarians, connected with various Young Men’s Institutes, Mechanics’ Libraries, and Students’ Libraries at colleges, to whom the discussions of such a convention and the opinions of such men as would be there gathered, would be of incalculable advantage.”⁴ Norton continued to discuss the convention in the on-going editions of the *Norton’s Literary Gazette* in order to drum up interest among librarians around the country as well as internationally. In May 1853 a call was published beginning, “the undersigned, believing that the knowledge of books, and the foundation and management of collections of them for public use, may be promoted by consultation and concert among librarians and other interested in bibliography...”⁵ The call was signed by 26 prominent librarians, including Charles Folsom of the Boston Athenæum, Jewett of the Smithsonian Institution, William F. Poole of the Boston Mercantile Library, and Lloyd P. Smith of the Philadelphia Library Company.

Delegates came from 14 different states of the 31 in the Union in 1853, with one person traveling from San Francisco for the Convention (Edward E. Dunbar, Mercantile

³ *Norton’s Literary Gazette and Publisher’s Circular*, 15 July 1852, v. 2, 128.

⁴ *Norton’s Literary Gazette and Publisher’s Circular*, 15 July 1852, v. 2, 128.

⁵ *Norton’s Literary Gazette and Publisher’s Circular*, 15 May 1853, v. 3, 82.

Library Association). Other western states represented included Louisiana, Ohio, and Missouri, but representatives primarily came from New England and the Mid-Atlantic States (75 of 82, 91.5%). Not surprisingly, New York was represented by 48 individuals (58.5%), including several newspaper employees and publishers.

Jewett was unanimously elected as President of the Convention as the first order of business, likely promoting the impression that Jewett was responsible for the convention occurring. Following his opening address, Jewett proposed two initiatives. The first was the establishment of a National Library. Jewett envisioned the Smithsonian Institution as a candidate for a national library because he saw a clear alliance between a national library and the Congressional act establishing the Institution from the funds bequeathed by James Smithson. The second initiative was a stereotype catalog system that he had developed at the Smithsonian and sought to promote as a standard methodology through the nation's libraries: this system included rules for preparation, expense covered by the Institution for the extra cost of stereotyping, distribution of those titles already cataloged, and a publication of a General Catalogue of all Libraries.⁶

Following the opening remarks and resolutions, the Convention discussed a broad range of topics. In reporting on the Convention in October, Norton reported:

Acquaintances have been formed among numerous members of the Librarian's profession, who have never seen or corresponded with one another before; an arrangement has been made for the regular interchange of catalogues and reports; the experience of those who have had charge of public libraries has been brought before those who are novices in the work, upon a great variety of topics; the Smithsonian system of cataloguing, which aims at most important changes has been explained by its originator, and carefully discussed; facts and statistics concerning a large number of widely scattered institutions have been collected and arranged; certain new and ingenious

⁶ George B. Utley, *The Librarian's Conference of 1853, a chapter in American library history* (Chicago: American Library Association, 1951), 143-150. The complete proceedings of the Convention were published in *Norton's Literary Gazette* in October 1853 and are reproduced in full in Utley's work on the Convention.

inventions for the preservation and exhibition of illustrated works have been introduced to the public; preliminary steps have been taken for preparing a Librarians' manual; suggestions have been made in regard to the establishment of popular Libraries all over the country; and measures have been taken to form a Librarians' Association, or Bibliographical Society, of a permanent character, the object of which shall be to promote, in every way, the establishment and efficient conduct of collecting books.⁷

Norton presents a rave review indeed. He has a broad look at the future and suggests the ways that librarians could and should work together.

Bibliographic classification was one of the topics discussed at the Convention. Two separate presentations covered both theoretical and physical practicalities of individual classifications. The first, a letter written by Romain Merlin of Paris, France, endorsed a logical classification of the sciences, which would reflect a natural order of the branches of human knowledge. Merlin wrote, "according to my views, a system of bibliographic classification is a logical chain of great classes and their subdivisions, whose formation and order are the result of a few principles, which serve as a base to the system."⁸ His proposal outlined the fundamental divisions providing logical or philosophical foundations for his conception. He concluded his correspondence, "I should be very much honored if my method were judged by your learned librarians worthy of being applied to the literary collections which are made all over America."⁹

A second presentation was given by Lloyd P. Smith, Librarian from the Philadelphia Library Company. Unlike Merlin, who spoke in broad philosophical terms about classification, Smith discussed a catalog completed in 1835: "it has occurred to me that a short account of the manner of arranging and cataloguing the books of the Library Company

⁷ Norton's *Literary Gazette*, 15 October 1853, v. 3, 176.

⁸ Utley, 163. See also Utley, 76-78.

⁹ Utley, 166.

of Philadelphia, might give rise to a discussion on those subjects which would be mutually instructive.”¹⁰ In drawing out the virtues of the catalog and its arrangement, Smith described briefly the history of the Library Company and its current situation, noting, for instance, that the library worked through a closed stack system that made the catalog all the more useful for Library Company members: “it is obvious that, in our system, this strict dependence (where the librarian’s memory is at fault) on the catalogue make a good one of the greatest importance.”¹¹ In describing the current catalog, Smith stated, “the great catalogue was arranged, according to subjects, into the usual five grand divisions of Religion, Jurisprudence, Sciences and Arts, Belle Lettres, and History. These chief heads were subdivided with considerable minuteness, each subdivision being arranged alphabetically by authors’ names, and anonymous books being placed at the end.”¹² It is clear that Smith was not addressing the philosophical structure of this arrangement but accepting it as standard, “five grand divisions,” so that he could discuss other aspects of the catalog that improve its usability. Unlike Merlin, the arrangement is not up for debate. Smith recounted some of the challenges the Library Company faced, in particular supplements required after the initial publication in 1835. After praising the construction of the catalog and the work of George Campbell, librarian of the Library Company from 1806 to 1829, Smith discussed the addition of an index to aid users in discovering specific works, indicating that work may appear five or six times within the index to maximize its retrievability. Smith concluded, “I flatter

¹⁰ Utley, 166.

¹¹ Utley, 167.

¹² Utley, 167.

myself, that where this plan is carried out, the Library Company of Philadelphia will possess a catalogue unsurpassed for a facility or reference by any in the world.”¹³

That classification is discussed in this two-pronged fashion at the Convention indicates the interest in theory and utility, even in the early period of American librarianship. Classification can be understood as central to the concerns of librarians often isolated from colleagues and working on solutions to universal problems of description and access. In 1853, librarians seized the opportunity to share in very real ways the solutions of their individual collections.

The promise of the Convention, though, was stultified following its adjournment on September 17, 1853. McGrath supposes that the personal events of key players, Jewett, Folsom, Norton, and others, the Panic of 1857, the Civil War, and Reconstruction, all created barriers for on-going gatherings of librarians.¹⁴ It would not be until 1876 that an effort similar to the Convention would happen again, with the next generation of librarians and a more extensive library community. The 1853 Convention provides us a glimpse of the conclusion of the early years of American librarianship, before the homogenization of the profession and its methods. Classification is one area in which librarians were experimenting during this period of national and sociocultural formation. From this period of proto-professionalization of librarians to today, classification serves as the central avenue by which we understand the significance behind the organization of knowledge.

¹³ Utley, 169.

¹⁴ Sister Gabriella McGrath, “Library conventions of 1853, 1876, and 1877” *Journal of Library History, Philosophy, and Comparative Librarianship*, 8 (1973), 56-57.

CHAPTER 1:

INTRODUCTION

Library classification systems are most frequently associated with a “mark ‘em and park ‘em” mentality, and library users rarely associate the systems with the conceptual framework of the organization of knowledge. Users (scholarly researchers) do observe that “their” books, or books that deal with the topic they are considering directly, tend to be grouped together, and on the occasion that this is not the case, they wonder why and are vexed. Given the world of information today, this situation probably happens with greater frequency. Calls for dissolution or change in classification systems are increasing. New approaches to knowledge production such as interdisciplinary and transdisciplinary research and publication on the web raise issues for knowledge organization that are difficult to reconcile with traditional approaches to the organization of knowledge as reflected in bibliographic classification.

Assumptions about the foundations of bibliographic classification present a view of discursive structures for the organization of knowledge and an understanding of how the world as expressed through ideas works. For example, Sir Francis Bacon’s explication of knowledge organization as proposed in his *The Advancement of Learning* is generally recognized in the literature on library classification as the basis of modern classification systems. However, in understanding the construction of a library classification system, it is clear that there are contextual influences that also affect the way that ideas are ordered.

Classification systems have consistently represented a worldview, whether that system was constructed to reflect an artificial or natural order.

The late nineteenth century confirms its position as a watershed in American library history when viewed from the perspective of library classification. This period can be seen as a time of paradigmatic shift in the understanding of the role of classification in libraries. This shift creates a new approach to library classification and demonstrates the implications of external pressures and movements. This shift also moves both the library and librarian from an isolated position to an integral place in society. Classification no longer reflects a particular worldview, as it once had, but becomes a working part of that worldview, imbued with the responsibilities that come along with that role.

The end of the nineteenth and beginning of the twentieth century can also be seen as a period of homogenization in classification. With the publication of the Decimal Classification (DDC, 1876), the founding of the American Library Association (1876), the publication of *The Library Journal* (1876), and the distribution of Library of Congress cataloging cards (1901), libraries participated in a community that provided systematic directions on such library functions as cataloging and classification. This was a time of professionalization in librarianship, with its accompanying regularization, benchmarks, and “right” ways to do things. Classification, though, was not “invented” by Melvil Dewey. The success of his system worldwide has created a false sense that there was nothing before the DDC. In fact, the classification of bibliographic materials has a long history, and the classification of knowledge has an even longer one.

This dissertation examines a period prior to the homogenization of library classification. It examines the role that context plays in the creation of classification systems.

The current research is designed to uncover specific influences. The period before the creation of a library community was chosen as the focus of this research because the sociocultural upheaval of the period demonstrates the effect of contextual change on the organization of information and the impact that contextual change can have on how knowledge is represented to the community the library serves.

There are three interrelated objectives for the dissertation. First, in looking at early nineteenth-century classification systems, the research explores the concept of warrant as a component of discourse. This focus places classification among other discursive elements that provide definition and illumination of the society in which they interact. Second, this study provides evidence that classification systems and library catalogs are fertile sources for intellectual history. While intellectual historians have used library catalogs in their research, classification systems are often overlooked.¹⁵ Third, this research explores a period in American library history that is formative and experimental as the country itself was going through its own tumultuous period of self-definition.

The Early Republic and Antebellum period in American history provides a rich arena to explore contextual influences in library history. In many senses this was a pre-modern time for the new nation, but in others it was very modern. Development and expansion was happening at an unprecedented rate and the nation struggled with both self-identity and a new political structure that was tested time and time again. Communities were growing, particularly in urban settings, and national pride was surfacing as the country worked to compete in an international arena. This was nowhere more true than in the intellectual climate. A post-colonial society faces many challenges in self-definition and confirmation

¹⁵ The study of Thomas Jefferson and his bibliophilia is an example of the use of library catalogs as a component of intellectual history. See Douglas L. Wilson, *Jefferson's Books* (Charlottesville, Va.: Thomas Jefferson Memorial Foundation, 1996).

from its former colonizers. Nation building is a complex process, and the United States faced not only the yoke of colonization but the experiment of democracy and the Republic.

To achieve the objectives of the research, this study looks at classified catalogs from early nineteenth-century social libraries. It examines the structure and order of the classification systems constructed and outlined within the catalogs. This is done through the analysis of the classification systems exhibited in the catalog and examination of the context of the libraries, including their formation, history, and the communities they served. Social libraries were chosen because they were institutions that reflected many of the sociocultural and intellectual movements prevalent in the early nineteenth century. Social libraries were voluntary, member-initiated and -supported institutions that flourished during this period.¹⁶

There are some challenges to a study of this kind. While it was relatively easy to identify and locate classified catalogs, based on numerous bibliographies constructed over the past century and a half, contextual information was less easy to acquire. What Shiflett terms “little histories”¹⁷ of the social libraries examined were also easy to obtain, but information about catalog compilers was elusive, as was information about most members of these institutions. In addition, the classification system was explicitly discussed in only a few cases, and attributions for catalog construction were anonymous. Even the prefaces to catalogs rarely had any attribution. Very little concrete discussion regarding classification was recorded until the 1853 Librarians Conference.

¹⁶ Social libraries are defined as voluntary institutions created for the purpose of collecting and providing access to books and other published materials to its membership. Social libraries often include a social as well as an intellectual function in the community. Additional materials collected could include scientific instruments, natural history collections, historical artifacts and art. Social libraries are discussed in detail in chapter 3.

¹⁷ Orvin Lee Shiflett, “Clio’s Claim: the role of the historian in library and information science” *Library Trends*, v. 32 (1984), 385-406.

In order to explore these various intertwining themes, seventeen classified catalogs from Early Republic and Antebellum social libraries were examined. These constitute published catalogs that were generated for the control and inventory of social library collections. The catalogs were chosen because the holdings are presented in a classified order. The catalogs themselves constitute the main source for this study. For most of the catalogs, a synopsis of the classification system, usually constituting a table of contents for the catalog, is provided. In addition, most of the catalogs provide a preface that often includes a history of the institution, the charter and by-laws to the organization, leadership, and at times membership lists. It is clear that these catalogs were serving more purposes than just a record of holdings. The classification systems of the sample of catalogs examined are provided in Appendices B-R. Appendix A provides a summary table of the catalogs in the sample.

The catalogs were selected using Charles Ammi Cutter's inventory of library catalogs, part of the United States Bureau of Education's *Special Report on Public Libraries* published in 1876. While other bibliographies of printed library catalogs have been created and were consulted,¹⁸ Cutter's list provided identification of classified catalogs in his description, indicating the nature of the catalog listed. For example, he used the term "Clid." (see Figure 1) for those catalogs presented in a classified form. Of the 1,010 catalogs listed in Cutter's table (the first catalog listed was created in 1723 for Harvard College and the last was created in 1876 in Oswego City, New York), 458 (45.3%) were created prior to the Civil War. Of those 458 catalogs, 75 (16.4%) were classified catalogs. Between 1800 and 1861,

¹⁸ Other library catalog bibliographies include: Robert Singerman, *American library book catalogues, 1801-1875: a national bibliography*. (Champaign, Ill.: Graduate School of Library and Information Science, University of Illinois at Urbana-Champaign, 1996) and Robert B. Winans, *A descriptive checklist of book catalogues separately printed in America, 1693-1800* (Worcester: American Antiquarian Society, 1981).

the numbers become 421 catalogs and 67 (15.9%) in classified order. Selecting only social library catalogs, this set was narrowed to 213 catalogs and 50 in classified order. At this point, I attempted to acquire these classified catalogs for social libraries through interlibrary borrowing. The available catalogs (17 (34.0%) published between 1802 and 1858 and representing 12 libraries) constitute the present sample.

It is clear that classified order was not the primary way in which library catalogs were presented. But as Ranz indicates in his treatment of book catalogs, proponents of subject arrangement believed that classified catalogs “enabled the reader to see what books the collection possessed on a given topic; at the same time, a particular book in the collection could still be located simply by looking under the appropriate subject grouping, where the books were arranged alphabetically by author.”¹⁹ Despite these advantages, classification was a less popular way than straight alphabetical order to present holdings. There are two possible reasons why this may have been the case. First, the holdings of libraries were not large enough to require subject arrangement. This may be true; none of the classified catalogs in Cutter’s listing have fewer than 1,000 volumes in the collection.²⁰ A second reason why only approximately 16% of the catalogs were classified could be attributed to the lack of community guidelines on creating a classified catalog. Alphabetical listings are an easy way to present the information. Classification systems needed to be *created*. American libraries were in their formative years in the early nineteenth century. A classification system indicates a level of sophistication that not all library communities had reached by this time.

¹⁹ Jim Ranz, *The printed book catalogue in American libraries: 1723-1900* (Chicago: American Library Association, 1964), 24.

²⁰ Note that Cutter provided inconsistent data on the number of volumes in libraries. Of the 421 catalogs listed between 1800 and 1861, 96 (22.8%) include the number of volumes in the description.

A geographic analysis of the Cutter table presentation also indicates that library catalogs were not produced uniformly across the nation. Catalogs were created primarily in New England and Mid-Atlantic states, where libraries flourished. A mere 36 of the 421 catalogs (8.6%) were from Southern states.²¹ In addition, some libraries created multiple catalogs. The fluctuation between classified and alphabetic catalogs provides an interesting twist, though. For example, Cutter accounts for a catalog for the Boston Athenæum in 1809 that is classified, with 15 classes, but by 1827, the Athenæum eschews a classified catalog in favor of an alphabetical catalog, and the five catalogs (1829, 1834, 1840, 1863, and 1870) that follow from the Athenæum continue an alphabetic arrangement.

Library historians recognize that library catalogs are important sources for library history. McMullen, in his *American Libraries before 1876*, states, “the printed catalogs issued by many libraries in the years before 1876 have been useful in two ways: (1) the catalog may be the only evidence of the existence of a library, and (2) the catalog may have an introduction that tells the history of the collection up to the time of printing.”²² Carpenter, in his introduction to Singerman’s *American Library Catalogues, 1801-1875: a national bibliography* concurs by discussing the challenges faced by historians:

to the historian today, library catalogues are even more useful than they were to Jewett and Rhees. They at least had the advantage of being able to send out a questionnaire – we cannot. We can only use what has come down to us, and library catalogues constitute the single largest body of primary sources for the history of American libraries before the founding of the American Library Association in 1876.... Library catalogues are the one common source that exists for libraries of all sizes and types.²³

²¹ States include: Alabama, Georgia, Kentucky, Louisiana, North Carolina, South Carolina, and Virginia. Of those 36, the clear majority of the catalogs come from South Carolina.

²² Haynes McMullen, *American libraries before 1876* (Westport, Conn.: Greenwood Press, 2000), 9.

²³ Carpenter in Singerman, v-vi.

Carpenter continues by providing potential evidence for a wide range of historical inquiries, including law, science, medicine, prisons, and education.²⁴ Peter Hoare, in “‘To mock the world’ – Library catalogues and the library historians” reminisces on the catalog evidence in English history and the various avenues that can be pursued using these sources. For example, Hoare notes of circulating library catalogs: “they tell you so much about what was important for their readers, generations ago, and all too often they are the only surviving evidence for the contents of a library.”²⁵ These anecdotal statements from a range of library historians provide clear evidence that library catalogs are considered significant sources for a range of historical questions. While catalogs have been used for library history research by many scholars, many have overlooked the classification systems as a source for the understanding of intellectual history. This is surprising given that prior to Smith and Merlin’s presentations at the 1853 Librarian’s Convention; classification was not publicly discussed in other venues besides catalogs. This research seeks to remedy that and begin to explore library catalogs as concrete evidence for how the discourse of knowledge organization was shaped in the American intellectual landscape.

Little research has been done on library catalogs themselves. Two notable exceptions provide some insight into the history of catalogs as artifacts of library history. Dorothy May Norris, in her *A history of cataloguing and cataloguing methods 1100-1850: with an introductory survey of ancient times*, deals with the construction of catalog codes through an evidentiary approach to catalogs. While the work itself lacks analytical rigor, her descriptive content provides cataloging and classification theorists with the raw material in order to

²⁴ Carpenter in Singerman, viii.

²⁵ Peter Hoare, “‘To mock the world’ – library catalogues and the library historian” *Catalogue & Index*, no. 113, (1994), 3-4.

make interpretive guesses at the construction of catalogs prior to the nineteenth century. As part of her description, Norris reports on subject arrangements as they appear in the catalogs she is examining, providing some credence to the idea that the arrangement of a catalog provides useful evidence in understanding the catalog in a larger social milieu.²⁶

Of more significance to this study, however, is Jim Ranz's *The printed book catalogue in American Libraries: 1723-1900*. This monograph looks at the wider history of catalogs from which the sample for this research was drawn. Ranz traces the roots of the printed book catalog to English predecessors, including Thomas James' 1605 catalog of the Bodleian Library, which overlaps with Norris's survey.²⁷

Ranz's work provides important evidence for our understanding of book catalogs. Of the early catalogs, Ranz states, "although the art of catalogue making in seventeenth-century England was still in the rudimentary stages, it was more than adequate for the needs of the fledgling libraries in the colonies. The task, rather, was to adapt this knowledge to the needs of the libraries in the new land."²⁸ As with most other importations from the England, catalogs were simultaneously adaptive and imitative. Ranz also asserts that the catalogs served a vital need in the colonies, "books and money for books were sorely lacking in the colonies; and in the catalogue the colonists astutely recognized a prime means for soliciting gifts, especially from their wealthier countrymen back in England."²⁹ Ranz goes on to assert that promotion and solicitation of donations were a primary motive for creating library

²⁶ Dorothy May Norris *A history of cataloguing methods, 1100-1850: with an introductory survey of ancient times* (London: Grafton & Co., 1939).

²⁷ Ranz, 2; Norris, 142-159.

²⁸ Ranz, 3.

²⁹ Ranz, 3.

catalogs, particularly in the eighteenth century. Lewis, in a preface to a reproduction of the 1764 catalog of the Redwood Library Company in Newport, Rhode Island notes of the construction of the original catalog:

We do not know how the books were chosen, but there must have been a committee that made up the list after much discussion. Doubtless the Rector of Trinity, the Reverend James Honeyman, whom Berkeley described as “learned,” was on it and also some of the donors who between 1747 and 1764 gave books to supplement the original collection.³⁰

This and similar examples demonstrate the multiple purposes catalogs served during this formative period. Catalogs were used to solicit contributions by demonstrating holes in the existing collection.

For social libraries, Ranz indicates that catalogs were also used to promote enrollment for the library.³¹ Dependence on subscription rates most likely placed this additional task on the catalog. This was often done in subtle, manipulative language. For example, this passage from the 1840 catalog of the Mercantile Library Company of Philadelphia demonstrates the inclusion of a ‘sales pitch’:

Its reading rooms have been always well attended, and its choicest books have had an unceasing circulation... To them all, so far as they chose to use it, the Library has been a rich treasure, a pure and constant source of pleasure and improvement, and it is not invidious to affirm that in its list of members may be found a very large proportion of the merchants of our city, who have most honoured their profession, have lived most virtuously and happily; who best enjoy and most usefully employ the fruits of their industry, and who are best prepared for the reverses to which all are exposed.³²

³⁰ Wilmarth S. Lewis, “Preface” *The 1764 Catalogue of the Redwood Library Company at Newport, Rhode Island*. Marcus A. McCorison, ed. (New Haven: Yale University Press, 1965), xii.

³¹ Ranz, 7.

³² *Catalogue of the books belonging to the Mercantile Library Company of Philadelphia: with a general index of authors; and containing the Constitution, rules, and regulations of the association accompanied by a sketch of its history* (Philadelphia: printed for the Company, 1840), xiii.

Other catalogs include similar statements of institutional pride and advantages of membership, and so we have early evidence of library advocacy.

Obstacles to the creation of library book catalogs did exist. In particular, printed catalogs were a serious investment. As Ranz notes, “in a period in which libraries were continually beset by inadequate funds the expense of printing a catalogue constituted an especial hardship. The cost of printing 500 copies of a catalogue of from 300 to 400 pages amounted to approximately \$500.”³³ As an example, the Library Company of Philadelphia minutes recount the expenses allocated for the production of its 1807 and 1835 catalogs: the 1807 catalog cost a total of \$2,705.13 for over 1,000 copies. An initial expense was allocated for 995 copies, but two additional lots were ordered and the minutes do not account for the number of catalogs actually printed.

Date	Amount
28 April 1808	\$724.50
27 April 1809	\$106.60
3 May 1810	\$0.00*
2 May 1811	\$102.00
30 April 1812	\$40.00
29 April 1813	\$0.00*
28 April 1814	\$46.00
2 May 1816	\$202.80
1 May 1817	\$50.00
30 April 1818	\$59.00
29 April 1819	\$60.00
27 April 1820	\$48.00
3 May 1821	\$21.00
2 May 1822	\$51.00
1 May 1823	\$34.00
29 April 1824	\$25.00
28 April 1825	\$24.50
28 April 1826	\$21.50
3 May 1827	\$10.50

³³ Ranz, 23.

Date	Amount
1 May 1828	\$23.25
30 April 1829	\$13.60
29 April 1830	\$15.40

***No catalogs were mentioned as being sold.**

Table 1: Date and proceeds of 1807 catalogs purchased from the Library Company of Philadelphia³⁴

The cost of production of the 1807 catalog is offset by on-going sales of catalogs (see Table 1). This most likely accounts for the ordering of two additional runs. There are a few things to note: the production of the 1807 catalog was at an expense of \$2,705.13; a total of \$1,678.65 was recorded as income from the sale of those catalogs, resulting in a deficit of \$1,026.48. In addition, as would be expected, the number of catalogs waned as the years passed. One of the major critiques to a printed book catalog has been and still is that it becomes quickly out of date as libraries continue to pursue acquisitions.

The Library Company sought a new catalog in 1835. Its expenses demonstrate that the printing economy made the production of catalogs more reasonable, costing in total less than the 1807 catalog and producing at least 1,000 copies (see Table 2). Significantly, \$600.00 of that expense was allocated to George Campbell, former Librarian for the Library Company, for the arrangement, proof reading, and supervision of the construction of the catalog, an expense that was not clearly delineated in other catalog production budgets.

Expense	Amount
Printing and papers	\$1,828.48
George Campbell	\$600.00
1,000 copies in sheets	\$242.48
Total	\$2,670.96

Table 2: Expenses and amount to produce the 1835 catalog of the Library Company of Philadelphia³⁵

³⁴ Minutes, Library Company of Philadelphia Records, 1794-1832, Library Company of Philadelphia, Philadelphia, Pennsylvania.

The production and sale of library book catalogs is an interesting area of research. More data would be needed to provide a complete picture of the creation and production of book catalogs. It would be necessary to gather similar data to that available for the Library Company in order to provide a complete picture.

As part of this research, evidence of the compiler was sought. This was done because the context of the creator of a classification system is an essential component to analyzing that system. For the most part, the compilers of the catalogs in the sample, though, remain elusive. For those catalogs in which a compiler was identified, they were often not significant in the historical record and information about their education or philosophical stance is not available. In a few instances, the classification system is discussed in the preface of the catalog, and that information has proven invaluable, but the information about individual contributions was not easy to discern.

The second chapter discusses classification from its theoretical foundation. It provides a brief outline of the development of library classification, discusses the components of structure in classification, and the relationship to the organization of knowledge. The concept of warrant is then introduced as a theoretical construct used in the examination of systems. Warrant has been used in other studies on classification and these are examined in order to refine how warrant is reflected in classification systems. The chapter concludes with a proposal for a new conceptual framework in which to examine the classification systems identified in this study.

The third chapter provides the landscape of the first half of the nineteenth century and places libraries within that landscape. It defines the social library as a phenomenon and places it contextually within the development of the young country. Social libraries were not

³⁵ Minutes, Library Company of Philadelphia Records, 1794-1832.

an invention within the United States, but they interacted in an intellectual climate that was unique to the United States as it was forging the new nation. Other movements that are parallel to the social library movement are also considered, including the lyceum or public lecture movement and developments in education during this period. The intellectual landscape is also examined, particularly in terms of religion, fiction, and science as they are used as examples of analysis of the classification systems.

The fourth and fifth chapters present the analysis of the classification systems in the sample. This is done by examining each library in the sample, followed by comparative presentations. In line with the idea that the context of a library is an essential component to understand its classification system, each library is individually examined in terms of its establishment and objectives. Within this context, the classification systems presented in the catalogs are described and analyzed. Following this, the classification systems are compared using four different metrics. First, they are compared to Bacon's organization of knowledge. A method of "superclassing" was developed that identifies groupings of classes as matching the three categories of knowledge that Bacon laid out. Second, the classes generally associated with religion and fiction are examined. Both of these categories undergo significant shifts in importance in American society during the first half of the nineteenth century, and their place in classification systems do and do not reflect those changes. Third, the categories generally associated with science are examined to demonstrate the connections and disconnections between the development of library classification systems and the professionalization of science in this period. Class names are compared across the catalogs to examine their semantic variation. Through all of these analytic lenses, social library type, geography, and historical context are discussed to provide a richer analysis. Finally, a

discussion about convergence on classification systems and the ways in which libraries could emulate each other's systems are discussed.

Social library classified catalogs provide us with a window into the world of intellectual structure in the early nineteenth century. This work represents a first foray into using classification as a method of communication about the way in which the world works.

As Lisa Hughes notes,

Classification systems, whether they originate inside or outside of the library community, represent a worldview, a way of making sense of the multitude of information that people encounter. Humans and their knowledge of the world are both imperfect, so is it surprising that classification systems lack perfection? In the end, classification systems reveal more about the systems' creators than they reveal about the world.³⁶

If classification does reveal to us the meaning and relationship between knowledge domains, it can be understood as a communication or education device for its intended audience. This provides evidence that the warrant of a classification system can reveal underlying discourses in society. The early nineteenth century in the United States provides a special arena for this analysis because of the social, political, and intellectual upheaval that the new nation and the world were facing. The complexity of this time is reflected in the classification systems that were created and provide a window into that world.

³⁶ Lisa Hughes, "Revealing classifications" in *Colorado Libraries*, 32, (2006), 67.

CHAPTER 2: CLASSIFICATION, WARRANT AND DISCOURSE

Of all the aspects of librarianship, the one that is most readily recognized by non-librarians is the Dewey Decimal Classification system. It stirs up images of a notation that is at once familiar but mysterious. The underlying implications of that notation, though, are seldom considered even by the most scholarly of library users. To most users, classification is a systematic approach to placing materials on a shelf, of providing access to those materials by denoting a *physical location* that the user can go to and retrieve the material. Classification as understood in library and information science also concerns location, but it is the intellectual space as reflected by a system and not its physical manifestation that provides fertile ground for analysis.

Fritz Machlup in his *The production and distribution of knowledge in the United States*, provides a framework in which to begin to look at the nature of library classification. In defining knowledge, he states

of course, if only one person has a particular piece of knowledge and does not share it with anybody, it may be that no one knows 'about it.' We do not ordinarily take notice of knowledge possessed by only one knower. Only when he discloses what had been a 'one-man secret' and thus does his part in the production of a state of knowing, in other minds, what he alone has known, will one usually speak of 'socially new knowledge.'³⁷

³⁷ Fritz Machlup, *The production and distribution of knowledge in the United States* (Princeton: Princeton University Press, 1962), 13.

Machlup also provides differentiations between basic and applied, general-abstract and particular-concrete, analytical and empirical, enduring and transitory knowledges. These differentiations allow him to argue that the role of organizing knowledge is an act that provides more information than defining knowledge because it involves value judgments.³⁸

Machlup is primarily concerned with the economic aspects of knowledge organization and production rather than the organization of knowledge for its contextual understanding. While this dissertation focuses more on the latter, Machlup's analysis is important in beginning to think about library classification because it considers the basic structures that produce the knowledge, which provides the very things that are being organized.

It is clear from a consideration of the history of libraries and books that library classification has deep and far-reaching roots. Classification forms a most basic function in managing books in a library, whether large and open to all or small and private. Even anecdotal evidence demonstrates that people interested in books classify them in one scheme or another. Terry Belanger in his *Lunacy and the Arrangement of Books* recounts,

Many, perhaps most, individual book collectors have developed their own schemes for the arranging of their books. One of the most interesting of these idiosyncratic schemes is that of Alistair Cooke. His assemblages of books on Americana covers an entire wall of the study of his New York apartment “with books on New England in the upper right corner, California at the lower left,” and Illinois towards the center. Thus the books on say, the Rocky Mountains can be arranged in the physical vicinity of books on Colorado and Wyoming, a flexible arrangement which may defy standard classification systems, but which works for Mr. Cooke: and more power to him.³⁹

To understand the roots of bibliographic classification, then, is to analyze approaches developed over thousands of years to the challenges of providing access to knowledge that has been structured in some meaningful way.

³⁸ Machlup, 16.

³⁹ Terry Belanger, *Lunacy and the Arrangement of Books*, (New Castle, DE: Oak Knoll Press, 2003), 11-12.

In order to understand the larger impact that classification systems can have on those that are creating, interacting, and interpreting these systems, it is necessary to examine the structural and intellectual messages inherent in those systems. In addition, classification is a sociocultural construct of a particular context. This chapter focuses on the nature of classification and its relationships to the organization of knowledge. It explores the concept of warrant in classification research and suggests a connection to discursive theory that provides the analytical structure for the present research.

Notation systems also play a part in library classification systems. They are referred to in almost every treatise on classification, particularly in explaining how classification systems work. This is clear from the generalized treatments of most modern classification systems. There is, though, literature that correctly deals with notation systems as independent of intellectual organization. This distinction is important in that the classification system and the notation system are integrally linked but in thinking about classification, notation needs to be considered separately from the intellectual foundations of classification. The Dewey Decimal Classification system, in particular, exemplifies the merging of these two distinct concepts: the order of knowledge and the way in which that order is communicated. For this research, notational considerations are unexplored. Instead, it focuses on the implicit messages conveyed by the classes and their proximity or distance from each other, largely in absence of the actual volumes included in the library catalog or their retrieval. Further research into that aspect of the classified catalog is certainly warranted for a more full understanding of classification, catalogs, and the materials and their use.

The impulse to classify

Classification is a fundamental impulse of human kind. As demonstrated through Belanger's various examples in the *Lunacy of Arrangement*, individuals devise systems for their own use to make sense of the world or a subset of it. As Bowker and Star indicate in their introduction to *Sorting things out: classification and its consequences*, classification is an inescapable human activity: "To classify is human. Not all classifications take formal shape or are standardized in commercial and bureaucratic products. We all spend large parts of our days doing classification work, often tacitly and we make up and use a range of ad hoc classifications to do so."⁴⁰ They continue by listing a range of mundane activities that are dependent on classificatory behaviors. In all endeavors, classification is a natural impulse to make sense of the world around us.

The relationship between classification and categories is particularly significant in exploring this impulse. Bowker describes two divergent approaches to classification: Aristotelian and prototype.⁴¹ He argues that rather than creating a clear delineation between these two types of classificatory approaches, humans engage in a hybrid method that includes the hierarchical, binary qualities of Aristotle with the fuzzier, more flexible structure of prototype theory. In contrast, Jacob argues for a clear delineation between classification and categorization that confines classificatory acts to rigid structures and systems.⁴² This

⁴⁰ Geoffrey C. Bowker and Susan Leigh Star, *Sorting things out: classification and its consequences* (Cambridge: The MIT Press, 1999), 2-3.

⁴¹ Geoffrey C. Bowker, "The kindness of strangers: kinds and politics in classification systems" *Library Trends*, 47 (1998), 255-292.

⁴² Elin Jacob, "Classification and categorization: a difference that makes a difference" *Library Trends*, 52 (2004), 515-540.

differentiation deserves some attention if we are to understand the processes at work and potential interpretive spaces that can be used in examining existing classification systems.

The principles of categorization, as outlined by Rosch, present the foundation of prototype theory.⁴³ Rosch notes two general principles, cognitive economy and perceived world structure. She defines cognitive economy as the “function of category systems and asserts that the task of category systems is to provide maximum information with the least cognitive effort,” while perceived world structures are the “structure of the information so provided and asserts that the perceived world comes as structured information rather than as arbitrary or unpredictable attributes.”⁴⁴ Lakoff credits Rosch for developing the fundamental conceptualization of categorization in *Women, Fire, and Other Dangerous Things: What categories reveal about the mind*, his theoretical work on categorization. Lakoff notes that it was Rosch who introduced the concept of prototypes and asserts that “prototype theory, as it is evolving, is changing our idea of the most fundamental of human capacities – the capacity to categorize – and with it, our idea of what the human mind and reason are like.”⁴⁵

Rosch bisects categories into vertical and horizontal dimensions. Her distinction here is focused on inclusion into categories through relationships that are apparent in structure that extend beyond a single category, i.e., their relationship within a hierarchy.⁴⁶ The horizontal dimension focuses on exclusivity of categories. She notes that this is defined by “means of

⁴³ Eleanor Rosch. “Principles of Categorization” in *Concepts: Core Readings* (Cambridge: The MIT Press, 1999), 189-206.

⁴⁴ Rosch, 190.

⁴⁵ George Lakoff, *Women, Fire and Dangerous Things: What categories reveal about the mind*, (Chicago: The University of Chicago Press, 1987), 7.

⁴⁶ Rosch, 191-192.

formal, necessary, and sufficient criteria for category membership.”⁴⁷ It is this second dimension that contains prototype theory, which Rosch defines as “the more prototypical of a category a member is rated, the more attributes it has in common with other members of contrasting categories” and, further, “prototypes appear to be just those members that most reflect the redundancy structure of the category as a whole.”⁴⁸

The relationships between categorization and classification are debated. Many scholars argue for an intricate intertwined relationship. As Vickery states, “classifying, in its simplest terms, means putting together things or ideas that are alike, and keeping separate those that are different.”⁴⁹ James D. Brown in his *Manual of Library Classification and Shelf Arrangement* asserts that the

principle of classification is of almost universal application. It is to be seen in nature on a gigantic scale in the disposition of earth, air, and water, and in the natural laws that govern them. Artificially it has a very good rudimentary exposition in the practice of the costermong, a familiar object in the streets of our large towns, but nevertheless a classifier of considerable skill. He does not put gooseberries, cherries, and strawberries all together in one barrow, and sell them mixed under the comprehensive name of ‘Fruit’ at three pence a pound, but carefully divides and keeps them apart under a strict plan of classification. He may subdivide his main class, ‘Strawberries.’ into two sub-classes, ‘Sir Joseph Paxtons’ and ‘British Queens’ respectively, attaching to each different values...⁵⁰

Brown continues his description of this method of categorization to include quality, size and so on by the berry-seller. Sayers, in a similar vein, notes that “classification is merely the

⁴⁷ Rosch, 196.

⁴⁸ Rosch, 197.

⁴⁹ B.C. Vickery, *Classification and indexing in science* (London: Butterworths, 1975), 1.

⁵⁰ James Duff Brown, *Manual of library classification and shelf arrangement* (London: Library Supply Company, 1898), 11-12.

power of observation applied; and we have to apply it to all things.”⁵¹ Langridge emphasizes that classification is an inherent human behavior, noting that it can be either simple, as in Brown’s or Sayers’ examples, or complex.⁵² As with Bowker and Star, these examples demonstrate the role of classification for the most mundane items and connect the everyday activity of categorization to classification. Similarly, Taylor states that classification systems in the United States are based upon a classical theory of categories, which involves similarity or difference to other things within the category; it is “like an abstract container with things either inside or outside the container. The properties in common for the things inside the container were what defined the category.”⁵³ In Bliss’s *Organization of Knowledge in Libraries*, he provides a summary of principles for library classification that includes, among others, principles that speak to categorization. For example, the principle *Definition of classes* discusses the need for defining a class by its characteristics much in the way that a category shares characteristics. Bliss states “any property, form, or relation, whether intrinsic or extrinsic, or any combination of them, common to the class, may consistently be regarded, or may be chosen, as *characteristic* of the class, which may be defined by the respective terms.”⁵⁴

Perhaps one of the clearest examples of the exploration of the relationship between categorization and classification is Durkheim and Mauss’s look at Aborigine civilizations in

⁵¹ W.C. Berwick Sayers, *A manual of classification for librarians and bibliographers* (London: Grafton & Co., 1944), 5.

⁵² Derek Langridge, *Approach to Classification: for students of librarianship*, (Hamden, Conn.: Linnet Books, 1973), 15-17.

⁵³ Arlene G. Taylor, *The organization of information* (Englewood, Col.: Libraries Unlimited, 1999), 174.

⁵⁴ Henry Evelyn Bliss, *The organization of knowledge and the subject-approach to books* (New York: H. Holt and Company, 1939), 39. Emphasis in the original.

Primitive Classification. This work provides a detailed explanation of the role that categorization plays in classification. In *Primitive Classification*, Durkheim and Mauss are interested in how classification is used by their subjects as a tool for understanding societies. They argue that social classification, or the ways in which society organizes its people, is essentially a categorization of its peoples. They extend this social classification, then, to serve as a model for non-social things with the conclusion that all classification is based upon this basic social classification.⁵⁵ In working on this hypothesis, they state, “We must... ask ourselves what could have led them to arrange their ideas in this way, and where they could have found the plan of this remarkable disposition.”⁵⁶ In order to understand the fundamental organization, Durkheim and Mauss study Australian tribes and their organization. They see an extension from the basic moiety organization separated into clans as symbolized by totems. The totems of one moiety are not found in the other moiety. Durkheim and Mauss conclude, “it is that if totemism is, in one aspect, the grouping of men into clans according to natural objects (the associated totemic species), it is also, inversely, a grouping of natural objects in accordance with social groups.”⁵⁷ Whether one accepts the general premise that classification is based upon social organizations, it is clear that Durkheim and Mauss are using the concept of classification and categorization interchangeably in a similar vein to that of Bowker’s hybrid model.

In contrast to these studies, Jacob argues against this idea of interchangeability between classification and categorization. She defines categorization as “the process of

⁵⁵ Rodney Needham, “Introduction” in Émile Durkheim and Marcel Mauss. *Primitive Classification*. (Chicago: The University of Chicago Press, 1963), xiv.

⁵⁶ Durkheim and Mauss, 9.

⁵⁷ Durkheim and Mauss, 17-18.

dividing the world into groups of entities whose members are in some way similar to each other.”⁵⁸ Classification is for Jacob a representational system for the organization of a collection of resources.⁵⁹ Her decision to limit classification to the act of organizing knowledge as representative in physical (or virtual) containers is not an uncommon one, although it provides rigidity to the concept of classification that creates boundaries for its implications. Jacob concedes that there are similarities between categorization and classification, but she focuses instead on differences between these two processes to justify her argument. She identifies six characteristics of classification that contrast with categorization: process, boundaries, membership, criteria for assignment, typicality, and structure. Classification, for Jacob, is a rigid system, necessitated by mutual exclusivity and non-overlapping boundaries whereas categorization is more fluid, flexible, and dependent upon a particular context.⁶⁰

While Jacob provides a compelling argument, she is analyzing classification as it exists as a complex structure for the organization of materials in the present day. For her examination of classification in the context of this comparison, she uses terminology that underscores this contemporary understanding of classification. A question to be asked, though, is that if it is accepted that there is a wide contrast in today’s time, has it always been like that or was there a time when categorization and bibliographic classification shared more qualities? If as Bowker suggests, classification systems may have an appearance of rigidity, while at the same time providing a dynamic process, does that provide a clearer, yet less concrete, window into the sociocultural structures inherent in classified knowledge?

⁵⁸ Jacob, 518.

⁵⁹ Jacob, 522.

⁶⁰ Jacob, 527-528.

Qualities of classification

Classification systems exhibit some common structural qualities. In order to understand the larger impact of classification, it is necessary to focus not on the notational aspects (and thus its physical placement) but on the schematic structure and its accompanying intellectual location. Classification systems exhibit qualities that enhance our understanding of their intellectual impact. In particular, the role that logic plays in classification system formation provides a first look at the structures implicit in systems.

Structural analyses of classification systems are one step in the process of understanding its intellectual impact, and the literature that deals with various structures is often found in the historical treatments of classification systems. In conjunction with structure is a focus on the major divisions or classes that classification literature exposes. This is particularly important in the context of interdisciplinary studies that have surfaced as a problem for library classification. Historical treatments also uncover underlying assumptions by researchers of the role of classification in library management as well as their implications on people's understanding of the world around them.

There are several aspects of classification systems that have been examined in classification literature. Some of the aspects have roots in the reliance on classification as a logical system. Other aspects come as a result of practice and serve as critiques of current systems. This section explores these aspects to provide a foundation for understanding of some of the larger issues faced by classification systems. The overall structure of this section should guide us through the fundamental characteristics of library classification while at the same time highlighting areas that call for further research.

The section begins with a discussion of the role of logic and its legacy of hierarchy in classification. Connections to logic are in the very roots of classification theory. Logical structures and analyses play less of a role in today's classification research than they have in the past, but many of the topics analyzed have relevance in understanding classification systems as formal structures. The order of classes is an important structural component in the research on classification systems. While the following section on warrant provides a primary focus for future work, it is not possible to comprehend or to speak clearly about warrant without including an understanding of these other aspects of classification as well.

The Five Predicables are concepts that discuss qualities of predicates in a logical construct. They are genus, species, difference, property, and accident. Genus is defined as any class of object that can be broken into at least two minor classes (species). There are a certain number of qualities that belong to all members of the genus. Species is defined as the minor classes of genus. Species themselves can act as genus, by being subdivided into further minor classes. The quality that creates species from the genus is called the difference. A property is defined as a quality that applies to the whole class but does not form part of the definition of that class. A property, therefore, may belong to other classes as well. Finally, an accident is a quality or characteristic that may or may not belong to members of the class and has no effect on other qualities that help to define membership. Intension and extension are also concepts that play a part in the Five Predicables. A genus as a group of qualities represents intension; a group of objects possessing those qualities is extension. Therefore, the genus is within the species (intension) and the species is within the genus (extension).⁶¹

⁶¹ Sayers, 22-23. Stanley W. Jevons, *The Principles of Science: a treatise on logic and scientific method*, (London: Macmillan, 1887), 698-700. W. Howard Phillips, *A Primer of Book Classification*, (London: Association of Assistant Librarians, 1955), 13-16. Explications of the Five Predicables vary in literature. For example, Broadfield defines the Five Predicables as definition, genus, differentia, property, and accident.

Jevons sees the issue of characteristics and qualities as fundamental to classification. He states, “all logical inference involves classification, which is indeed the necessary accompaniment of the action of judgment. It is impossible to detect similarity between objects without thereby joining them together in thought, and forming an incipient class.”⁶² Therefore, classification is essentially a bifurcate process, where classes branch out step by step based upon whether a characteristic is present or not. This is explained by the Tree of Prophyry, which begins with Substance and uses a bifurcation at each level until demonstrating the hierarchical relationship of instances at the level of Man. The Tree demonstrates the roles of Genus, Species, and Difference in the creation of this binary classification. Shera credits the Tree for adding the “principle of *gradation by specialty*, the progression downward from terms of greater to less extension and successively increasing intension.”⁶³ Based upon these principles, Vickery outlines the basic rules of classification as, “each characteristic of division must produce at least two classes. Only one principle of division must be used at a time, to produce mutually exclusive classes. The species of any genus must be completely exhaustive of their parent class.”⁶⁴ These basic rules can be seen as a direct connection to those principles defined in formal logic. In contrast, Phillips notes that “the value of the Tree in the study of classification has been overrated. It was not advanced as a classification of knowledge but merely as an illustration of Porphyry’s theory that all

Definition is explained as the “form which essence takes qua known” or, an essence that makes it this thing and not that. Differentia, he defines as part of an essence that distinguishes it from others (A. Broadfield, *The Philosophy of Classification*, (London: Grafton & Co., 1946), 19).

⁶² Jevons, 673.

⁶³ Jesse H. Shera, *Libraries and the Organization of Knowledge*, (Hamden, Conn.: Archon Books, 1965), 79.

⁶⁴ Vickery, 2.

things are inter-dependent.”⁶⁵ Despite this position, the Tree does demonstrate relationships that take place in bifurcate classification.

For the most part, the contribution that Stanley Jevons has made to the field of library classification concerns a statement made following his treatise on formal logic. Jevons was not interested primarily in affecting library classification. His main objective is the principles of science and the use of logic. Library classification serves as an example for him to prove his point about science. He states,

Classification by subject would be an exceedingly useful method if it were practicable, but experience shows it to be a logical absurdity. It is a very difficult matter to classify the sciences, so complicated are the relations between them. But with books the complication is vastly greater, since the same book may treat of difference sciences, or it may discuss a problem involving many branches of knowledge.⁶⁶

Shera accepts this statement and defines library classification as,

a list of terms which are specifically and significantly different each from the other, capable of describing the subject content of books, inclusive of all knowledge, infinitely hospitable, in an arrangement that is linear, unique, and meaningful, and which when applied to books, usually, though not necessarily though the medium of a notation, results in their arrangement on the shelves according to the logical principles that inhere in the schematism.⁶⁷

Shera observes that there are four limitations to bibliographic classification: linearity, inconsistency of organization, inherent incompleteness, and complexity. According to Shera, linearity allows only for a single dimension but the relationships among books are poly-dimensional. The linearity is necessary due to the use of alphabetic or numeric notations, which are also linear. Shera asserts that notation muddles classification that in itself is not

⁶⁵ Phillips, 16.

⁶⁶ Jevons, 715.

⁶⁷ Shera, *Libraries and the organization of knowledge*, 99.

linear. The inconsistency of organization refers to the lack of consistency across classes on the basis of differentiation. He provides several examples for arrangements of classes, including the biological sciences, geography and travel, philosophy, and literature and demonstrates that these classes would be arranged based upon characteristics defined by that class: genera and species, national or political boundaries, schools of philosophic thought, or literary form. Inherent incompleteness refers to the provision for all knowledge, and therefore assumes a static universe or an ability to foresee the future. Complexity refers to the inability to sustain itself if it were to meet the objectives. It would simply be too complex.⁶⁸ Shera concludes from these limitations that the “history of library classification, then, has been the narrative of a pursuit of impossible goals, and its pages are strewn with the wreckage of those who either were blissfully unaware of the dangers by which their paths were beset or hoped to circumvent them through more modification of previous schematisms or simple tinkering with notation.”⁶⁹

Hierarchy plays a central role in logical classification. Not all library classification systems, though, are considered hierarchical. Shaw makes a distinction between hierarchical and synthetic classification, while Taylor further divides the systems into hierarchical, enumerative, and faceted.⁷⁰ A hierarchical classification system is a grouping mechanism that moves from general to specific and is likened to the scientific classification systems that move from Kingdom down to species. A principle that is fundamental to a hierarchical structure is that those categories lower down share the attributes that form the grouping

⁶⁸ Shera, *Libraries and the Organization of Knowledge*, 99-100.

⁶⁹ Shera, *Libraries and the Organization of Knowledge*, 100.

⁷⁰ Ralph R. Shaw, “Classification Systems” *Landmarks of Library Literature 1876-1976*, Dianne J. Ellsworth and Norman D. Stevens, eds. (Metuchen, NJ: The Scarecrow Press, Inc., 1976), 359. Taylor, 177.

above it (inheritance). This is described as hierarchical force. In contrast enumerative classification systems designate a place for each concept. That does not mean that they are not hierarchical; they very well may be. It means only that there is little deductive labor in matching or finding the place for a concept. Faceted or synthetic classifications focus on combining elements to build a classification representation. As Taylor notes, most contemporary classifications combine these characteristics. The Dewey Decimal Classification (DDC) and Library of Congress Classification (LCC) both have hierarchical structure but use some facets to provide expediency in schedules. Examples include geographical tables that are part of each system.⁷¹

Hierarchy, though, has a broader impact on classification than the navigation and use of the schedules. To explore relationships in the DDC, Mitchell focuses on hierarchy as one of the main components of analysis. She notes that hierarchical relationships are “expressed through notation and structure. In the DDC, all topics (aside from the ten main classes) are part of the broader topics above them.”⁷² Her point about notation is supported by the length of notation as a visual representation of hierarchical relationships, but she does not provide any more insight than this observation. Her analysis of structural hierarchy is also focused on the expressions in the schedules and relies more on the meaning that can be derived from notes and references in the schedules. She points to these as well as other aspects to highlight the rich relationships in the DDC. In terms of hierarchical relationships, Mitchell concludes that, “no special labeling exists for the different kinds of hierarchical relationships, but the

⁷¹ Taylor, 177.

⁷² Joan S. Mitchell, “Relationships in the Dewey Decimal Classification System” in *Relationships in the Organization of Knowledge*, Carol A. Bean and Rebecca Green, eds. (Dordrecht: Kluwer Academic Publishers, 2001), 213.

type can be determined from the context in which it appears (e.g., a taxonomic schedule, parts of a discipline, a listing of geographic features).”⁷³ Despite Mitchell’s lack of analytical strength, the role that hierarchy plays in her understanding of relationships in the DDC places hierarchy as a central component in the classification’s design.

Hierarchy provides one aspect of structure for classification. Regarding the affinity between classification and structure, Marcella and Newton observe, “classification systems seek to provide a structure for the organization of materials so that an item may be retrieved according to some aspect of its character.”⁷⁴ Structure, then, is at the heart of classification. As discussed above, there are a variety of structures available to classification designers to choose from and there are ramifications for the way in which that choice communicates an understanding of the purposes and use of classification. Structure becomes an area of analysis that is at the core of classification research.

For an example of the impact that structures can have on the elucidation of classification systems, Benedictine monk and library theoretician Martin Schrettinger provides a good point of discussion. He specified the creation of analytics by arguing that the monograph, a book on a single topic, was a fallacy. Garrett, in analyzing the wall library system of the Baroque library, provides this outline of Schrettinger’s contributions:

Scholars and librarians of the eighteenth century assumed that there was a unique and natural place for each book on a library shelf, mirroring the presumed order of nature, as reflected in the Linnæan classification of plant and animal species. Schrettinger argued, by contrast, that it is impossible to arrange books on a shelf in a meaningful order, since they almost never have, as he called it, single “OrdnungsMerkmal” (ordering feature), a classificatory characteristic, or sign that would allow for the assignment of a single shelf location. For the wall library to work, Schrettinger argued, librarians would have to purchase multiple copies of each book so that a copy would always be

⁷³ Mitchell, 224.

⁷⁴ Rita Marcella and Robert Newton, *A New Manual of Classification*, (Hampshire, England: Gower, 1994), 3.

where a user would search for it. The only truly feasible alternative, according to Schrettinger, was the introduction of nonvisual aids to locate library materials, chief among these being catalogs.⁷⁵

Schrettinger's perspectives and solutions provide not only a view on the development of a cataloging concept still in use today, analytics, but also as a critique on the structures of classification systems.

Marginalization is the primary focus of the critical examinations of structures in classification systems. In analyzing the Dewey Decimal Classification system, for instance, Olson notes that a bias places "topics outside of mainstream North American and European culture and ... [omits] topics associated with marginalized groups."⁷⁶ This is similar to Nelson's observations on library classification for art history. Nelson focuses on the Library of Congress Classification system, and concludes that the system "achieved more than an efficient arrangement of knowledge, according to prevailing values. Like all successful classifications, the LC system also constructs and inculcates those same values and thereby supports and legitimates the societies that create and are created by the system."⁷⁷ These echo the concerns that Beghtol discussed in terms of multidisciplinary. Each of the authors identifies problems inherent in the general structure of classification.

Olson's "Universal Models: a history of the organization of knowledge" uncovers a central assumption that "naming knowledge is a discourse constructing knowledge."⁷⁸ She devises a theoretical framework to discuss universal models. In particular she is interested in

⁷⁵ Jeffrey Garrett, "Legacy of the Baroque in Virtual Representations of Library Space," *Library Quarterly*, 74 (2004), 53-54.

⁷⁶ Hope A. Olson, "Sameness and Difference: A cultural foundation of classification" *LRTS*, 45 (2001), 115.

⁷⁷ Robert S. Nelson, "The map of art history" *Art Bulletin*, 79, (1997), 32.

⁷⁸ Hope A. Olson, "Universal Models: A History of the Organization of Knowledge" *Advances in Knowledge Organization*, 4 (1994), 72.

the assumption of universality apparent in knowledge organizations and reflected in library classification. She outlines the assumptions of universality as “first, a mistrust of differences in language, and second a need for universal models to overcome these differences. The two parts are, in deconstructive terms, a binary opposition with universality and differences being apparent opposites, each defined by not being the other. In knowledge organization, universality is the dominant concept.”⁷⁹ In exploring this problem, she focuses on Dewey and Cutter’s emphasis on the “real” subject of a book to ensure its proper place in the classification. Of Colon Classification she states that the “sequence of facets in Colon or any other faceted classification creates a hierarchy which asserts the values of some characteristics over others.”⁸⁰ Olson concludes that the limits of universality indicate the role of contexts that are present in the acts of inclusion and exclusion. These are fundamental activities of classification and categorization, but they can be problematic for those areas that do not fit into traditional disciplines. For example, she notes that “feminist literature is problematic for knowledge representation by being interdisciplinary, non-traditional (or anti-traditional), and dynamic in terms of language and content.”⁸¹

Rubanowice makes a similar criticism when he discusses the issues of intellectual history. He argues that intellectual history is transdisciplinary. “My complaint,” he begins, “lies rather with the very principle of hierarchy itself whereby theories of knowledge mapping having led to debilitating administrative systems and ultimately to the distortion of

⁷⁹ Olson, “Universal Models”, 73.

⁸⁰ Olson, “Universal Models”, 74.

⁸¹ Olson, “Universal Models”, 77.

the very reality being mapped.”⁸² Traditional classification systems aim to have books on a given subject grouped together, but in transdisciplinary pursuits, that objective is undermined. He notes that all history is transdisciplinary.⁸³ Rubanowice calls for a distinction between classification, which he correctly interprets as subject analysis, and location. Classification is at end the “underlying principles guiding the best structuring or mapping of accumulated knowledge.”⁸⁴

Structures provide ample room for critiques of classification, particularly for the marginalized or dispersed. Contextualized understandings of how classification schemes are constructed can be determined through a look at their structure and the resulting impact on the order of classes, and the placement of those topics considered outside of the mainstream. Current classification research calls for increasing flexibility and a denouncement of rigid processes inherent in most contemporary classification systems.

Inherent in the ideas of categorization and hierarchy are relationships. Relationships are integral to hierarchy in that those subordinate in a class are related to that class.⁸⁵ Categorization also requires relationships in that those things grouped together share qualities that allow them to be grouped so. There are more complex relationships involved in classification, though, than those that form part of hierarchy and categorization. Green notes that in examining relationships in knowledge organization, one must reconcile the “types of

⁸² Robert J. Rubanowice, “Intellectual history and the organization of knowledge” *Journal of Library History, Philosophy and Comparative Librarianship*, 10 (1975), 265.

⁸³ Rubanowice, 266.

⁸⁴ Rubanowice, 267.

⁸⁵ See Clare Beghtol, “Relationships in Classificatory Structure and Meaning” in *Relationships in the Organization of Knowledge*, Carol A. Bean and Rebecca Green, eds., (Dordrecht: Kluwer Academic Publishers, 2001), 99-113, for a detailed discussion of relationships inherent in hierarchy.

entities that participate in those relationships with the semantic types of those relationships.”⁸⁶ She goes on to identify major entities and then groups the types semantically into four categories: bibliographic or descriptive, intra- and intertextual, subject, and relevance.⁸⁷ This delineation provides a useful framework for understanding the current and potential uses of relationships in information retrieval.

Warrant in classification research and its connection to discourse

In 1901, E. Wyndham Hulme outlined a new principle for library classification and subject analysis. He described this principle in an article entitled “On the Construction of a Subject Catalogue in Scientific and Technical Libraries” published in the *Library Association Record*. It is through this article that Hulme lays out his idea of literary warrant: the “formulation of classification which is inherent in literature. This definition binds us on the one hand to respect literary unity, and on the other to carry the division of subject-matter to the point where specific entry is reached.”⁸⁸ Hulme’s influence on the construction of the Library of Congress Subject Headings and the Library of Congress Classification by promoting a concrete connection between the literary production in the collection and the development of these systems should not be understated. However, in the context of classification as a theoretical structure, the significance of the concept of warrant as it applies to classification systems is especially significant in understanding classification systems and their impact on the communities that they serve.

⁸⁶ Rebecca Green, “Relationships in the Organization of Knowledge; An Overview” in *Relationships in the Organization of Knowledge*, Carol A. Bean and Rebecca Green, eds., (Dordrecht: Kluwer Academic Publishers, 2001), 6.

⁸⁷ Green, 7-13.

⁸⁸ E. Wyndham Hulme, “On the Construction of a Subject Catalogue in Scientific and Technical Libraries” *Library Association Record* (v. 3, 1901), 512.

It is ironic that Hulme insisted on promoting a classification principle that separates theoretical structures from the classification of physical objects. Rodriguez asserts that Hulme's interest in promoting the concept of literary warrant was to challenge the influence of scientific structures, based on the order of the sciences. This was in contrast to Ernest Cushing Richardson's natural classification approach, which stated that "the closer a classification can get to the true order of the sciences and the closer it can keep to it, the better the system will be and the longer it will last."⁸⁹ Hulme felt that philosophical considerations contradict the purpose of library classification and hinders the construction of robust classification systems. He rejected the necessity of book classification to conform to theoretical classification, and in doing so he presents a principle that has its own theoretical structure. To Hulme, "book classification is the ordering of books, not subjects or theories or ideas, and the source for our authority in classifying the book itself and not the requirements of a preconceived classification system with its ideological preferences."⁹⁰ Nonetheless, he articulates in his arguments a philosophical construct to examine and understand classification systems based on underlying structures or messages that the system conveys. For Hulme that structure was based upon the literature in the books that he was classifying, but other structures have driven the construction of library classification systems in other contexts.

In examining the history of classification, the ideas of the late nineteenth century can be found in Hulme's justifications for discarding theoretical foundations for classification. Rodriguez notes four operations for the discovery of knowledge within books. First, the

⁸⁹ Ernest Cushing Richardson, as quoted in Robert D. Rodriguez, "Hulme's Concept of Literary Warrant" *Cataloging & Classification Quarterly*, 5 (1974), 18.

⁹⁰ Rodriguez, 18.

classifier must define the subject matter of the book as expressed by the book. Second he/she registers this information in terms of subject classes; third, there is a coordination of the terminology of subject classes used; and finally that terminology is translated into the notation.⁹¹ The inclusion of notation in this outline does not suggest that Hulme is in anyway interested in the construct of notation. Instead, Hulme is much more engaged in the nature of classification and the foundation of the systems, stating:

All subject catalogues are class catalogues in the sense that their headings are general names or names of classes. Hence the only distinction which can properly be drawn between the types known as dictionary and class catalogues is that they differ in the arrangement of their classes. . . . Distinctions based upon different methods of subject registration are of infinitely greater importance than distinctions of formal arrangements.⁹²

Rodriguez interprets Hulme's endorsement and explication of literary warrant as it connects to the role of book classification as "locative" and "indicative" rather than "educative."⁹³ He understands it as a separation between classification as an explanation of the way that the world works and the very real purpose of organizing books (or other resources) in such a way that they can be located and can reveal the relative location of other materials by classification.

Beghtol extends the term of warrant to introduce the concept, "viewpoint warrant." As described by Beghtol, viewpoint warrant emphasizes the "classificatory gaze" of each domain and examines every intellectual landscape from the vantage point of its own

⁹¹ Rodriguez, 18.

⁹² E. Wyndham Hulme, "On a Co-operative Basis for the Classification of Literature in the Subject Catalogue" *Library Association Record*, 4 (1902), 317-326.

⁹³ Rodriguez, 23.

framework.⁹⁴ This extension is important in that it allows us to think about the role that warrant plays in the construction of classification systems. Whether relying on the knowledge represented in the discrete units being classified, as Hulme's literary warrant endorses, or relying on the understanding of the world through a lens defined by religious or scientific visions, warrant participates in the construction of all classification systems. If warrant is accepted in this framework, uncovering warrant can be considered a component of discourse as explored by philosopher Michel Foucault.

In contrast to Hulme's practical approach to classification systems, Henry Evelyn Bliss embraced a philosophical stance in the creation of his classification. Bliss's endorsement of the educational and scientific consensus as an organizational principle provides a direct example of the concept of warrant that deviates clearly from Hulme's concept. Even though Bliss does not use the term 'warrant' to discuss his consensus approach, it should be considered an example of the idea of an underlying structure that determined the order of the classes and the order within classes. Principle 19 forms the entrance of the concept:

XIX: Organization of knowledge in libraries: in classification, in subject-catalogs and in other bibliothecal services, knowledge should be *organized in consistency with the scientific and educational consensus*, which is *relatively stable* and tends to become more so as theory and system become more definitely and permanently established in general and increasingly in detail.⁹⁵

The important aspects of this principle connect directly to the concept of warrant in that it drives the structure of the organization. As with Hulme's warrant where the underlying organizational structure relied upon the knowledge in the books that are being classified,

⁹⁴ Clare Beghtol, "General Classification Systems: structural principles for multidisciplinary specification" *Advances in Knowledge Organization*, 6 (1998), 94.

⁹⁵ Bliss, 42. Emphasis in the original.

Bliss saw that structure in the educational and scientific consensus had been established and was stable. Vickery notes that this reliance on the traditional disciplines was justified to Bliss because, according to Bliss, although sciences develop, fundamentally they did not change in accordance to relationships, Bliss comes to this conclusion based on the idea that the sciences had not changed in almost a century. The consequence of this stability was that new knowledge should be able to be fitted easily into the framework.⁹⁶ For Bliss, this was a matter of practicality, because it stemmed from a stable structure. Bliss's general complaints about classifications were that systems were confusing, inefficient, and lacked economy. Therefore, Bliss sought to build a classification system on sound principles in order to alleviate these problems, and in particular, to establish a relatively permanent structure.⁹⁷

The use of the concept of warrant is not new in classification research, although until recently only a few scholars actually employed the term 'warrant' outside of the context of Hulme's theory of literary warrant. Beghtol, in "Semantic validity: concepts of warrant in bibliographic classification systems" identifies four different types of warrant in classification theory: literary warrant, scientific or philosophical warrant, educational warrant, and cultural warrant. These are effective categories in analyzing the construction of classification systems in the twentieth century, exploring particularly the ideas of Hulme and Bliss. Beghtol also provides a general definition of warrant: "Warrant covers conscious or unconscious assumptions and decisions about what kinds and what units of analysis are appropriate to embody and to carry the meaning or use of a class to the classifier, who must interpret both the document and the classification system in order to classify the document by

⁹⁶ Vickery, 163.

⁹⁷ Alan R. Thomas, "Bibliographic classification: the ideas and achievements of Henry E. Bliss" *Cataloging & Classification Quarterly*, 25 (1997), 60.

means of available syntactic devices.”⁹⁸ In considering warrant as this general construct, warrant becomes an analytical tool available to researchers. Beghtol concludes that classification systems are based upon “pre-defined principles and priorities” that facilitate the establishment of the system and the interaction with that system and that those principles “constitute the semantic warrant of the classification system, whether or not the warrant is completely and explicitly recognized by the classificationist.”⁹⁹

Research on historical classification systems often constitute investigations into the warrant of the system developed. These investigations illustrate the various types of warrant outlined by Beghtol, although it is clear that for classification systems developed outside of the modern classification constructs, themes are less clearly delineated from her four warrant types. Religion, education, culture and politics all surface as intertwining influences on classification structures.

Religion as a component of culture has a dominant influence on classification schemes. Charaf examines three Islamic philosophers’ approach to scientific classification as they reflect the evolution of Islamic philosophy. These systems are created between the tenth and fourteenth centuries and reflect what she describes as two phases in Islamic thought: “the period of transmission and the period of production.”¹⁰⁰ The earlier period is characterized by the adoption and adaptation of Aristotle’s theories, while the later period by a more dramatic infusion of Islamic culture to construct classification systems. Charaf parallels these developments with changes in Muslim religious interpretations: “this ‘new wave’ sprang

⁹⁸ Clare Beghtol, “Semantic validity: concepts of warrant in bibliographic classification systems” *Library Resources & Technical Services*, 30 (1986), 110-111.

⁹⁹ Beghtol, “Semantic validity,” 122.

¹⁰⁰ Inaam Charaf, “Conceptualisation and organization of knowledge between the 10th and 14th centuries in Arabic culture” *Knowledge Organization*, 31 (2004), 213.

from a new conception of the relationship between revelation, spirit, and reasons, and hence the relationships between religion, science, and philosophy, at this time, where Muslims were opening up to the cultural world through various translations of scientific and philosophical masterpieces.”¹⁰¹ In this research, Charaf uses classification structures to explain the cultural and religious evolution experienced during that period.

In contrast to Charaf’s approach, Scrivner uses the monastic life to explain Medieval classification. He examines four catalogs surviving from the Carolingian period, although he provides comparisons to other monastic catalogs that allow him to make generalizations about the monastic classification of knowledge. For Scrivner, the monastic life, as an on-going religious expression predominates in the structure of these classified catalogs. Scrivner notes, “merely listing such examples of patterns of associations, though it may bring into sharper focus some of the peculiarities of cataloging in the medieval monastic library, does nothing to advance understanding them. For that purpose it is necessary to examine... the cultural heritage that shaped the way compilers of these catalogs are likely to have understood the world around them and the configuration of existing knowledge.”¹⁰² Scrivner points to the dominance of the *Trivium* (grammar, rhetoric, dialectic) and the *Quadrivium* (arithmetic, geometry, astronomy, music) education model, and the predominance of the study of the scriptures in Christianity during this period:

there was in Christian thought something of a paradox whereby its central message was of such simplicity that a person or even the rudest understanding could grasp it sufficiently so as to secure salvation, while at the same time its doctrines offered complexities of such depth as to try human comprehension to its limit in their explication. It was generally believed that whatever was

¹⁰¹ Charaf, 219.

¹⁰² Buford Scrivner, “Carolingian Monastic Library Catalogs and Medieval Classification of Knowledge” *Journal of Library History*, 15 (1980), 437.

hidden or obscure in one part of the scriptures was laid open and made plain in another, thus allowing for both the immediate communication of the message and redemption and the unending task of interpretation and commentary.¹⁰³

Scrivner also focuses on the physical realities of monastic life as part of his analysis of these catalogs. By exploring the patterns of monastic living, including the practice of a loose distribution of books through the monastery, Scrivner asserts that the catalogs provide “enduring assumptions concerning the relationships among the purposes of the various field of *knowledge*.”¹⁰⁴ Generally, liturgical and service texts were kept in the Chapel, commentaries were kept in the scriptorium, and instructional books were used to educate novitiates. Life was regulated with prayer, and these patterns were on-going. Scrivner asserts that this lifestyle affected the monks’ perspective:

all history, too, was patterned, its beginning and its future termination familiar from Scripture and homily. The events of history represented a record of the working out of God’s will, of which human laws were but a simulation, from Adam through the Age of Man comprising the old law (justice) and into the Sixth Age beginning with the birth of Christ and the advent of the new law (mercy).¹⁰⁵

Scrivner clearly reads the classification systems as expressions of these religious ideals and as a part of the fiber of monastic life.

The classification system created by Jesuit librarian Jean Garnier illustrates an education and religious impact combined. Garnier was librarian for the College of Clermont in Paris in the seventeenth century. Kane asserts that Garnier is a pioneer for modern library classification. Contemporary to Garnier, library classification was based upon the division of

¹⁰³ Scrivner, 439.

¹⁰⁴ Scrivner, 441. Emphasis in the original.

¹⁰⁵ Scrivner, 441.

knowledge into schools such as the humanities, philosophy, history, the sciences, law, medicine and theology. Garnier departs from this traditional approach in his classification. Of the Jesuit college system, Kane notes that,

besides being organized within the traditional framework of knowledge, [Jesuit colleges] had a special tendency to a fairly common form of classification and cataloging, both because the colleges all formed a common scheme of studies and a common method of teaching, and because the Jesuits moved from college to college a good deal, and hence were carriers of library methods in a way likely to promote the resemblance between one Jesuit library and another.¹⁰⁶

Kane identifies a relationship between both the fundamental understanding of the organization of knowledge and the curriculum and teaching methodologies, which is reflected in the Jesuit approach to classification. Garnier states this relationship himself:

The knowledge which is contained in books perfects man according to all the powers of his mind which are capable of dealing with knowledge; and these are four: his higher reason, his lower reason, his memory, and his capacity for social relations with other men, which last is a sort of blending of the first three. For, as the ancients put it, man is an animal at once akin to God, endowed with reason, and functioning in society. But it is the knowledge of divine things that perfects man's higher reason, the knowledge of human things that perfects his lower reason, the knowledge of the past that perfects his memory, and the knowledge of Law that perfects his social relations. That knowledge is called divine which derives from the word of God; that knowledge we call human whose source is man's own reason; knowledge of history is that which brings to life the deeds of former times; knowledge of Law embraces the rules, that is the bonds, by which human societies are linked together.¹⁰⁷

Throughout this exposition on the way in which knowledge is formed and understood, Garnier is writing from a Jesuit point of view. In exploring Garnier's classification, Kane

¹⁰⁶ W. Kane, *Jean Garnier, Librarian*. (Chicago, Ill.: Elizabeth M. Cudahy Memorial Library, Loyola University, 1940), 93.

¹⁰⁷ Jean Garnier, *Systema*, as quoted in Kane, 193.

illuminates the underlying assumption that there is an approach to the world of knowledge that informs the structure of a classification system. He continues,

there is not a system of classification in existence, even our most comprehensive and elaborate, that can stand undamaged before purely speculative criticism. Every library classification is a compromise, a balancing arrangement between the known past and the unknown future, between the physical rigidity of the existing stock of books and the flexibility of expansion to care for books that may come, even between a philosophy based upon enduring principles and a sheer, expedient eclecticism; and that kind of compromise must, in this imperfect world, forever keep changing, as the stock of books changes, and as the compromisers change their mental attitudes.¹⁰⁸

Garnier's approach to classification, particularly his record of his classification system, provide a look into the past structures that defined Jesuit education. Those structures dictated the way in which his system proceeded through knowledge and exemplify the concept of warrant.

Research into Chinese classification systems, both ancient and modern, illustrates the impact of cultural and political influences. For example, Jiang examines the history of Chinese classification and its connections to Chinese culture. The arena that Jiang examines is ancient Chinese culture, justifying that choice by stating that "the Chinese classification scheme is very different from modern, Western-influenced classification systems. Its classes and subclasses are not designed to 'correspond largely to academic disciplines or areas of study' but rather to sketch a knowledge paradigm of Chinese civilization and the humanity of the Chinese people. In this system the materials are not arranged according to their subject matter but according to their functions in the context of Chinese culture and society."¹⁰⁹ In constructing this contrast, however, Jiang negates the possibility that Western-influenced

¹⁰⁸ Kane, 216.

¹⁰⁹ Shuyong Jiang, "Into the Source and History of Chinese Culture: Knowledge Classification in Ancient China" *Libraries & the Cultural Record*, 42 (2007), 1.

classification systems are based upon disciplinary divisions, because that is the knowledge paradigm that developed over the nineteenth and twentieth centuries. Jiang does assert, as is seen in other classification system developments, that “the development of the Chinese classification system corresponded to the changing social, political, intellectual, and cultural aspects of Chinese society. On the other hand, the historical environment of distinctive ages was instrumental in shaping and directing the classification system.”¹¹⁰ It is clear that Jiang and other classification researchers assume that the context of the classification construction is relevant to understanding the structure and meaning of the system, even for cultures as disparate as ancient China and the Western world.

Studwell, Wu, and Wang concentrate on the influence of Mao in the construction of classification systems in the People’s Republic of China, but begins with a general statement that links to Jiang’s more recent research: “an unchanging theme in this historical evolution of book classification is the influence of ideology, because intellectual knowledge has been regarded by the Chinese rulers as an important and effective means to govern, and books are always treasured and controlled. Therefore, the organization of books into a meaningful pattern began early and was reflective of the ideology of the ruling class.”¹¹¹ They focus on the impact of the Cultural Revolution, where education was openly considered indoctrination and new publications, particularly those on Communist ideology, were inadequately represented in traditional Chinese and western classifications. They assert that the discussions that took place around the creation of new classifications systems were open to the inculcation of political ideology. This kind of research is interesting in that it brings

¹¹⁰ Jiang, 10.

¹¹¹ William E. Studwell, Hong Wu, and Rui Wang, “Ideological influences on book classification schemes in the People’s Republic of China” *Cataloging & Classification Quarterly*, 19 (1994), 61-62.

warrant to the forefront. As discussed earlier, most classification systems are predicated on particular theoretical constructs, even, as in the case of Hulme, if they are trying to be anti-theoretical. The classification systems identified by Studwell, Wu and Wang, were created based on Mao's classification of knowledge, which was a political understanding of the world.

Frohmann, in his "Social Construction of Knowledge Organization: the Case of Melvil Dewey" analyzes the social and political issues of classification.¹¹² A fundamental aspect of his thesis is that Dewey presented a new construction of knowledge organization and that it was the interaction between context and content that illuminates the underlying currents of warrant. Frohmann's argument is important in two ways. First, he argues that the construction of the Dewey Decimal Classification system was due to contextual influences: "Social analyses of SKOs [Systems of Knowledge Organization] that assume clear distinctions between an autonomous realm of knowledge organization and social, economic, or political factors limit the analysis of the DDC to enumeration of the 'manifestations' or 'reflections' in Dewey's system of the knowledge and culture of his time."¹¹³ This first argument can be considered his attempt at exploiting, exploring, and supporting the concept of warrant as a valuable tool for analysis of classification systems (and other textual evidence from the past). The second argument has two aspects: first that there was a durable system and second that in order to accept such a change as DDC, "large scale social transformations" had to be not only amenable but also subject to dynamic situation.¹¹⁴ For his purposes,

¹¹² Bernd Frohmann, "The Social Construction of Knowledge Organization: The Case of Melvil Dewey" *Advances in Knowledge Organization*, 4, (1994), 109-117.

¹¹³ Frohmann, "The Social Construction of Knowledge Organization," 111.

¹¹⁴ Frohmann, "The Social Construction of Knowledge Organization," 111.

Frohmann uses the DDC to discuss the larger implications of discursive structures for systems of the organization of knowledge. In his analysis, he asserts that Dewey disavowed any underlying theoretical principles for classification and relied solely on the warrant of his notation system, which Frohmann connects directly to technobureaucratic social structures.

For instance, in contrasting Dewey and Cutter, Frohmann states,

Since for Cutter, mind, society, and SKO stand one behind the other, each supporting each, all manifesting the same structure, his discursive construction of subjects invites connections with discourses of mind, education, and society. The DDC, by contrast, severs those connections. Dewey emphasized more than once that his system maps no structure beyond its own; there is neither a ‘transcendental deduction’ of its categories nor any reference to Cutter’s objective structure of social consensus. It is content-free: Dewey disdained any philosophical excogitation of the meaning of his class symbols, leaving the job of finding verbal equivalents to others. His innovation and the essence of his system lay in the notation.¹¹⁵

He continues by discussing William Fletcher’s critique of Dewey on the grounds that he “exercised his expertise in a stable moral, cultural, and social order whose authorized categories constituted the basis of a properly constructed SKO,” and that Dewey’s invention negated those principles “in favor of mechanical procedures and operatives.”¹¹⁶ Frohmann’s analysis is a window into the notion of warrant, while not using that specific terminology. Frohmann’s analysis provides explicit connections between post-structuralist concepts of discourse using the realm of classificatory warrant as a testing ground.

There are other ways in which warrant can affect the process of classifying. For example, Coleman, in “A Code for Classifiers: Whatever Happened to Merrill’s Code?” documents the construction of a set of guidelines to assist the classifier’s task in assigning classification despite the system in use. Coleman asserts that William Stetson Merrill, in his

¹¹⁵ Frohmann, “The Social Construction of Knowledge Organization,” 112-113.

¹¹⁶ Frohmann, “The Social Construction of Knowledge Organization,” 113.

work (1912-1927) clearly “emphasized that differences between general problems (theoretical principles) of classification,” but “practical principles that would help promote consistency in the art of classifying books in libraries, irrespective of the classification used by the library, was the focus of the code.”¹¹⁷ In the critique that Coleman documents throughout her rendition of the history of the code, we see that conceptions of warrant become apparent. For instance, in accounting for one of the most debated aspects of Merrill’s code, Coleman recounts Dorkas Fellows’ reservations: “she questioned Merrill’s advocacy of the ‘intent of the author’ as the primary principle to be used by classifiers in determining what the book is about and cites Wyer as the authority with whom she agrees. Wyer and she felt that the *Code* over-emphasized the principle of authorial intention in determining the subject of the book (aboutness).”¹¹⁸

More telling is the conceptual analysis that Coleman conducts in treating her subject historically. She compares and contrasts the various editions of the *Code* and identifies influences on future classification systems. Two of these comparisons speak directly to the concept of warrant, while the others provide a glimpse at the historical process. First, she looks at the process of classifying versus classification – it is clear from Merrill’s words that he makes a clear distinction between the two:

Classification of books differs from classification of knowledge. The latter is the science of drawing up a scheme or system in which the various subjects of human inquiry, or human life in its varied aspects, are grouped according to their likeness or relations to one another. Classification of books, on the other hand, while making use of a scheme of knowledge, may be considered the art of assigning books to their proper places in a system of classification.¹¹⁹

¹¹⁷ Anita S. Coleman, “A *Code* for Classifiers: Whatever Happened to Merrill’s Code?” *Knowledge Organization*, 31 (2004), 162.

¹¹⁸ Coleman, 164.

¹¹⁹ Merrill, *A Code for Classifiers*, (1914), as quoted in Coleman, 171.

This language is reminiscent of Hulme's own concentration on the distinction between classification of books and classification of ideas.

Studwell, Wu and Wang, in their analysis of ideological influences on library classification in China do a subtle but admirable job of counteracting Merrill's assertion that classifying and classification can be differentiated. In uncovering and analyzing classification systems in China before and after the Cultural Revolution, Studwell, Wu and Wang argue persuasively for a concrete connection between the impulse to apply and the system itself. For example, in discussing the Wuhan Classification Scheme, the authors assert "the relationship between theoretical and applied sciences seems to be emphasized. This, of course, was done to follow Mao's instruction. Mao was believed to have said: 'Application is the basis of theory, in return, theory serves application.'"¹²⁰ In comparing this kind of analysis to the evidence present in Coleman's analysis of entries from Merrill's *Code*, one fails to see the difference. For instance, Coleman replicates Merrill's Definition and Scope of this class for Art (Fine Arts): "The term art as used by the classifications is restricted to the 'fine arts.' Both the fine arts and the practical arts deal with the methods of putting into concrete form ideas which are practically useful or esthetically pleasing to man, and the line between the two cannot be very sharply drawn. The fine arts cover the material relating to the sculpture, the graphic arts, drawing, design, painting, carving, engraving, architecture, and the decorative arts."¹²¹ The way the term is defined restricts it. The comparison to the Maoist placement due to definition brings to light the pervasive quality of the concept of warrant to the fundamental structures and semantic meanings of classification systems.

¹²⁰ Studwell, Wu, Wang, 69.

¹²¹ Merrill, *A Code for Classifiers*, (1928) as quoted in Coleman, 166.

Research into warrant extends beyond the intellectual exercise of identifying guiding principles. The impact that a warrant has on the classification of materials and the message that classification systems convey is an area of intense research. Ndakotsu, for example, provides an indictment of literary warrant in looking at the way in which Africa is represented in classification systems such as the Library of Congress. Ndakotsu identifies a post-colonial and racial bias in the treatment of Africa.¹²²

In a similar vein, Nelson analyzes the representations inherent in Art History text books, library classification, and dissertations. Of classification, Nelson notes: “with the spread of open-stack policies, the classification of libraries became an important aspect of [the] educational mission, for classification served to indicate the basic structure of knowledge.”¹²³ In looking at the treatment of art history specifically, Nelson provides a critique of the Library of Congress classification: “the classification of art history books, first by media and then by a certain gerrymandered map, thereby orders the browsing of open stacks, that serendipity of discovering an unknown but related book, the rationale for all classificatory systems, is thus hardly accidental.”¹²⁴ Nelson’s article seeks to uncover the biases inherent in the discipline as a whole, and the analysis of the library classification provides a useful component of his overall objective. As he states, “as a discipline, art history acquired and has been accorded the ability and power to control and judge its borders, to admit or reject people and objects, and to teach and thus transmit values to others.”¹²⁵

¹²² Tsuzom M. Ndakotsu, “Classifying Africa” *African Research & Documentation*, no. 101 (2006), 40.

¹²³ Nelson, 30.

¹²⁴ Nelson, 32.

¹²⁵ Nelson, 28.

Olson explores the issues of warrant by examining the role of sameness and difference in the construction of classification systems to uncover bias. By using sameness (and thus difference) as an area for analysis, Olson relies upon disciplinary warrant as the framework for classification: “Discipline – as the primary facet in our classifications – is fundamental sameness. Within each discipline in a classification the subdivision reflects the discourse of specialists.”¹²⁶ It is this disciplinary framework (or warrant) that causes problems for Olson as she uncovers bias, and she contradicts Beghtol’s call for viewpoint warrant, which relies heavily on disciplinary structures to construct viable categories for classification. Olson, however, does not directly consider the concept of warrant, or at least does not refer to it as such. Her study does bring to light the legitimacy of extending the concept of warrant to include the frameworks of bias or discourse. Should that concept be limited to explicit statements of intention in the construction of classification systems (or SKOs so named by Frohmann) as referred to by Hulme or can the concept be the framework in which to highlight the very issues that Olson, Frohmann, and Studwell, Wu and Wang are exploring?

In her analysis, Olson focuses on a cultural milieu to examine concepts of sameness and difference. As an example, she discusses the treatment of Literature and Folk Literature in the DDC in the context of Western values, particularly that of the role and importance of individual creation.¹²⁷ For Olson, the emphasis on authorship displayed in the literature (800) class contrasts directly with that for folk lore (390), crediting anonymity and social nature as

¹²⁶ Olson, “Sameness and Difference,” 117.

¹²⁷ This theme has been discussed in the context of the identification of main entry in cataloging codes of the west. Ruth French Strout, in “The Development of the Catalog and Cataloging Codes” *The Catalog and Cataloging*, Arthur Ray Rowland, ed. (Hamden, Conn.: The Shoe String Press, 1969, 3-32) asserts that eastern cultures place an emphasis on society and therefore do not privilege authors over titles because authorship is secondary to the work itself.

the culminating difference and resulting in the distinction in the classification system.¹²⁸

Interestingly, in concluding this example, Olson asserts that the distinction found in the classification system “is no longer part of our discourse, and its remnant fails to reflect its original intent. However, the arrangement serves to differentiate rather than gather, even though the status of the concepts is reversed.”¹²⁹ While asserting that the valuations and the cultural judgments that instigated those valuations have evolved, Olson does not provide concrete evidence that these ideas have actually changed and it is possible that the remnant is troubling only for those who feel slighted by the seeming bias (i.e. folklorists).

Olson provides a similar analytical structure for hierarchy in classification systems.

Orienting her analysis again on the 800 class of DDC, Olson asserts,

The cultural background influences not only how we define our sameness but which samenesses are primary for the organization of the classification. The fact that the major colonial languages define the majority of the space in the 800s whereas the literatures of hundreds of different languages are crammed into the 890s is indicative of both bias and literary warrant in North American collections. However, the focus on language is also indicative of the largely colonial perspective of the classification of literature. It reflects the dominant discourse of the discipline. Colonizing countries have been more likely – in the past – to use a single language and impose that language on colonized countries.¹³⁰

As shown in this passage she employs literary warrant directly as a contributing factor to bias. She ably demonstrates the evidence of this bias; however, she does not explore the

¹²⁸ Olson, “Sameness and Difference,” 118.

¹²⁹ Olson, “Sameness and Difference,” 118-119.

¹³⁰ Olson, “Sameness and Difference”, 119. It is interesting here that Olson does not explore this concept any further. A great deal of research has been done in the historical and cultural anthropological fields on this presupposition of dominance and “other” that could provide more clear arguments for the points of bias as well as illuminate some of the basic arguments that she is making about sameness and difference. Her analysis on the whole appears superficial because she introduces these concepts without an exploration of these underlying theories. (See Tzvetan Todorov, *The Conquest of America: the question of the other*, (New York: Harper & Row, 1984); Stephen Greenblatt, *Marvelous Possessions: the wonder of the New World* (Chicago: University of Chicago Press, 1991); and Benedict Anderson, *Imagined Communities: reflections on the origin and spread of nationalism*, (London: Verso, 1991) for examples of the theory of “other” in the historical discipline).

implications of that bias (or warrant) on the construction of classification systems as valid or interesting in their own right. In her defense, Olson is interested more in the eradication of bias in classification. What is striking is her use of post-structuralist and post-modern works with their implications followed by solutions that carry their own versions of warrant.¹³¹

Belanger examines the anecdotal personal arrangements of books. Each case mentioned by Belanger presents a different way of arranging materials, using the arrangement of books to communicate something about the individual who creates that arrangement. Belanger does not limit himself to those arrangements that are bibliographical, though, and asserts that motivations for arrangement can range from color, size or type depending upon the needs of the arranger. This demonstrates that assumptions that we make about the general approach to arrangement (or classification) cannot attempt to cover all the ways in which arrangement can be effected by the needs or the worldviews of individuals who are creating or using them. Conceptually, the study of classification systems necessarily involves the study of the milieu in which the system was created. The concept of warrant provides ample opportunity to draw out the underlying socio-cultural influences that directed the creation of the system.

In “Bacon, warrant, and classification,” Olson identifies the definition of warrant from the *Oxford English Dictionary* as “justifying reason or ground for an action, belief, or feeling.”¹³² In examining the role that Sir Francis Bacon’s organization of knowledge plays in classification structures, Olson asserts that

¹³¹ Olson, “Sameness and Difference,” 120-121.

¹³² Hope A. Olson, “Bacon, Warrant, and Classification” Mikel, Breitenstein, eds. *Proceedings 15th Workshop of the American Society for Information Science and Technology Special Interest Group in Classification Research*. (Providence, R.I., 2004), 1.

it gives us a different view of warrant and purpose than we usually encounter today. The argument about whether or not bibliographic classification is linked to the classification is key to this idea. If we accept that bibliographic classification is unrelated to the classification of knowledge, then literary warrant alone is justified. On the other hand, if we consider that what is recorded and then classified bears some relation to knowledge, then classification of knowledge is indeed linked to bibliographic classification.¹³³

As the research discussed above demonstrates, warrant is a fundamental component of classification. In Hughes' article about the nature of classification systems, she connects human values to the construction of classification systems and thus intimates that all classification is fundamentally flawed because it will always carry some kind of bias. She concludes that, "in the end, scientific and library classification systems are useful, powerful, and dangerous. They have the power to shape reality if people accept them without question."¹³⁴ Warrant provides one way to discuss those biases.

The research presented in this dissertation examines the connection between the organization of knowledge and classification systems developed in the first half of the nineteenth century in the United States. It is hypothesized that the classification systems developed have a relationship with Bacon's organization of knowledge, but that as contextual developments take place the warrant for classification is shifting and adjusting. It is the worldview of the early nineteenth-century America that this study explores.

The study of warrant bears an uncanny similarity to the study of discourse as explicated by the philosopher Michael Foucault. In fact, Foucault wrote *The Order of things* to explore the ordering codes, "in order to conduct an inquiry whose aim is to rediscover on what basis knowledge and theory become possible; within what space of order knowledge was constituted, on the basis of what historical *a priori*, and in the element of what positivity,

¹³³ Olson, "Bacon, Warrant, and Classification", 4.

¹³⁴ Hughes, 69.

ideas could appear, sciences be established, experience be reflected in philosophies, rationalities be formed, only, perhaps, to dissolve and vanish soon afterward.”¹³⁵ Most of Foucault’s works are interested in investigating the intricacies of underlying structures, and his theory of discourse discussed below provides a useful framework for the study of warrant.

Discourse

The use of theory is an important aspect of any research. The library and information science discipline is not without theory of its own, but also often adopts theories from other disciplines in order to better understand the research questions. The presence or absence of theory in information science research is a topic of much debate. McKechnie and Pettigrew examined the presence of theory in information science literature over a period of five years. In this analysis, they examined several variables: approach, discipline of authors, and the use of theories within broad categories. In addition, they defined the broad categories of theories used in the articles examined and provided further explications of theories mentioned within the text as compared to those referenced within citations. One of the conclusions they put forward is that when theory was referenced, there was a reliance on secondary sources rather than the theorists themselves.¹³⁶ Other information science researchers have sought to define theory for information science demonstrating unease with a discipline that appears to lack clearly delineated theories of its own.¹³⁷

¹³⁵ Michel Foucault, *The order of things: an archaeology of the human sciences* (New York: Vintage Books, 1994), xxi-xxii.

¹³⁶ Lynne E.F. McKechnie and Karen E. Pettigrew, “Surveying the Use of Theory in Library and Information Science Research: A Disciplinary Perspective” *Library Trends*, 50 (2002), 406-417.

¹³⁷ John M. Budd, “An epistemological foundation for Library and Information Science” *Library Quarterly*, 65 (1995), 295-318. Samuel E. Trosow, “Standpoint Epistemology as an Alternative Methodology for Library and Information Science” *Library Quarterly*, 71 (2001), pp. 360-382. Harris’ fundamental theoretical work is found

The presence of Foucault's ideas in information science research is not surprising. There are many studies in information science and related disciplines that use Foucault's concepts of discourse to examine a wide variety of problems ranging from the culture of libraries to the discourse of library and information science education.¹³⁸ His influence has spread over a wide variety of disciplines but primarily those associated with humanities and social sciences.

To his advantage, Foucault is hard to classify as a theorist. While much of his writing has generally been lumped into the field of history, he is typically described as a philosopher. Of all the ways in which Foucault may be described, there is consensus on his role as a leader in post-structuralist and cultural studies. This section of the chapter analyzes his theoretical framework on discourse in an effort to provide a structure for the analysis of warrant in the larger project.

Foucault wrote numerous works on specific topics, such as the history of the modern penal system, psychiatry, sexuality, and the natural sciences, and throughout these he

in Michael H. Harris, "The Dialectic of Defeat: Antinomies in Research in Library and Information Science" in *Library Trends*, 34 (1986), 515-531.

¹³⁸ See Jeffrey Garrett "Redefining Order in the German Library, 1775-1825" *Eighteenth-Century Studies*, 33 (1999), 103-123; Gary P. Radford "Trapped in our own discursive formations: Towards an archaeology of library and information science" *Library Quarterly*, 73 (2003), 1-18; Gary P. Radford and Marie L. Radford. "Structuralism, post-structuralism, and the library: de Saussure and Foucault" *Journal of Documentation*, 61 (2005), 60-78; Gary P. Radford and Marie L. Radford, "Libraries, Librarians, and the Discourse and Fear" *Library Quarterly*, 71(2001), 299-329; Marie L. Radford and Gary P. Radford, "Librarians and Party Girls: Cultural Studies and the meaning of the librarian" *Library Quarterly*, 73(2003), 54-69; Gary P. Radford "Flaubert, Foucault, and the Bibliotheque Fantastique: Toward a Postmodern Epistemology for Library Science" *Library Trends*, 46(1988), 616-634; Nancy Pickering Thomas, *Reading Libraries: an interpretive study of discursive practices in library architecture and the interactional construction of personal identity* (Ph.D. Dissertation, Rutgers, the State University of New Jersey, School of Communication, Information and Library Studies, 1996); Nancy Pickering Thomas, "Unpacking Library Posters: A theoretical approach" in *Journal of Education for Library and Information Science*, 42(2001), 42-56; Gary P. Radford, "Positivism, Foucault, and the Fantasia of the Library: Conceptions of Knowledge and the Modern Library Experience" *Library Quarterly*, 62(1992), 408-424; Bernd Frohmann, "'Best Books' and Excited Readers: Discursive Tensions in the Writings of Melvil Dewey" *Libraries & Culture*, 32(1997), 349-371; and in a related discipline, Richard McNabb, "Making all the Right Moves: Foucault, Journals, and the Authorization of Discourse" *Journal of Scholarly Publishing*, (1999), 20-41.

develops his ideas about discourse. *The Archaeology of Knowledge & The Discourse on Language* (1972) is perhaps his most theoretical work, exploring the dimensions of discourse. In this work, he defines discourse as, “a group of sequences of signs in so far as they are statements, that is, in so far as they can be assigned particular modalities of existence.”¹³⁹ Following Foucault’s line of thinking, for the purposes of this dissertation, discourse is defined as the meaning of the underlying structures of knowledge.

The significance of the statement to Foucault’s theory is an important aspect of discourse as he has construed it. Statements, according to Foucault, are the building blocks of discourse. Statements are either objects or words, and it is their interrelation and connection that informs the shape and texture of the discourse. McHoul and Grace identify the distinction between Foucault’s conception of discourse from other more mainstream applications of the term, including formal and empirical approaches associated with linguistics and sociology.¹⁴⁰ For Foucault, they assert, discourse “refers not to language or social interaction but to relatively well-bound areas of social knowledge... According to this new position, in any given historical period we can write, speak or think about a given social object or practice... only in specific ways and not others.”¹⁴¹

As with other disciplines, the use of theory can be explored as legitimately as its discrete problems. Using theory is often an initial expression of the endorsement of that theory in its applicability. When members of a discipline begin to write methodological literature that endorses or explains a particular methodology, it marks a second step for the

¹³⁹ Michel Foucault, *The archaeology of knowledge & the discourse on language* (New York: Pantheon Books, 1972), 107.

¹⁴⁰ Alec McHoul and Wendy Grace, *A Foucault primer: discourse, power, and the subject* (New York: New York University Press, 1993), 26-27.

¹⁴¹ McHoul and Grace, 31.

acceptance of theory in the pantheon of the discipline. This is the case with Foucault's concept of discourse in library and information science research. Frohmann, in particular, has provided a methodological framework for information scientists to employ Foucault's ideas to analyze information science problems. Taking Frohmann's works as well as Budd and Raber, and Blair, information scientists have had an opportunity to consider the application of Foucault's theories to the discrete problems that they are researching.¹⁴²

Frohmann addresses discourse analysis as a research method in two articles. In "Discourse analysis as a Research Method in Library and Information Science" Frohmann notes that the lack of attention to discourse as a research method can be grounded in its qualitative nature in a discipline overshadowed by quantitative methodologies. Frohmann seeks to decrease the resulting void by providing access to the framework established by Foucault called discourse analysis. Frohmann does not just set out to explain the mechanics of discourse analysis, though. He establishes a framework to demonstrate its relevance to library and information science proposing that "at present, discourse analysis in LIS has at its disposal a rich and growing body of data, consisting of academic and professional talk that addresses, either obliquely or directly, the question of what information and its near relations might be."¹⁴³

In his article "Discourse and Documentation: Some implications for Pedagogy and Research," Frohmann looks at the relationship between Paul Otlet's theories of

¹⁴² See Bernd Frohmann, "Discourse analysis as a research method in library and information science" *Library and information science research*, 16 (1994), 119-138; Bernd Frohmann, "Discourse and documentation: some implications for pedagogy and research" *JELIS*, 42 (2000), 12-26; John M. Budd and Douglas Raber, "Discourse analysis: method and application in the study of information" *Information processing & management*, 32 (1996), 217-226; and Carole Blair, "The statement: foundation of Foucault's historical criticism" *The Western Journal of Speech Communication*, 51 (1987), 39-45.

¹⁴³ Frohmann, "Discourse Analysis as a research method," 120.

documentation and Foucault's discourse analysis. Frohmann notes that "Otlet saw knowledge organization as the solution to a social crisis and a necessity for a harmonious international society... Otlet's concern for the social and material aspects of information invites a Foucaultian analysis of the material and institutional properties of information as *discourse*."¹⁴⁴ He argues for the use of relevance as the methodological approach is instructive in that it is an introduction of external methodologies for a discipline. As Frohmann elucidates, "the challenge posed by discourse analysis for information studies is how to incorporate the implication of Foucault's ideas – that *information* only emerges in a world as an *effect* of institutionally legitimated material practices with occasioned inscriptions or utterances, such that specific statements and sets of statements gain more or less stability, and endure over time as resources for a wide range of social practices."¹⁴⁵ And similarly in looking at the landscape of information science discourses, he asserts that they are

thoroughly intertwined with specific institutional forms through which power over information, its users, and its uses is, has been, and will continue to be exercised. These discourses include specialized talk about information, its organization, and who uses it and who does not, what its uses are, have been, or might be, the social and cultural roles of the organizations in charge of it, the introspective analyses of the professional, and even personal, identities of its keepers, and the programmatic pronouncements of its theorists who speak about how these things should be spoken about.¹⁴⁶

Given this wide scope, nearly all issues in information science are fair game for discourse analysis. This represents a review of the paradigm of information science in which not only the questions to be asked are broadened but also valid methods used to answer those

¹⁴⁴ Frohmann, "Discourse and Documentation," 13. Emphasis in the original.

¹⁴⁵ Frohmann, "Discourse and Documentation," 17. Emphasis in the original.

¹⁴⁶ Frohmann, "Discourse analysis as a research method," 121.

questions are broadened to include discourse analysis.¹⁴⁷ Frohmann is not interested in overturning the paradigm but seeks to broaden the existing paradigm to include discourse analysis as a valid realm for information science.

In looking at discourse analysis, Frohmann, in the form of Foucault's explication of theory, uses three examples of discourse analysis in action: the technobureaucratic discourse of Melvil Dewey, the use of facets by Ranganathan, and the shift toward users in library and information theory. His final example provides interesting insights into discourse analysis. As Frohmann states, "a benefit of the shift to users is that it problematizes, rather than stabilizes, the related notions of information users and information needs. When users are forced into the center of theoretical vision, questions arise of how their identities, and especially their information needs, are constructed in theoretical discourses."¹⁴⁸ This is done, Frohmann argues, by a commodification of information and information users. The success of this shift can be seen by the role that user studies now play in library and information science. He concludes his example by stating that

attention to theories about the construction of the subjects inhabiting our social world is even more urgent. If the resources available to articulate 'information needs' belong to discourses, that are themselves the outcomes of political conflicts, then it is unlikely that noncritical social science methodologies, including the qualitative techniques of interviews and deep questionnaires, will disclose in the studies of information users any more than characteristics deriving from dominant systems of the production, distribution, organization, and consumption of information.¹⁴⁹

¹⁴⁷ See Thomas S. Kuhn, *The Essential Tension* (Chicago: University of Chicago Press, 1977). In "The Essential Tension: Tradition and innovation in scientific research" Kuhn asserts that "normal research, even the best of it, is a highly convergent activity based firmly upon a settled consensus acquired from scientific education and reinforced by subsequent life in the profession." (227). This normal research determines, for Kuhn, not only the questions being asked, the way they are answered and understood, but also the instruments used in measurements and the ways that they are communicated. Kuhn sees all of this as convergent activities while scientific advance is necessarily divergent, thus creating the "essential tension." (226).

¹⁴⁸ Frohmann, "Discourse analysis as a research method," 133.

¹⁴⁹ Frohmann, "Discourse analysis as a research method," 134.

Frohmann rounds up this look at discourse analysis as a research methodology by tying it most directly to historical research, by connecting “specific social practices and institutional attempts to achieve closure over the discursive means of constructing identities for information users.”¹⁵⁰ By doing so, Frohmann grounds both discourse analysis and historical research firmly in the paradigm of information science by connecting it to the real problems faced in the discipline and bringing in significant contextual forces, such as consumer capitalism, to bear upon those questions.

Budd and Raber also look at discourse analysis as a methodology, although their work deals more broadly with discourse analysis as methodology rather than arguing solely for Foucault’s construct of discourse. That Budd and Raber include Foucault in their survey of discursive analytic theories is significant, particularly in relation to Jürgen Habermas’s own ideas about discourse. Of Habermas, they state, “his interest is much more in the social than in the individual, which implies that the actions of the individual are informed by position or membership in a society. At the heart of this thinking is language as it serves a socially communicative function.”¹⁵¹ Following this construct of discourse, they discuss Foucault’s emphasis on precedent and external influences on discourse requirements that includes “beginning analysis at a prediscursive stage in order to include in examination any conditions (cognitive, social, institutional, etc.).”¹⁵² With this juxtaposition of these two theorists on discourse, they firmly place the theory in a larger framework involving context,

¹⁵⁰ Frohmann, “Discourse analysis as a research method,” 134.

¹⁵¹ Budd and Raber, 225.

¹⁵² Budd and Raber, 225.

external to any one individual, and relating that context to a broader understanding of the social and cultural influences but also over time.

Blair provides clear guidelines for discourse analysis by looking at the basic data used in discursive constructs, what Foucault calls the statement. The idea of the statement, for Blair, argues that “knowledge and power are coextensive, that power and knowledge always imply one another” and that “to utter a statement that counts as knowledge is to act in relation to others (power), and it is also to act in a particular relationship with the self (ethics). The archaeological method, which involves an analysis of statements, attempts to discover power relations that are also rules of knowledge and constitutions of the self as an ethical actor.”¹⁵³ Blair thus offers up Foucault’s ‘statements’ as the raw material for discourse analysis. Blair clarifies the choice of the term statement: Foucault was not limiting himself to a linguistic framework for his methodology, but he extended the concept to “derive his conclusions about the acts of knowledge, power, and ethics from a consideration of the statement’s relation to the not-uttered, to other utterances, and to its definition of its own past.”¹⁵⁴ Blair disarms the connection to rhetoric by concluding that “it is not unusual to conceive of rhetoric as having an ethical, political, epistemological, or historical character. But Foucault has provided us with a particular means of considering all of these characteristics under the rubric of a coherent and unified, theoretical perspective.”¹⁵⁵ Blair’s treatment of Foucault’s understanding of the statement is understood by its multidimensionality. Blair argues for a three-dimensional approach (power, discourse, and self). These dimensions act and interact, define and redefine each other in such a way that the

¹⁵³ Blair, 367.

¹⁵⁴ Blair, 377.

¹⁵⁵ Blair, 377.

relationships derived are complex. That this mirrors many discursive analyses is no mistake, but by defining the dimensions, Blair provides a framework for future research using discourse analysis.

Foucault's concepts of discourse have been readily applied to classification by other scholars. Garrett and Nelson's articles are of particular interest because of their treatment of classification systems using Foucault's theories. Radford and Radford in "Structuralism, post-structuralism and the library: de Saussure and Foucault" are similar in that their analysis uses classification to understand the impact of discursive formation on libraries. They draw convincingly on the use of discourse in a visual exercise of understanding classification:

Imagine standing in front of the library bookshelf. Just by looking at the titles on the spines, one can see how the books cluster together. One can see which books belong together and which do not, which books seem to form the heart of the discursive formation and those which reside on the margins. Moving along the shelves, it is possible to see books which tend to bleed over into other classifications and which straddle multiple discursive formations. One can physically and sensually experience the domain of a discursive formation by following the books along the shelves, having one's fingers trail along the spines as one scans the call numbers, feeling the depth and complexity of the collection by the number of volumes and the variety of its titles, of reaching those points that feel like state borders or national boundaries, those points where one subject ends and another begins, or those magical places where one subject has morphed into another and you did not even notice.¹⁵⁶

The well-crafted imagery created by Radford and Radford is an important aspect to the use of Foucault's theories that can be seen again and again; Foucault helps information scientists answer both large and small questions. Essentially any given discourse has multiple discursive formations within it. Discourse, then, in this visualization of library classification is a miasma of interlocking discursive formations that are dynamic; that Radford and Radford consider it possible to visualize this in considering the "books on the shelves" confirms the notion that, once identified, discursive formations are readily acceptable implies that they are

¹⁵⁶ Radford and Radford, "Structuralism, post-structuralism and the library," 70.

discursive formations. These ideas will be extended to explore whether or not classification can be thought of as discursively expressive.

The Organization of knowledge vs. the organization of books

It is clear from the research on classification systems recounted above that there is a tension between the role of library classification in ordering materials in a library and ordering knowledge in the universe. This tension has been discussed within the classification literature and provides another aspect of classification that needs to be explored.

Most present-day classification schemes do not claim to provide an organization of all knowledge. This disclaimer is generally accompanied by statements such as Dewey's: "the impossibility of making a satisfactory classification of all knowledge as preserved in books has been appreciated from the first, and nothing of the kind attempted. Theoretical harmony and exactness has been repeatedly sacrificed to the practical requirements of the library or to the convenience of the department in the college."¹⁵⁷ Another example is Phillips' distinction between knowledge classification and book classification. He defines knowledge classification in three categories: logical, philosophical and scientific. Book classification, instead, involves schedules that reflect systematic order and the placement of books within the schedules' arrangement. He notes that the

essential difference between knowledge and book classification is that the former arranges knowledge itself, its substances tangible and intangible, while the latter arranges the expression of this knowledge in written or other form. A knowledge classification is abstract, for *ideas* only are arranged, whereas a book classification is concrete and concerned with ideas in their *written representation* – a much more complex form.¹⁵⁸

¹⁵⁷ Melvil Dewey, *A classification and subject index for cataloguing and arranging the books and pamphlets of a library* (Amherst, 1876), 4.

¹⁵⁸ Phillips, 22.

Phillips goes on to provide sixteen different ways in which books may be ordered; subjectival is only one of those. Yet, Phillips concluded this section by stating, “the schedules of a book classification are maps of knowledge which teach logical thought and have ‘real value to others than those who serve in a library, in furnishing facts, suggestions, and subject outlines, and in helping to classify information.’”¹⁵⁹ Taylor notes that the connection between library classification and notation might be the reason for the distinctions between the categorization of knowledge and that of materials, but that those twentieth-century systems are firmly grounded in the knowledge classifications of the past.¹⁶⁰

This self-awareness was not always the case, though. Early approaches to classification focused on the whole of knowledge, which were then only manifested through the arrangement of materials. Bacon’s *Advancement of Learning* is one example of the organization of knowledge that has been adopted to construct classification systems. Thomas Jefferson’s chapter system may be the most obvious of these.

Vickery creates a full history of classification in the sciences. He asserts that Aristotle provided a framework for knowledge, which reigned for nearly two millennia. This framework “began to break down, however, during the late Middle Ages and into the Renaissance, and in the eighteenth century was finally abandoned. The subsequent history of classification has been the attempt to find a new rational system of the sciences to replace

¹⁵⁹ Phillips, 25.

¹⁶⁰ Taylor, 173. See also Francis L. Miksa, “The concept of the universe of knowledge and the purpose of LIS classification” *Classification Research for Knowledge Representation and Organization*, N.J. Williamson and M. Hudon, ed. (Amsterdam: Elsevier, 1992), 105-106. Miksa argues a similar point, but focuses more on the impact of these assumptions for librarians. He notes that many approaches were tried, most notably alphabetical arrangement, but concludes that the classified arrangement eventually succeeded “because of the long tradition of classification in library organization. For centuries shelf arrangements had been classified, usually following educational curricular structure, and catalogs had followed such arrangements as a matter of course.” (106)

that of Aristotle.”¹⁶¹ According to Vickery, Aristotle “divided knowledge into three parts – the Theoretical, which aims at knowledge for its own sake; the Practical, which seeks knowledge as a guide to conduct; and the Productive, which aims to be used in making things useful or beautiful.”¹⁶² There are parallels in the organization of knowledge and classification in his analysis. In talking about Medieval science, Vickery focuses on Roger Bacon’s plan for an encyclopedia, which would be arranged in four parts: “(1) grammar and logic; (2) Mathematics – the quadrivium; (3) Natural Science; and (4) Metaphysics and Morals.”¹⁶³ Vickery compares medieval classifications of knowledge to the Aristotelian system, concluding that science is still not separated from other aspects of knowledge the way that it has been in the modern era, but the growth of knowledge during that time created new fields of knowledge. By the 13th century in both Arab and European cultures – Vickery uses the Turkestan philosopher al-Farabi as an Arab predecessor to the Medieval scientific perspective – it became increasingly difficult to incorporate new knowledge into old schemes. Vickery’s focus on the Arab context is an interesting departure from the traditional focus on Western culture as the basis of modern classification systems.¹⁶⁴ In particular, Vickery points to a new class of ‘derivative’ or ‘mechanical’ sciences created as a response to this retrofitting. Vickery concludes that the Medieval era, with its accumulation of knowledge, was central to the abandonment of the strict Aristotelian understanding of the organization of knowledge and the creation of classification schemes.

¹⁶¹ Vickery, 148.

¹⁶² Vickery, 149.

¹⁶³ Vickery, 150.

¹⁶⁴ Vickery, 151. See also Foster Stockwell, *A history of information storage and retrieval*, (Jefferson, NC: McFarland & Company, Inc., 2001) as another example of a more global analysis of the organization of knowledge. Stockwell includes both Arab and far Eastern perspectives in his history of encyclopedias.

It is clear from Aristotle forward that the organization of knowledge and the organization of materials are almost never completely separate. Even with those classification systems that are self-consciously described as “artificial” there is still some foundation for an understanding of the organization of knowledge. Several examples of the intermingling of these two objectives bring objects of physicality into the mix as an integrated component of these ideas.

The wall library of the Baroque period is a particularly important example. Garrett posits the visual emphasis during the Baroque period, particularly in expressions of architecture, results in a “directly readable” library, which allowed library users to locate library material without the intermediary of the catalog. A wall system allowed users to “survey all of a library’s well-ordered holdings in a single encyclopedic glance, then proceed confidently to where they knew an individual item should be.”¹⁶⁵ This method had several impacts that are examined by Garrett, including a visualization of the universe of knowledge within the library space and the user’s sense of interaction that is not displaced to the librarian or the catalog. Garrett extends this mingling between the organization of knowledge and the organization of materials to the online environment in sketching a strategy for library web pages. This is an interesting reversion to older models where libraries were seen as houses that contained the whole universe of knowledge in an organized fashion. The vision that Garrett sees in the wall system involves a space that provides a link to people’s understandings of the world. As he states, the library “simulated and mirrored knowledge space, which in turn mirrored the universe.”¹⁶⁶ Garrett suggests that the Baroque library had

¹⁶⁵ Garrett, “The Legacy of Baroque”, 50.

¹⁶⁶ Garrett, “The Legacy of Baroque”, 51.

the effect of directly involving the user, “by allowing users to feel they were not only in a library but also wandering through a surveyable knowledge landscape, finding books and finding knowledge at the same time in a space common to both, leaving out the aesthetically distracting and epistemologically unnecessary ‘intermediary’ of the catalog.”¹⁶⁷

Findlen focuses on the interaction between knowledge and locations, including the use of building metaphors within that framework.¹⁶⁸ Focusing on Guilo Camillo’s modeling of the human mind, Findlen demonstrates the connection to physical structures. Camillo’s memory theater model was similar to a Roman amphitheater with a hierarchical, social status organization. He placed “the most elemental symbols of wisdom on the lowest benches, ‘following the creation of the world,’ and situating the arts and sciences on the top bench of his theater under the sponsorship of Prometheus, because they were the last things that man had discovered.”¹⁶⁹ Findlen goes on to connect the curio cabinet with the desires for encyclopedic knowledge and the creation of specialized places such as anatomy theaters and botanical gardens to demonstrate the connections between space and knowledge. While Camillo’s memory theater was merely a model, these other spaces were built with a specific intention to segment, specialize, and represent particular kinds of knowledge.

Garrett’s analysis of the *Holzbibliothek* (wood library) is another example of the interplay between knowledge, space, and materials. These wood libraries, he explained, could be found in remote castles and monasteries, and are made up of

¹⁶⁷ Garrett, “The Legacy of Baroque”, 51.

¹⁶⁸ Paula Findlen, “Building the house of knowledge: the structures of thought in late Renaissance Europe” *The structure of knowledge : classifications of science and learning since the Renaissance*. Tore Frangsmry, ed. (Berkeley : Office for History of Science and Technology, University of California, 2001), 5-51.

¹⁶⁹ Findlen, p. 14.

book-like objects, each assembled from the wood of a different tree, with a spine covering made of that tree's bark, sometimes still with the moss hanging from it that the tree would have known, and indeed did know, in life. Inside the book-container are specimens of the tree's fruit, leaf, root, and other characteristic parts. The spine was marked with the name of the tree, both in the vernacular (e.g., *Rottanne pino*) and with the Linnaean classification in Latin (e.g., *picea abies*). Call numbers were not necessary, for the classification identified unequivocally where the book – and the tree – stood in the order of books and the order of things.¹⁷⁰

Garrett notes that this blending of the natural world and libraries is a physical display of the integration of the order of knowledge with the order of books.

Perhaps the least obvious example is Battles' look at Jonathan Swift's *The Battle of the Books*. Swift is interested in the period in which old and new ideas were debated and aptly interprets the battle metaphor in this context. For Swift, the books represent the ideas, and he uses the book as a physical representation (something that could go into battle) for the confrontation. Battles makes the connection of Swift's concerns for pamphlets that were "quickly authored and often poorly edited texts that were the chief medium of the quarrel among the ancients and moderns – for it is indeed these 'books' in particular whose arrival in the physical library stirs controversy among the resident volumes."¹⁷¹ While Battles does not draw the explicit connection between the physical location of the books and the order of knowledge, it is clear that Swift made those connections given the choices he made: *The Battle of the Books* demonstrate this interweaving of knowledge and classification at the dawn of the information explosion.

Classification provides an arena to explore a variety of themes. Given that the natural impulse to classify is inherent in humans, classification is an important component to understanding the social and cultural patterns of human society. The difference between

¹⁷⁰ Garrett, "Redefining Order," 105.

¹⁷¹ Matthew Battles, *Library: an unquiet history* (New York: W.W. Norton & Co., 2003), 98.

categorization and classification provides one aspect of research that has not been fully explained. Hierarchy, logic, and other structural considerations are also a significant component to understanding various classification systems. Warrant provides a lens through which we can explore the sociocultural, religious, educational, and political influences that are reflected in classification systems, although most research on those topics avoids the term warrant. However, framing warrant as a component of Foucault's concepts of discourse provides a research method in which classification can be understood. Finally, the differentiation between the order of books and the order of knowledge has become an important demarcation in twentieth century library classification, but there is no history of this delineation. As with other aspects of classification, the rigidity of the twentieth century is a new phenomenon for bibliographic classification. Earlier classification systems present a fluidity of these components that makes the research of them all the more interesting.

CHAPTER 3:
SOCIAL LIBRARIES AND THE AMERICAN INTELLECTUAL AND
CULTURAL LANDSCAPE

Classification systems are culturally bound. As discussed in the previous chapter, historical context provides the framework in which classification systems operate. As Bowker and Star indicate, “information scientists work every day on the design, delegation, and choice of classification systems and standards, yet few see them as artifacts embodying moral and aesthetic choices that in turn craft people’s identities, aspirations, and dignity.”¹⁷² There are several components that need to be explored in order to understand the structural and cultural implications of classification systems: first, the landscape in which the classification system was constructed, and second the environment in which that system was used. This chapter seeks to explore both of these components in order to highlight the significant cultural and intellectual landscape of the United States in the first half of the nineteenth century in an attempt to ground the analysis of classification systems and construct an in depth look at social libraries where these classification systems were being constructed and used.

¹⁷² Bowker and Star, 4.

Forming and forging a new nation

The success of the American Revolution did not guarantee the success of a new nation. The American social, political, cultural and intellectual landscape was still very connected to the home country. This hegemony of English intellectual and social culture was well-established during colonial times, when London was considered the nexus of political, cultural and economic activity for England and her colonies.¹⁷³ Americans sought to establish themselves as independent and equal contributors, while at the same time participating in an intellectual community that still regarded Europe and London as the center of the movement. This contradictory impulse demonstrates one facet of the complexity faced by the new country.

At the same time as American intellectual leaders looked towards England as their source of cultural inspiration, a burgeoning national pride was fueled as the colonies threw off the yoke of colonialism and infused the country with new political and economic models. The experiment of the republic permeated the social institutions that were being created throughout the states. Local competition also raised the significance of the social institutions to levels that allowed for efforts to establish cultural and intellectual institutions that demonstrated the abilities of the American scientist and the cultivation of its citizens.

Against this backdrop, basic community values and traditions were evolving. The place of religion and theology was changing as secularization swept the national scene. The separation of church and state embodied in the Constitution was the first step in formally sanctioning religion as an individual, personal activity. Conversely, the growth of urban areas and the beginnings of industrialization created heterogeneous communities that challenged

¹⁷³ John C. Greene, "Science, Learning, and Utility: Patterns of Organization in the Early American Republic" *The pursuit of knowledge in the early American Republic*. Alexandra Oleson and Sanborn C. Brown, eds. (Baltimore: The Johns Hopkins University Press, 1976), 1.

established social hegemonic structures. Coupled with these movements is the creation of a new genre of literature targeted at the leisure time of the working class. Fiction makes a startling entrance into the American consciousness in the early nineteenth century and provides an area for contestation around which institutions responded. In fiction, as in other cultural arenas, America looked to England first to define its tastes, but then filtered it through the Puritan perspective to form a view of novel reading “along with other forms of self-indulgence and recreation such as dancing, card playing, hard drinking, and loose living of every description.”¹⁷⁴ This view of fiction was consistently challenged over the nineteenth century, as production and consumption in America had a mercurial rise.

Denning looks at the rise and fall of the dime novel during the 19th century in order to ascertain its history as well as its use in understanding working class culture and ideology. He defines the “fiction question” as it played out in the latter part of the 19th century as “a social conflict over the relations between the dominant genteel culture, the relatively autonomous and ‘foreign’ working class cultures, and the new commercial culture, the new ‘mass’ culture.”¹⁷⁵ This conflict, however, was predicated on an already established role of fiction in American culture. The questions of suitability of dime novels and their role in defining working class culture is dependent on a developed sense of “good” and “bad” fiction and that is dependent on a sense of fiction as part of textual output, to be consumed or not. The first half of the nineteenth century provides this necessary condition with its enhanced technologies in production and increased interest among patrons to create the foundation

¹⁷⁴ Esther Jane Carrier. *Fiction in Public Libraries, 1876-1900*. (New York: The Scarecrow Press, Inc., 1965), 14.

¹⁷⁵ Michael Denning, *Mechanic accents: dime novels and working-class culture in America* (London: Verso, 1998), 47.

necessary for this struggle to occur. The ‘fiction question’ is played out forcefully in the role of public libraries in providing access to these materials in the latter half of the nineteenth century¹⁷⁶, but it is presaged by the world of social libraries in the first half of the nineteenth century.

The creation of a scientific America and the professionalization of science that took place in the first half of the nineteenth century also illustrate the complexity of the times. The early history of American science is full of complex movements, advances and status quo, which illustrate the kind of hopscotch pattern that took place in developing a national scientific community. At the same time, it was part of the larger intellectual community. As the American scientific community was experiencing these changes, science itself was going through changes as industrialization, scientific advance, and exploration of areas of the new world reach its apex.

George Daniels, in his *Science in American Society: a social history*, provides a broad overview of the development of science in colonial and republic times. He asserts that during the colonial period, scientific endeavor in the colonies served the mother country. This core and periphery attitude is shown by the collectors who worked assiduously to collect specimens and send them back to England for identification and analysis. Given the challenges that faced settlers in the New World, this early attitude is not surprising. Even into the eighteenth century, settlers were struggling with day-to-day existence. Urban centers were barely established and communication and transportation were challenges faced by all colonists as they forged their way in the New World.

¹⁷⁶ Denning, 48-50.

The pattern established in colonial science in North America is similar to other institutional structures. The settlement of the New World broadened Old World perspectives on sciences. Daniels notes the impact of exploration on scientific constructs thus:

along with the new desire to see ‘the many things in nature,’ the broadening perspective and the knowledge of new forms, unaccounted for in the old system, gave a powerful impetus to the search for new classificatory systems. This search became a major concern of the seventeenth and eighteenth centuries. One can, in fact, say that the beginnings of modern classificatory systems were in large measure a response to the explorations.¹⁷⁷

The establishment of a nation only encouraged more people to enter the scientific world as colleagues rather than apprentices. While Americans had consistently participated in a scientific community that was centered in European constructs in order to acquire books and instruments and to have a sense of belonging for “men who keenly felt their provincial limitations,” they struggled to establish themselves as equals in those constructs.¹⁷⁸

Education structures as well promoted this provinciality. Daniels asserts that “even the best education eventually becomes obsolete – and the process of obsolescence is accelerated during a period of such intellectual ferment as the seventeenth century. The books brought with settlers likewise grew out of date, and even the new ones imported did not give the immediacy and the stimulus of personal contact with persons of similar interest.”¹⁷⁹

Coupled with these problems was the early dominance of theological training and pursuits. In New England, education systems were established to promote the theological structures of puritan life, while in other areas, survival was tantamount to the education expected in the colonies. As colonial life became more secure, increasing interest in scientific

¹⁷⁷ George H. Daniels. *Science in American Society: a social history*. (New York: Alfred A. Knopf, 1971), 16.

¹⁷⁸ Daniels, *Science in American Society*, 51.

¹⁷⁹ Daniels, *Science in American Society*, 71.

endeavors and enlightenment philosophies began to overcome earlier conservatism. As

Daniels notes,

basic to the Enlightenment point of view – indeed, the very essence of it – was a new conception of science. The older conception of science was a dogmatic subject matter – as an extension of technologia – was replaced in the minds of educated New Englanders by a conception of science with a mathematical and experimental foundation, relying upon sense experience rather than intuition, innate ideas, or authority, and concentrating upon explanation in terms of mechanical processes rather than ultimate purposes.¹⁸⁰

This secularization of scientific exploration accompanied other movements to segment the various areas of knowledge in the nineteenth century.

The nature of American settlement also had a lasting effect on the way in which science developed in the nation. A colonial legacy of survival in the New World and the struggle to establish a strong, competitive nation pushed scientific citizens to focus on the practical rather than the theoretical sciences. Franklin is seen as the father of this practical approach. Various technological innovations were a result of this practicality, specifically the power loom, the water frame, the spinning jenny, and other inventions that spurred on the industrial revolution.¹⁸¹ These are only the tangible effects of this emphasis on practical or “useful knowledge.” In all the learned societies and organizations that were formed during the period before and after the Revolution, the call for usefulness is the one common link. America, like its European counterparts, saw science as “useful”.

As the nineteenth century progressed, though, and democratization of science took place, a distinction would be made between scientists and practitioners. In addition, the speed of scientific discovery and the dissemination of the information about those discoveries would create a division between the theoretical and the practical that would replace Old

¹⁸⁰ Daniels, *Science in American Society*, 92.

¹⁸¹ Daniels, *Science in American Society*, 104.

World hegemony with intellectual hegemony. As Daniels notes in the case of agriculture, there was a disconnect between the societies and the poor farmer who might benefit from the experimentation. Efforts to stimulate experimentation by organizations failed and these organizations had little appeal for practitioners. In response to this, popular lectures and lyceums developed in American that would bring science to the practitioner and would further draw American science into the practical realm. By the time of the great lyceum movement of the 1830s, America had a two-fold scientific existence, theoretical and intellectual for the elite scientific thinkers, practical and basic for the common people of the country. The Lyceum was the “main channel of popular information about science after the first quarter of the century.... a typically American institution created in response to the growing demand for education and self-improvement – a demand fed by a variety of sources, all connected with the growth of social democracy.”¹⁸²

The new government was slow to support science. Alexander Dallas Bache’s coastal survey of the 1840s is one of the rare examples of federally funded scientific endeavors in the first half of the nineteenth century.¹⁸³ Publication of the *American Journal of Science*, and proceedings from the American Philosophical Society all worked to professionalize science in the United States. The establishment of the Smithsonian and the United States Naval Observatory are examples of the resolution of early nineteenth-century ambiguity.¹⁸⁴ Science thus became bifurcated in American culture, with popular culture taking a scientific bent but

¹⁸² Daniels, *Science in American Society*, 162.

¹⁸³ Alexander Dallas Bache was appointed as superintendent of the United States coast survey in 1843, following the death of Ferdinand Rudolph Hassler. This effort was funded by Congress and mapped the entire coast line and constructed several observation stations. For more on the coast survey, see Hugh Richard Slotten, “The Dilemmas of Science in the United States: Alexander Dallas Bache and the U.S. Coast Survey” *Isis*, 84 (1993), 26-49; and Hugh Richard Slotten, “Science, Education, and Antebellum Reform: the Case of Alexander Dallas Bache” *History of Education Quarterly*, 31 (1991), 323-342.

¹⁸⁴ Greene, 5.

with a practical approach. As science took on a popular flavor, an accompanying intellectual elitism for theoretical science developed. The distance between the two increases as science becomes more complex through discovery and the results of professionalization.

Education itself went through a variety of changes in the nineteenth century. As noted earlier, colonial higher education focused primarily on theological training. Harvard and Yale were established in the seventeenth century, but they were originally intended to train clergymen. Classical education structures were well-supported by colonial dependencies on European validation. Like other cultural and intellectual structures, though, education underwent significant scrutiny in the nineteenth century. Accompanying democratic movements created increasing expectations and demands on the educational systems. This resulted in initiatives involving self-improvement as well as more formal structures to improve the education of new groups.

The roots of “useful knowledge” began in the eighteenth century. As the country moved toward Revolution, students in traditional college settings began to seek alternative ways to understand the world around them. Students rejected traditional pedagogical methods in favor of new methodological approaches. These efforts are reflected in support systems that assist in learning. Student literary societies and their accompanying libraries were one solution.¹⁸⁵ In fact, a history of American college libraries reveals that early education institutions did not place value on the library as a learning support mechanism for students. In Hamlin’s history, *The University Library in the United States*, he discusses the “complete about-face, from stress on guarding the collection to the exclusion of use, to one of emphasis on use even at some risk to preservation” as the most important development of American

¹⁸⁵ Meyer Reinhold, “The quest for “Useful knowledge” in Eighteenth-century America” *Proceeding of the American Philosophical Society*, 119 (1975), 108-132.

academic libraries.¹⁸⁶ McLachlan, in his examination of American student societies, discusses the role that these societies played, not only in assisting in formal education, but in providing lessons on proper behavior and social norms as young men were entering adulthood. Like social libraries, discussed below, one of the primary themes of these societies was education by peers, which served as a training ground for the development and on-going maintenance of libraries that served that education.¹⁸⁷

These themes were redolent in the activities of American intellectuals as well. Franklin, Jefferson, and Rush all pointed to the concept of useful knowledge as a result of education rather than strictly classical learning. Reinhold reviews in particular Rush's rejection of the classical curriculum (targeting Latin and Greek in particular) as a prime reason why students would not complete their formal education: "many sprightly young boys of excellent capacities for useful knowledge, have been so disgusted with the dead languages, as to retreat from the drudgery of schools, to low company, whereby they have become bad members of society, and entailed misery upon all who have been connected with them."¹⁸⁸

While the theme of "useful knowledge" is a constant one throughout the first half of the nineteenth century, the ideas that it represents evolved over time: early perceptions differed from those of the nineteenth century, reflecting change in ideology and culture.¹⁸⁹

From knowledge as an appropriate gentlemanly pursuit to social mobility to specialized

¹⁸⁶ Arthur T. Hamlin, *The University Library in the United States*, (Philadelphia: University of Pennsylvania Press, 1981), 23.

¹⁸⁷ James MacLachlan, "The Choice of Hercules American Student Societies in the Early 19th century" *The University in Society*, Lawrence Stone, ed. Vol. 2, (Princeton: Princeton University Press, 1974), 449-494.

¹⁸⁸ As quoted in Meyer Reinhold, "Opponents of classical learning in American during the Revolutionary period" *Proceedings of the American Philosophical Society*, 112 (1968), 229.

¹⁸⁹ James D. Watkinson, "Useful knowledge? Concepts, values, and access in American education, 1776-1840" *History of Education Quarterly*, 30 (1990), 351.

knowledge, useful knowledge was a constantly shifting perception, although consistently sought after.

Knowledge was being tested and reformulated throughout the nineteenth century in America. New groups were interested in knowledge acquisition but there were limitations on the types of knowledge that they were interested in. Nationalism replaced European validation to drive the creation of intellectual and scientific communities and a competition between cities created a framework for energies to establish reputations and attract industry and secure an intellectual reputation.

Libraries in Colonial America

The settlement of the North American colonies brought Old World concepts to the new wilderness. It was not a direct transfer of institutions, though. Early years in the colonies forced settlers to attend to the basic strategies of survival. Settlement in the Northern colonies followed a different pattern than those of the Southern and Mid-Atlantic colonies, primarily because the early settlement of the North was community-driven with religious ties. The settlement in colonies outside of New England was much more individual. While the seventeenth century provided challenges that were fundamental to survival, by the eighteenth century settlers were able to establish institutions that resembled those of their home countries.

Libraries, similar to most other institutions, were originally imports to the colonies of British America. The seventeenth century does not rate high in the foundation of social institutions in general, and libraries in particular. A notable exception was the libraries established by Thomas Bray, an Anglican minister responsible for the establishment of a group of libraries in the late seventeenth and early eighteenth century. These libraries were

the first formal libraries in the English colonies. Bray demonstrated a “complete understanding of the frontier problem of intellectual poverty, and the steps they took to remedy this poverty of mind and soul.”¹⁹⁰ These libraries were intended for the clergy who traveled to the English colonies to minister to the settlers and were not “regarded simply as gifts... but as an indispensable factor in inducing men of education to move to the colonies.”¹⁹¹ That these libraries did not survive beyond the involvement of Bray is a testament to the personal component of the establishment of libraries in these kinds of conditions. That personal nature of library foundation is evident until the establishment of public, government supported libraries of the mid-nineteenth century.

Even the libraries established by Bray demonstrated the challenges faced by the colonists. Bray’s motivation for establishing these libraries was a concern for the on-going education of clergy and laity in the colonies. In proposals written up by Bray, he “began by lamenting the lack of books in the plantations, and pointing out how few of the clergy could afford to provide libraries of their own. Since a minister could do his best only if he had ready access to a library, Bray outlined a method that would endow each minister going to America with a ‘sufficient Library of well-chosen books’ if his design was supported.”¹⁹² Books were scarce resources in the colonies. Printers were few and far between in the early years and most materials were imported from Europe.

This situation further demonstrates the relationship that was prevalent between the colonies and the home country, in that the colonists were considered as dependents rather

¹⁹⁰ Charles T. Laughler. *Thomas Bray’s Grand Design: libraries of the Church of England in America, 1695-1785*. (Chicago: American Library Association, 1973), 5.

¹⁹¹ Laughler, 5.

¹⁹² Laughler, 18.

than equals in the context of both physical and intellectual growth. Daniels notes that this is true in the context of the scientific revolution that occurred in the seventeenth and eighteenth centuries as well. In exploring the North America,

despite all the advances that were made, science in the colonies remained definitely *colonial*; that is to say, the primary determinant of the direction of scientific work was the relation of the colonies to Europe. There was no real indigenous scientific community during the colonial period; the colonial scientist was a member of the scientific community of Western Europe and his activities were mostly determined by his ability to contribute to that community. The problems were suggested by that community and the colonial scientist depended upon it for recognition.¹⁹³

Daniels goes on to assert that in natural history, colonists were collectors rather than analyzers, and that their main contributions were seen in what they could provide for their European counterparts. The natural resources and education were not enough for them to obtain an equal status. Colonists were perceived as remote, with inadequate training, their instruments were rudimentary. While their observations were welcome, their analysis was considered “amateurish.”¹⁹⁴ The issue with books was similar. Colonists were dependent on their European counterparts to acquire materials. It was not just a matter of production, though. It was also a matter of perceived value. The colonists themselves believed that the materials from Europe were necessary for an intellectual life and that works created in the colonies did not supplant the need for those created by Europe.

Despite these obstacles, colonists were involved in the intellectual revolutions that were taking place in the Western world at the time. While many colonists were educated in Europe, Harvard College was founded in 1636 and Yale College followed in 1701. Colonial institutions were approximately twenty years behind Europe in terms of development,

¹⁹³ Daniels, *Science in American Society*, 59.

¹⁹⁴ Daniels, *Science in American Society*, 61.

though. Both Harvard and Yale were primarily theological institutions, established to train ministers. Libraries were established in the colonies as well. Perhaps the most famous is the first, The Library Company of Philadelphia, which was established as a result of the industrious and generous nature of Benjamin Franklin. Franklin's influence on American library development cannot be overstated. As Augenbraum notes, "the juxtaposition of the development of the library and the wish for self-directed moral education reflects Franklin's belief in the exchange of ideas among thinking men and the public library as an aid in doing so, and the library as an instrument of the secularization of culture."¹⁹⁵ Shera, in his landmark *Foundations of the Public Library*, outlines what is necessary for libraries to be established: "it is known that libraries are distinctly an urban phenomenon, that they flourish only when the economic ability of the region is sufficiently great to permit adequate support and that they are the product of a mature culture."¹⁹⁶ The seventeenth century was a period of instability, but the eighteenth century saw the progress of American colonial life allowing for the development of libraries.

The circulating library

Circulating libraries were one popular type of library in the United States. Kaser, in his work *A book for sixpence: the circulating library in America*, defines the circulating library as collections of books that were loaned for profit. These libraries had their roots in London establishments, beginning in 1742 with Rev. Samuel Fancourt, who coined the term.¹⁹⁷ Kaser notes the two conditions necessary for the success of circulating libraries

¹⁹⁵ Harold Augenbraum, "New York's Oldest Public Libraries" in *RBM: A Journal of rare Books, Manuscripts, and Cultural Heritage*, 1 (2000), 146-147.

¹⁹⁶ Jesse H. Shera, *The Foundations of the Public Library* (Chicago: University of Chicago Press, 1949), 15.

¹⁹⁷ David Kaser, *A book for sixpence: the circulating library in America* (Pittsburgh: Beta Phi Mu, 1980), 14.

during the eighteenth and nineteenth centuries: “a growing middle class with leisure to read, and the coming of age of the novel.”¹⁹⁸ The first American circulating library was established by William Rind in 1762. As Green explains, circulating libraries were “individual owned – generally by booksellers – and patrons could borrow books for a modest fee. Because their owners were entrepreneurs who hoped to turn a profit, they tended to reach out to the public by advertising, by making their premises inviting especially to women, and by stocking the most current and popular books.”¹⁹⁹

While there are some similarities with the social library movement, most notably the provision of scarce materials, such as books, circulating libraries differ in many ways from social libraries. First, circulating libraries were commonly a component of other businesses, such as booksellers, printers, tea rooms and taverns. Second, the circulating library served diverse populations; the only demographic restriction was the ability to pay the fee for the loan of a book. Unlike social libraries that restricted membership, the circulating library had open patronship: old and young, male and female. Circulating libraries provided some boundaries, but these were established not by notions of exclusivity, but by the very entrepreneurial attitude of offering a different collection than that of the circulating library down the street. As an example, Jacob Lahn in Philadelphia sought to serve the long-standing German community by maintaining a German language circulating library of over one thousand volumes.²⁰⁰ Third, circulating libraries were far more transient than social libraries. As businesses, they were open and closed based on an individual’s financial wherewithal.

¹⁹⁸ Kaser, 14.

¹⁹⁹ James Green, “Subscription libraries and commercial circulating libraries in colonial Philadelphia and New York” *Institutions of Reading: the social life of libraries in the United States*, Thomas Augst and Kenneth Carpenter, eds. (Amherst: University of Massachusetts Press, 2007), 53.

²⁰⁰ Kaser, 51.

This factor alone accounts for the prevalence of circulating libraries in cities. Larger cities contained more circulating libraries than smaller ones, but for all the cities examined in this study, each contained at least two, with three cities containing over twenty (see table 3).

City	Number of circulating libraries
Philadelphia	26
New York	25
Providence	24
Baltimore	17
Salem (Mass.)	7
Charleston	3
Lancaster (Penn.)	3
Newport (R.I.)	3
Louisville (Ky.)	2

Table 3: Sample cities and number of circulating libraries²⁰¹

Given their transient nature, it is assumed that these numbers may be significantly understated, as circulating libraries could have opened and closed so rapidly so as to leave no record.²⁰² In fact, libraries reporting to a survey completed in 1876 demonstrate an inverse relationship with longevity. The largest number reported only 1 to 5 years of existence (34) and the smallest numbers reported being over 16 years in existence (3 for 16-20 years, 3 for 21-25 years, and 5 over 25 years of existence).²⁰³

Finally, circulating library collections, from the outset, conveyed a different kind of purpose from the social library. Always a for-profit venture, the circulating library had little opportunity to stand on moral grounds if its paying patrons clamored for less intellectual materials. Kaser's subject analysis of circulating library catalogs demonstrates the cultural

²⁰¹ Aggregated from Kaser, 127-163, "Checklist of American commercial library enterprises, 1762-1890".

²⁰² Kaser notes at the outset of his checklist: "The following list of circulating libraries does not purport to be complete. It is rather an enumeration of those circulating libraries which were come upon in the preparation of this study." (127).

²⁰³ Kaser, 101.

forces at work in these libraries. If one starts with the assumption that, given the fiduciary emphasis, circulating library collections contained what was most immediately desired by their paying customers, the subject content is a window into the reading tastes of those customers (see table 4).

Circulating library Catalogs by date ranges	Average percentage of holdings by subject			
	Religion	Practical	Entertainment	Miscellaneous
1765-1780 (2 libraries)	22.0	12.5	61.0	4.5
1781-1800 (15 libraries)	14.5	12.2	70.1	3.2
1801-1820 (38 libraries)	9.1	6.1	81.4	2.7
1821-1840 (24 libraries)	5.5	4.9	87.0	2.5
1841-1860 (5 libraries)	2.0	2.8	94.8	0.0

Table 4: Subject analysis of circulating library catalogs, 1765-1860²⁰⁴

The above table demonstrates an ever growing emphasis on leisure reading supported by circulating libraries. The entertainment category is an early dominant group of materials and steadily increases over the decades until the 1840s when circulating libraries were almost entirely comprised of those types of materials. Religion displays an opposite trajectory over the same time period. While early in the century religion enjoyed almost a quarter of the collections in circulating libraries, by the end of the period examined, it comprises only 2.0%. It is clear that while fiction and historical works were enjoying increasing popularity, religious works were less in demand. This kind of evidence is significant based on the fact that the circulating library was dependent upon the willingness of customers to pay to borrow a book.

Circulating libraries provide a window into the reading tastes of the general public in the United States. As Kaser notes, “the circulating libraries... pioneered in the circulation of

²⁰⁴ Created from data reported in Kaser, 173-176. Religion includes philosophical ethics, theology, and religion; practical includes economics, commerce, government and political, law, science, technology, fine arts, and rhetoric; entertainment includes literature, fiction, geography and travel, history and biography; and miscellaneous includes reference and miscellany.

popular books, striving always to supply the books people wanted to read in numbers commensurate with the public appetite.”²⁰⁵ The prominence of entertainment materials in the collections of circulating libraries shows that the public was turning to fiction for their reading. Businesspeople running circulating libraries felt that it was “their responsibility to serve the public taste rather than to raise it.”²⁰⁶ This blunt acceptance of taste should be contrasted with the motivations of social libraries, which focused on educational or intellectual discourses, ostensibly providing uplift for mercantile and mechanical classes.

The social library in the new nation

The creation of social libraries preceded the Revolution and the formation of the new nation. With the founding of the Library Company of Philadelphia, a model was provided for efforts in other cities. Given the relative size of the new nation, transportation and communication obstacles, cities displayed a certain amount of local pride in the establishment of these kinds of social institutions. In addition, early republic social libraries displayed the adoption of the principles that the country was founded on. There are subtle messages in the historic discourse of some social libraries that confirm this adaptation of democratic principles.

The history of the Library Company of Baltimore exhibits the themes in social library establishment. In 1793, an exchange published in the *Baltimore Daily Repository* between three letter writers demonstrates both the local civic pride and the democratic themes that were an important aspect of nation building that was taking place. Philonaus begins the exchange by writing to the editor, “it is a circumstance to be regretted, that a town like this

²⁰⁵ Kaser, 118.

²⁰⁶ Kaser, 118.

containing upwards of fifteen thousand inhabitants, does not afford a circulating library...”²⁰⁷

A Citizen responds to this letter, stating that “suffer me to propose the adoption of one similar to that of the Philadelphia Library Company, established by Dr. Franklin, many years ago, which from its extensive utility, is too notorious to require a particular recital.”²⁰⁸ A Citizen further comments,

is it not therefore astonishing that a town respectable for its number, respectable for its commerce, should have continued so long inattentive to the advancement of science, the belles letters, and the real ornaments of life? Without reflecting on the vacancy of ideas, and predominating passions of the ladies for dissipation, let us endeavor to remove the evil by affording them the means of cultivation, and stimulate them a love of literature by publicly avowing that we are friends to science.²⁰⁹

At this point in the exchange, Another Citizen joins and commends A Citizen’s mention of the Franklin plan for a social library, but disputes the implication about the ladies of Baltimore.²¹⁰ A Citizen responds, appealing to Another Citizen’s charge and reconciling that error; he provides a plan for the structure of the proposed social library including an indefinite number of shares, each equally valued, with a ten pound initial price and then ten shillings annual subscription rate. He justifies these fees as creating a “fund to defray the wages of a Librarian, who should be a man of letters, rent of a room and contingent expenses...”²¹¹ A Citizen expands the audience of the library, though, beyond the confines of those who could afford the initial subscription rate of ten pounds. “Those not entitled by

²⁰⁷ Philonaus, 29 January 1793, as reprinted in “The Library Company of Baltimore” *Maryland Historical Magazine*, 12, (1917), 297-298. Note that it was common practice in the eighteenth and early nineteenth century for individuals to submit letters under pseudonyms such as Philonaus, A Citizen, and Another Citizen as is noted in the exchange regarding the formation of the Library Company of Baltimore. Benjamin Franklin was famous for this kind of editorializing, using pseudonyms Poor Richard and Mrs. Silence Dogood for example.

²⁰⁸ A Citizen, 31 January 1793 as reprinted in “The Library Company of Baltimore,” 298.

²⁰⁹ A Citizen, 31 January 1793, as reprinted in “The Library Company of Baltimore,” 299.

²¹⁰ Another Citizen, 1 February 1793, as reprinted in “The Library Company of Baltimore”, 299-300.

²¹¹ A Citizen, 2 February 1793 as reprinted in “The Library Company of Baltimore”, 300.

subscription, to deposit double the value of the book loaned, or set to which it may belong, paying therefor [sic] a certain hire per week or month – The fines and hire of the books would, *generally*, be more than adequate to the expenses of the institution.”²¹² Philonaus concludes this letter exchange with a final appeal to the city of Baltimore: “Let us no longer leave vacancy for a supposition that we are an unenlightened people, nor hesitate to use of efforts to establish and cultivate a plan so evidently advantageous to the community, and productive of the most pleasing embellishments of life.”²¹³ The exchange illustrates two aspects of early American society: first, local regions were measuring themselves against other areas of the country; and second, many of the solutions were discussed openly as details were worked out for the establishment of social institutions.

Competition with other regions was not limited to the establishment of libraries. Science also provided a realm for competition between cities. Baatz details the race to become the city of medicine that results in Philadelphia’s primacy.²¹⁴ It is clear that while American institutions were preparing themselves to participate as full members of the international community of intellectual activity such as the scientific community dominated by European societies, that local pride was also a factor in the establishment of social institutions. This theme was even written into the 1796 Constitution of the Library Company of Baltimore:

Being fully convinced, that in proportion to the diffusion of useful knowledge the Interest of Virtue will be promoted, and the prosperity of a community augmented; considering the Establishment of a Public Library to which an easy, but regulated access may be had, essential to the accomplishment of

²¹² A Citizen, 2 February 1793, as reprinted in “The Library Company of Baltimore,” 301. Emphasis in the original.

²¹³ Philonaus, 4 February 1793, as reprinted in “The Library Company of Baltimore,” 302.

²¹⁴ Simon Baatz, “‘Squinting at Silliman’: scientific periodicals in the early American Republic, 1810-1833” *Isis*, 82 (1991), 223-244.

these ends; and confirmed in this opinion by the happy effects, which have flowed from similar Institutions in other places; We the Subscribers, have associated for the purpose of establishing a public Library, in Baltimore.²¹⁵

The second theme of experimentation with democratic governing structures is both more elusive and more fundamental in the impact of the formation of the new nation. Article four of the Constitution of the Library Company of Baltimore articulated the role that shares play in the governance of the institution: “No person shall be allowed to Subscribe for more than one share in the Library, or to increase this number in any other way, than by legacy or inheritance. And if any Member shall at any time become regularly possessed of a plurality of shares, he shall not thereby be entitled to more than one vote or to any other extraordinary privilege whatever.”²¹⁶ This statement directly relates to the structure of democracy adopted by the nation. First, the construction of a “constitution” is a direct parallel. Second, the idea that no one could “own” more than another in terms of the stake that they have in governance, is an important part of the democratic structure implemented. A land-owner in American democracy did not have more than one vote in the government, based upon the amount of land owned. It is clear that the political ideals of the new nation were reflected in the structures of social institutions created at the time.

The purpose for establishing these institutions was usually outlined in the beginning of the constitution or by-laws written by the institution, and often reprinted in the catalogs. The dominant rhetoric found in these institution regulations is “useful knowledge.” As with much else in the early nineteenth century, this concept underwent evolution, but it does not diminish the utility of the phrase throughout the period.

²¹⁵ Constitution of the Library Company of Baltimore, 8 January 1796, as reprinted in “The Library Company of Baltimore”, 304.

²¹⁶ Constitution of the Library Company of Baltimore, 8 January 1796, as reprinted in “The Library Company of Baltimore”, 305.

Year Range	“Strict” social libraries	Other social libraries	Total number of social libraries in the United States
1781-1785	11	1	12
1786-1790	44	1	45
1791-1795	126	5	131
1796-1800	137	4	141
1801-1805	108	8	116
1806-1810	95	8	103
1811-1815	87	13	100
1816-1820	81	30	111
1821-1825	100	31	131
1826-1830	126	36	162
1831-1835	109	51	160
1836-1840	106	54	160
1841-1845	66	39	105
1846-1850	83	56	139
1851-1855	101	115	216
1856-1860	108	104	212

Table 5: Number of social libraries founded, 1781-1860²¹⁷

Social libraries were established at a relatively steady pace (see table 5). At the conclusion of the Revolution, people returned their attention to social institutions. By 1791, the number of social libraries tripled from the five years before, and continued to top 100, despite the war of 1812,²¹⁸ and the Panic of 1837, which did not seem to affect the establishment of social libraries between 1836-1840 but may explain the dip in establishing these libraries in the period 1841-1845.

The distinction between “strict” social and other types of social libraries provide some interesting overall statistics. The pace at which “strict” social libraries were founded did not slacken. But the dramatic increase (from 1 at the low end to a peak of 115 in 1851-1855) demonstrates that social libraries were seen as a solution not just for the traditional

²¹⁷ Adapted from McMullen, “The very slow decline of the American social library” *Library Quarterly*, 55 (1985), Table 1, 210 and Table 2, 212.

²¹⁸ The time period 1811-1815 demonstrates the lowest number of social libraries founded after 1791 at 100.

audiences but was being adopted for specialized purposes and audiences. This will be explored further below.

Regions and sub-regions	Number	% in the region	% in the United States
Northeast	4,275		42.6%
New England	2,641	61.8%	26.3%
Mid-Atlantic	1,634	38.2%	16.3%
South	1,534		15.3%
South Atlantic	801	52.2%	8.0%
East South Central	501	32.7%	5.0%
West South Central	232	15.1%	2.3%
Midwest	3,749		37.4%
East North Central	3,223	86.0%	32.1%
West North Central	526	14.0%	5.2%
Far West	474		4.7%
Mountain	129	27.2%	1.3%
Pacific	345	72.8%	3.4%
U.S. Total	10,032		

Table 6: Libraries in Regions before 1876²¹⁹

Table 6 examines the distribution of social libraries by region and sub-region prior to 1876. The data demonstrate the dominance of the Northeast in terms of the number and percentage of libraries in the United States, comprising almost half of all the libraries. The Midwest region is the region with the second most libraries. This region has more than double the libraries of the South, which may be surprising given that the South comprises many of the original colonies. Not surprisingly, the Far West region contains comparatively few libraries.

Accompanying the social library movement is the public lecture or lyceum movement. In fact, these movements should be seen as intertwined, both part of a larger movement for the democratization of knowledge and an emerging intellectual self-awareness in the United States. As Ray notes, “participating in a culture requires shared knowledge (*endoxa*), and both the mutual education societies and the sponsored public lectures of the

²¹⁹ Adapted from McMullen, *American Libraries before 1876*, Table 1.1, 5

nineteenth century educate the population about who they were and what was important to them. These institutions and events created a body of shared ideas and shared experiences, shaping a sense of nationhood through communal participation.”²²⁰

The lyceum movement is considered part of a larger educational movement beginning in the 1820s. Like the library movements of the time, the lyceum movement enjoyed immediate success. Ray reports 800 to 1,000 lyceums in 1831 and an astounding 4,000 to 5,000 lyceum by 1839.²²¹ While the lyceum and public lecture movement was a later development, the roots of these movements can be closely aligned with similar mercantile and mechanics’ movement. As Scott notes, the public lecture evolves in the 1830s while lectures themselves had been taking place in more exclusive settings before that date. After the 1830s, lectures were focused toward a broader audience.²²²

The broadening audience evolution is similar to mercantile library efforts. Other similarities to mercantile libraries and the public lecture movement existed. Scott notes that the attendees of public lectures of the 1840s and 1850s were a “diverse audience made up of both men and women, ranging in age from the mid-teens through the late fifties or early sixties, and drawn from an occupational spectrum that included artisans, mechanics, farmers, lawyers, teachers, professors, doctors, clergymen, shopkeepers, and merchants, as well as people in a wide range of commercial and service trades.”²²³ Despite this variability, though, Scott notes that the rural and immigrant populations were not generally among the

²²⁰ Angela G. Ray, *The Lyceum and Public Culture in the nineteenth-century United States* (East Lansing: Michigan State University Press, 2005), 7.

²²¹ Ray, 21. Scott estimates a lower number (3,500 to 4,000), 791, Donald M. Scott, “The popular lecture and the creation of a public in mid-nineteenth-century America” *Journal of American History*, v. 66, (1980), 791-809.

²²² Scott, 792.

²²³ Scott, 800.

participants. Instead, lectures were predominantly attended by the “aspiring and ambitious, personally, socially, or culturally.”²²⁴ Scott connects this to the dislocation felt by many of the people coming of age during this first stage of industrialization: “life appears to them less a matter of setting into an established niche than a process of continuing self-construction, as people had to decide how to begin, whether to move on in search of greater opportunities, when to seek out a situation with greater prospects or advantages, and, frequently, whether to go West and start fresh. The lecture-going public was thus made up of people who perceived themselves in motion, in a state of preparation or expectation.”²²⁵

The educational aspect of public lectures was also an important component of the social library movement. These movements coincide with a developing sense of significance in adult education. Again the theme of useful knowledge is redolent in the lyceum and public lecture movement. As Ray notes, “the lyceum was presumed to function by raising the mass not from ignorance to abstract scholarship but from ignorance to useful, practical knowledge that could be applied in daily working life.”²²⁶

Types of social libraries

Social libraries were not a monolithic phenomenon. There were several different types of social libraries created, based upon demographic and subject considerations. These types formed a variety of different types of organizations, with the binding characteristics that they were libraries that individuals joined for a fee and that they maintained a library collection which members, and sometimes the public, could borrow materials. Within the group of social libraries that were created, there are several different types that can be singled

²²⁴ Scott, 801.

²²⁵ Scott, 801.

²²⁶ Ray, 17.

out. “Strict” social libraries, as defined by McMullen, constitute the general movement of social libraries.²²⁷ Examples include the Library Company of Philadelphia, the New York Library Society, and the Library Company of Baltimore. These tended to be social libraries whose members were middle to upper class gentlemen interested in on-going intellectual interaction and increased symbolic capital through membership. Athenaeums are close cousins to the strict social library, in that the membership was only slightly more elevated and the collections more geared toward the arts and literature than were strict social libraries. Mercantile Libraries are on the other end of the spectrum from Athenaeums. They were created for the merchant classes of urban areas to provide intellectual and symbolic capital lift. Mercantile libraries were established to balance the disadvantages seen by not having formalized education. Mechanics’ Institutes took this a step further. These were associations created for mechanics and apprentices, rather than by them, and were seen as vehicles for educating and controlling the increasingly large class of young workers as a result of industrialization. Of the four social library types defined above, only the Mechanics’ institutes had an explicit “audience” in mind. This is reflected not only in their libraries but also in the variety of other activities mechanics’ institutes performed. There were educational opportunities, awards, and events that engaged workers in safe and respectable behavior. For example, the Mechanics’ Institute of Lancaster, Pennsylvania had awards for scholarship and for attendance.²²⁸

²²⁷ McMullen, *American libraries before 1876*, 22.

²²⁸ *Constitution, by-laws, and rules and regulations for the government of the Mechanics’ Society of the City and county of Lancaster* (Lancaster: Printed for the Society by John Baer & Sons, 1858).

Social library type	Region (number and percent)				All U.S.
	Northeast	South	Middle West	Far West	
“Strict” social	1,531 (62.1%)	268 (10.9%)	541 (22.0%)	123 (5.0%)	2,463 (74.7%)
Athenæums	45 (60.8%)	15 (290.3%)	12 (16.2%)	2 (2.7%)	74 (2.2%)
Mercantile Libraries	13 (37.1%)	11 (31.4%)	8 (22.9%)	3 (8.6%)	35 (1.1%)
Mechanics’ Institutes	66 (25.1%)	30 (11.4%)	161 (61.2%)	6 (2.3%)	263 (8.0%)
Other ²²⁹	240 (52.1%)	44 (9.5%)	161 (3.5%)	16 (3.4%)	461 (14.0%)
Total	1,895 (57.6%)	368 (11.2%)	883 (26.8%)	150 (4.6%)	3,296

Table 7: Social libraries by type and region before 1876²³⁰

Table 7 illustrates the types of social libraries by region. “Strict” social libraries comprised the largest number of social libraries across the United States and mercantile libraries the lowest number. This could be due to the fact that mercantile libraries were in direct competition with circulating libraries in the urban centers and potentially carried less social capital than the “strict” social library. There were other types of social libraries as well. As the movement progressed, social libraries were created around certain topics, such as law or medicine; and there were social libraries created for certain demographic populations such as women and young men. The public library movement, which began to flourish in the 1850s with the establishment of the Boston Public Library in 1852, began to replace social libraries in the American library landscape, although McMullen argues that the decline of the social

²²⁹ Other social libraries include those for specific audiences (women, young men, etc.) or special topics such as law, medicine, or religion, to name a few types.

²³⁰ McMullen, *American Libraries before 1876*, adapted from Table 5.1, 64.

library was not as rapid and easy to pinpoint as previously understood.²³¹ In his article, McMullen addresses the impression that the public library movement killed the social library movement. He finds, however, that social libraries continued to flourish beyond the establishment of public libraries, and while new social libraries were less likely to be formed, many libraries established during the social library movement and following the social library framework are still in existence today (including the Library Company of Philadelphia, the New York Society Library, the New York Mercantile Library, and many athenæums).

The type of social library impacted the role that that library could play in the conveyance of ideas. For example, because strict social libraries were created, maintained and sustained by a group of individuals expecting to engage in the advantages of such a library, the actions and work of the library were a personal investment. The same can be said of Athenæums and Mercantile libraries, although they each served different types of populations. Mechanics' institutes had a different objective because they were created by a few for the benefit of many. That many of the mechanics' institutes included education programs and an evaluative component in the form of awards to studious mechanics demonstrates the intent of the creators of these libraries.

Athenæums

Athenæums were a special type of social library. They contained the same principle of membership, selling shares and membership dues but differed from the "strict" social library in collections, patrons, and in the establishment of reading rooms. Thompson credits the latter as the "most distinctive specific purpose of that form of proprietary library to which

²³¹ McMullen, "The very slow decline."

the name athenæum was given.”²³² Francis Lieber, in a lecture delivered before the Columbia, South Carolina Athenæum in 1856, provides an informative backdrop for the purpose of the athenæum in America. According to Lieber, the name athenæum has its roots in antiquity. Associated with Athena, the goddess of wisdom, towns created buildings where “rhetoricians and authors read their productions and youth received partial education, or at least instruction.”²³³ This pattern was continued in the Roman Empire, but the Middle Ages eliminated athenæums “as nearly all other cultural establishments; but when the love of knowledge went abroad again from the cloisters, we find an Athenæum in Marseilles – a sort of academy of belles lettres.”²³⁴ Athenæums were associated with literature and aesthetics. Collections were general in nature, but leaned toward art and literature. Because of this, athenæums in the United States attracted a more elite audience. Arenson argues that the athenæum, more than other social libraries, established meeting places for men in order to create “bonds of elite fraternity” which is reflected in the furniture and design choices.²³⁵

The athenæum directly addressed some of the intellectual tension extant in the new country. As Thompson notes, athenæums “represented a broadening of interests; an increasing desire to read for general culture and intellectual stimulus. Americans were held in low esteem abroad, charged with supremacy of commercial interest, with lack of creative

²³² Charles Seymour Thompson, “For a Broader culture: Athenæums,” *Reader in American Library History*, Michael H. Harris, ed. (Washington: Microcard editions, 1971), 54.

²³³ Francis Lieber, *A lecture on the history and uses of athenæums delivered at the request of the Columbia Athenæum on the seventeenth of March, 1856* (Columbia, S.C.: Steam Power-press of R.W. Gibbes, 1856), 12.

²³⁴ Lieber, 13.

²³⁵ Adam Arenson, “Libraries in public before the age of public libraries: interpreting the furnishings and design of athenæums and other ‘social libraries,’ 1800-1860,” *The Library as Place: History, community, and culture*, John E. Buschman and Gloria J. Leckie, eds. (Westport, Conn.: Libraries Unlimited, 2007), 55.

ability in literature, in science, in art.”²³⁶ The establishment of athenæums, he concludes, was an effort to rectify these impressions.

The American Philosophical Society, while not an athenæum, possessed many of these qualities and demonstrated much of the same characteristics that athenæums did. The American Philosophical Society was formed to provide links to the Royal Society of London, the Linnaean Society of London, and others that supported the core of scientific exploration. In looking at the membership of the American Philosophical Society in 1824, patterns emerge as to who was involved in the institution. Of the 14 members examined, ten of them (71.4%) attended universities in the United States, including Harvard (law), the University of Pennsylvania (medicine), Princeton, and Haverford College. They tended to be lawyers, physicians, chemists, or naturalists, but none of these members had only a single profession. Aside from political endeavors (including the Presidency, Congress, and diplomacy), several members were educators or explorers, and almost all of them were authors of at the very least pamphlets and often full volumes contributing to the sciences and social sciences.²³⁷

As Lieber concludes in his presentation to his Columbia, South Carolina audience, he identifies the wish of all social libraries:

The institution you are establishing will afford rational and beneficial pleasure, by reading, hearing and conversing, to many who but for this rational recreation would have gone in search of irrational pleasure, with its manifold deteriorating and enslaving effects. Franklin said, against too great an extension of poor houses, build pigeon-holes and pigeons will come. Let us turn his simile, for it's quite as true in a good sense. Build pigeon-holes for sensible and innocent recreation and culture, and pigeons will flock in.²³⁸

²³⁶ Thompson, 56.

²³⁷ Members included John Quincy Adams, Horace Binney, Mathew Carey, Nathaniel Chapman, Robert Hare, William Edmonds Horner, William Hypolitus Keating, William Maclure, James Mease, George Ord, Thomas Say, John Sargeant, Lloyd Pearsall Smith, and John Vaughan. Information was taken from the American National Biography.

²³⁸ Lieber, 31-32.

While athenæums were elite social libraries, and the membership, as demonstrated by the analysis of the American Philosophical Society was the intellectual and socially elite of communities, social libraries of all types created a space where members could engage in profitable activities. This theme is seen in other social library types discussed below.

Mercantile Libraries

The mercantile library has enjoyed more scrutiny than other social library types. Perhaps this is because of the cultural developments that accompanied the unsettling aspects of industrialization and immigration that large cities, which have the most mercantile libraries, were experiencing. Perhaps too, from their inception to the high point of popularity before the Civil War, mercantile libraries demonstrate the sea change in cultural and social movements. While “strict” social libraries and athenæums flourished alongside mercantile libraries, the nature of those institutions did not change as dramatically as the mercantile institutions, while at the same time mercantile libraries maintained the same fundamental aspects of social libraries rather than evolving into a circulating library model. The mercantile library provides a view of the middle ground between the culturally elite social libraries and the for-profit enterprises of circulating libraries.

The mercantile library movement began in 1820 with the establishment of the Boston Mercantile Library and the New York Mercantile Library Association, which were soon followed by the Mercantile Library Company in Philadelphia in 1821. Ditzion posits that the formation of mercantile libraries sprang from the evolution of societies where “the upper and lower limits of this class drifted wider and wider apart” and goes on to associate the need for these institutions for those who could not afford to purchase a share in a library.²³⁹

²³⁹ Sidney Ditzion, “Mechanics’ and Mercantile Libraries” *Library Quarterly*, 10(1940), 195.

Mercantile libraries were fee-driven, but the proprietary nature of “strict” social libraries and athenæums was not a part of the mercantile model. As noted by many historians of mercantile libraries, one of the most distinctive characteristics was that they were established and governed by young clerks and merchants. This institution in particular had an impact on the group of people that formed it. As Augst points out, in discussing the New York Mercantile Library Association, it “helped to institutionalize the capacity for self-government, or character, within a context of mass leisure and education, and gave particular forms of reading new social meanings and moral functions of manhood.”²⁴⁰

While other institutions (circulating libraries, e.g.) provided access to materials, the establishment of mercantile library associations reflected an amalgamation of motivations, including education, fraternity, and self-improvement. In fact, mercantile libraries have been associated with the growing adult education movement. Boyd, in his dissertation *Books for Young Businessmen: Mercantile libraries in the United States 1820-1865*, makes this connection a central component of his work. Boyd argues for a fluidity of institutions during the mercantile library association movement, and credits four cultural contexts that contributed to the establishment of mercantile libraries: voluntarism, educational enthusiasm, the library movement, and the rise of cities.²⁴¹ The mercantile library was not alone in benefitting from these contexts, but it is their confluence that creates this distinctive institution type. Boyd’s analysis focuses primarily on the educational component of mercantile libraries, demonstrating a utilitarian nature through the formation of these

²⁴⁰ Thomas Augst, *The Clerk’s Tale: young men and moral life in nineteenth-century America* (Chicago: University of Chicago Press, 2003), 161.

²⁴¹ William Douglas Boyd, *Books for young businessmen: mercantile libraries in the United States* (Ph.D. Dissertation, Indiana University, 1975), 17.

libraries, and connecting them to the movement of self-education.²⁴² Unlike other more elite social libraries, which also had educational components, the mercantile library was an institution of self-improvement created and maintained by individuals who did not have access to formal educational structures and yet were in a commercial environment that could provide economic success and its accompanying social success. Boyd concludes that the primary aim of mercantile libraries was to provide education not acquired in formal structures.²⁴³

The educational component of mercantile libraries was aimed at the audience they were serving. While all social libraries were motivated by some underlying education component, mercantile libraries focused on those skills and knowledge that would help clerks conduct themselves successfully in a commercial world. Perkins asserts that mercantile libraries evolved as part of a great educational movement in the nineteenth century: “the intimate original connection of the mercantile or young men’s libraries with the general educational movement of the second quarter of this century was most evident in the feature, common to all the earliest of them, and still retained to a considerable extent, of a school, or at least an educational, department. This consisted most frequently of classes in such studies as book-keeping, arithmetic, writing, and modern languages.”²⁴⁴ The mercantile education was distinct from that of the classical educational structure, however. Atherton analyzes mercantile education in the Antebellum South, concluding that apprenticeships combated the weaknesses seen in classical education by providing a “‘proper college,’ for he would lose

²⁴² Boyd, 37.

²⁴³ Boyd, 78.

²⁴⁴ F. B. Perkins, “Young Men’s Mercantile Library” *Public Libraries in the United States of America, their history, condition, and management. Special Report* (Washington: Government Printing Office, 1876), 381.

any conceits of formal education and would acquire truth, accuracy, and decision.”²⁴⁵ This emphasis on “practical” education was not universally felt though; as noted earlier, the value of a classical education was retained in social capital. These themes can be seen in the mercantile library movement as a whole as it focused on practical classes, while also using its collections to provide more broad cultural education.

Other themes are also important to understanding mercantile libraries. Boyd asserts that one of the first components to the mercantile library was the establishment of a reading room and library collection. The association of the physical library and its membership is demonstrated dramatically with the mercantile library but is a component of all social libraries. Mercantile libraries also provided access to other related activities. Of the 14 mercantile libraries examined by Boyd, all of them had reading rooms, 12 of the 14 (85.7%) had lectures, 5 of the 14 (35.7%) offered classes and 3 the 14 (21.4%) offered literary exercises. Mercantile library collections also included cabinets of various natural history objects or historical artifacts (5 or 35.7%) and art collections (6 or 42.9%) to provide access to other artifacts of culture.²⁴⁶ Augst argues that as diffuse a class as clerks were in urban centers, the mercantile library association “functioned as a fraternity linking generations of young men in a sense of institutional tradition and professional identity.”²⁴⁷ The mercantile library served as a place to gather where young men could belong to a community, while at the same time improving their skills in order to ensure success within that community. The

²⁴⁵ Lewis E. Atherton, “Mercantile Education in the Ante-Bellum South” *The Mississippi Valley Historical Review*, 39(1953), 632.

²⁴⁶ Boyd, 100.

²⁴⁷ Augst, *The Clerk's Tale*, 163.

locative component is demonstrated by the importance of the reading room and later the inclusion of chess sets and other physical items that drew members to the place.²⁴⁸

The mercantile library became more complex as it evolved. As Augst argues in “The Business of Reading in Nineteenth-Century America: The New York Mercantile Library,” the mercantile library association was a business laboratory in which reading was commodified as merchants “negotiated their entrances into the volatile public sphere of market culture in antebellum America.”²⁴⁹ Augst uses the role of literature in the New York Mercantile Library Association and the introduction of a business approach to managing and sustaining that library association to demonstrate the evolution of a business culture during this period. He argues that the infusion of fiction in the collection and a turn from the concept of “useful knowledge” were a response to the enterprise culture developing in nineteenth-century urban centers. It was not, however, a wholesale abandonment of improvement motivations as was seen by circulating libraries, which were strictly economic endeavors. As Augst asserts, “only by supplying demand for fiction of both current and potential members could the library afford to subsidize the acquisition of ‘higher’ literature. Indeed, the low price of fiction would soon be used to rationalize purchases in terms of cost-effectiveness, since ‘books of fiction are the least expensive of the works we purchase’ and yet had the greatest benefit in boosting membership and revenue for the association.”²⁵⁰ The mercantile library as commercial laboratory makes sense when considering that it was established and run by young clerks who were struggling with identification and subsumed in a commercial

²⁴⁸ Perkins, 381.

²⁴⁹ Thomas Augst, “The business of reading in nineteenth-century America: the New York Mercantile Library,” *American Quarterly*, 50 (1998), 270.

²⁵⁰ Augst, “The business of reading,” 278.

world. Cultural and social status become capital in this environment as everything was viewed from a commercial perspective. Intangibles such as character are commodified in order to provide an economic incentive for maintenance. The mercantile libraries traded in rhetoric that emphasized these themes. As quoted in Augst, the 1831 New York Mercantile Library Association report indicated that character had more value than capital:

Unavoidable misfortunes may swallow up his capital; circumstances beyond his control may defeat his most judicious plans, and render his most prudent speculations ruinous, yet his character will survive the storm, safely moored beyond the reach of the tempest which has scattered his property.²⁵¹

It would appear then that there was a tension between this moralizing and the economic exigencies of increasing revenues through membership. Augst argues, though, that to transcend that tension, mercantile libraries “attempted to socialize young men for public life by promoting the clerk’s identification with not only a tangible social space, but also with a more abstract community defined by ‘mercantile character.’”²⁵² Augst sees the acceptance of the novel within the collection first as a pragmatic result of competition but asserts that this acceptance evolved into a question of character: “the individual clerk’s moral autonomy in the marketplace ultimately depended on his free exercise of taste as a reader, on the capacity for social judgment which emerged from the process of self-culture.”²⁵³ In all, Augst’s analysis of the New York Mercantile Library Association provides the evidence that social libraries were interacting in cultural and social definitions that were developing over time.

The presence of fiction in mercantile libraries has been examined even by its caretakers:

²⁵¹ Augst, “The business of reading,” 285.

²⁵² Augst, “The business of reading,” 286.

²⁵³ Augst, “The business of reading,” 296.

at the foundation of the Library, its benefits, open to all, were intended mainly for merchants and their clerks. It is probable that men of no other avocation would, for their own sakes, have arranged a collection which would have become so suited to popular tastes. It is the habit of the business mind to understand the wants of the general community, and to supply them; it may be for this reasons that the Mercantile libraries have in most of our cities, become the leading distributors of reading matter to the public. This has evidently been the case with ours, during the past nine years.²⁵⁴

The essay earlier indicates that

oversight is exercised in [the book] selection, so as to insure that any which could be properly classed among 'immoral or pernicious works,' shall be rejected. And it is believed that few or none such obtain admittance. If any such are discovered, they are removed. Further than this, the right of censorship is not exercised, excepting that in selecting those upon which the money appropriated to novels shall be spent, those of the highest grade and most nearly classic may be chosen.²⁵⁵

These passages demonstrate the tension that existed in these early forays into serving a public. In more ways than "strict" social libraries, the mercantile libraries were required to be self-sustaining. Without wealthy gentleman-patrons, the mercantile library made decisions based upon the maintenance of membership rates. At the same time, these libraries sought to ensure that that collection reflected quality, acknowledging the dangers of much that was being produced in the novel class. In some ways, this fulfilled a primary goal of uplifting members in that if a library to which a clerk is a member is selective in what it chooses, the clerk is thus selective in what he reads, while at the same time being able to read fiction. The solution to this was as Augst describes, "attempting to cultivate character while continuing to satisfy tastes of readers within the mass culture of print, the managers of the Mercantile Library articulated a new framework for understanding the moral epistemology of reading. In

²⁵⁴ *Essay on the history and growth of the Mercantile Library Co. of Philadelphia, and on its capabilities for future usefulness.* (Philadelphia: Published by the order of the Board of Managers, Jas. B. Rodgers, Printer, 1867), 11.

²⁵⁵ *Essay on the history and growth of the Mercantile Library Co. of Philadelphia*, 8.

practice, if not always in theory, the policies of the Mercantile Library revealed the novel's utility as an instrument of social knowledge and ethical practice, prior to and distinct from the sacralization of literary art in the later nineteenth century."²⁵⁶ It is these motivations and subtleties that find their expression in the mercantile library movement and its successor the public library, where such tensions are more formally engaged.

Mechanics' Institutes

Mechanics' Institutes are often discussed alongside mercantile libraries, but they really were a distinct form of social library. Like many other cultural institutions in America, the Mechanics' Institutes had their roots in England. Kelly identifies four general factors for the English movement to establish Mechanics' Institutes: a gradual acceptance of universal education; a growth of "philanthropic and humanitarian sentiment"; increasing interests in the sciences; and a need for literate workers brought on by the Industrial Revolution.²⁵⁷ Ditzion argues for many of the same factors in the United States, but provides some ranking to their impact:

if one takes an overview of the social changes of the first half of the nineteenth century, humanitarianism recedes to a secondary position as a force which motivated the establishment of mechanics' and apprentices' libraries. A primary force consisted in the changing character of apprenticeship. The educational advantages of indentureship were no longer as valuable as they had been formerly. The master having more than one apprentice – the number growing larger as the mode of manufacture increased in size and complexity of unit – could no longer give the same time and attention to such general education as the terms of indentureship required.²⁵⁸

²⁵⁶ Augst, *The Clerk's Tale*, 163.

²⁵⁷ Thomas Kelly, "The origin of Mechanics' Institutes" *British Journal of Educational Studies*, 1 (1952), 17-18.

²⁵⁸ Ditzion, 203.

Mechanics' Institutes, then, were established not by the apprentices, but by the masters who were struggling to continue old models of technical education in an environment less conducive to those traditions. Establishing Mechanics' Institutes, in a day when institutions brought people together to find common solutions, can be considered part of that larger movement. Kruzas argues that unlike other organizations, though, mechanics' institutes had a "painfully obvious aura of paternalism about them. They were, in part, intended to compete with saloons for the leisure time of country boys who came to big factory towns to learn a trade."²⁵⁹

Education was an important component to the Mechanics' Institute. The library comprised only one component, a supporting component, to lectures, tutoring, and discussion programs, to direct young apprentices to appropriate activities and away from the vices competing for their attention. Given that apprentices most often did not have the benefit of formal education, the Mechanics' Institutes did not battle the same tensions between practical and classical training. Therefore, the collections held in their libraries could focus on imbuing practical and patriotic themes, while reaffirming the importance of proper behavior by its apprentice members.

Social libraries of all types provide a window into the segment of society they served and the intentions of their members. Table 8 provides a summary look at the differentiations that can be made across the various types of social libraries and trends can be identified. Audiences tend to range from highly exclusive in the athenæum to completely open in the mercantile library type.

²⁵⁹ Anthony Thomas Kruzas, *Business and industrial libraries in the United States, 1820-1940* (New York: Special Libraries Association, 1965), 21.

Social library type	Level of exclusivity	Intended audience	Themes for establishment and the governance
Athenæum	Highly exclusive, based on share ownership, annual fees, and application to join.	Social and intellectual elite	Emphasis on arts and literature; association with reading room selectivity, place to go for individual study in an exclusive environment. Established and run by members.
“Strict” social library	Exclusive, based on share ownership, annual fees, and application to join.	Social and intellectual elite	General collections, including a wide variety of areas of interest to intellectuals from many professions. Established and run by members.
Mercantile	Open	Early on for clerks, but gradually open to a general audience.	Commercial and business education, elevating clerks as a component of the business culture. Established and run by members.
Mechanics’ Institute	Open to apprentices	Apprentices, lacking in formal education, working class	Providing educational opportunities and distracting workers from other less reputable pursuits. Established by employers and run by apprentices.

Table 8: Types and characteristics of social libraries

Exclusivity is achieved through the requirements of share purchases as well as annual fees. Educational programs are more important in mercantile libraries and mechanics’ institutes, where members have not had access to formal education structures, but for athenæums and “strict” social libraries, the institutions are bound by the desire for educated men to have access to collections, to converse on topics of interest, and to remain current with scholarship both at home and abroad.

The nature of social libraries

While there were different types of social libraries, there were some similarities in their structure. All social libraries required some sort of fee structure, elected officers, had behavior clauses, and maintained some sort of hours for either a reading room or for the acquisition and return of materials when no formal space was provided. There are two trends evident in the regulations (also called by-laws or ordinances) from the sample of catalogs used in this study: first, not surprisingly, library operation became more formalized over time as the library collection grew and the social library as an institution entered into maturity; and second, the differences in intended audiences for the social libraries are reflected in both the use of the library and ancillary activities.

The fees for social libraries were not always included in the regulations. Of the eight regulations examined, only three identified specific costs. Two of those, the Library Company of Philadelphia (1835) and the New York Library Society (1838) indicated the cost of a share as distinct from annual dues that members paid. The Library Company of Philadelphia fee in 1835 was \$40.00 per share with \$4.00 a year for dues.²⁶⁰ The New York Library Society reports the same type of fee structure in the ordinances created in 1812 and printed in the 1838 catalog, but includes amendments to those fees, decreasing the price of a share from \$40.00 to \$25.00 and increasing the dues from \$2.50 to \$4.00 a year by resolution passed in 1824.²⁶¹ The cause of these changes is not explained in the regulations, but it can be supposed that the New York Library Society was responding to decreased membership

²⁶⁰ *Catalogue of the books belonging to the Library Company of Philadelphia; to which is prefixed, a short account of the institutions with the charter, laws, and regulations.* (Philadelphia: C. Sherman & Co., Printers, 1835), x.

²⁶¹ *Alphabetical and Analytical Catalogue of the New York Society Library with a brief historical notice of the institutions; the original articles of association, in 1754 and the charter and by-laws of the society,* (New York: Printed by James Van Norden, 1838), xxiii-xxiv.

discussed below by shifting the financial burden from a larger one-time payment and lower annual cost to a lower share price and an increased annual cost to attract new members. The 1856 Library Company of Philadelphia catalog does not report the fee structure, but Rhees reports in 1857 that the annual dues were \$4.00, indicating that in the over twenty years between the two catalogs, the fees had not been changed.²⁶²

The Louisville Mercantile Library Association (1843) reported a different fee structure. Membership to the Library Association cost \$5.00 quarterly for the first year. For subsequent years, the cost was based on age. For those members under 35 years of age and “engaged in commercial pursuits”, the quarterly charge was \$4.00; over 35 years of age, the quarterly charge was \$6.00. Those individuals not “engaged in commercial pursuits” could pay “\$6 in advance, and if under 25 years of age, \$5 quarterly for the first year, and \$4 thereafter until past the age prescribed.”²⁶³ This is an interesting structure and communicates some of the intentions of the Library Association. Quarterly charges rather than share expenses provided a more flexible means for members who were less financially secure to participate in the Library Association. Also, the age distinction indicated a desire to recruit and serve young members and encourage their participation in the Library Association. The additional distinction between members from the commercial sector and the non-commercial sector indicated that the Library Association targeted the commercial sector but was open in its membership, and that it was interested in attracting young men to join the Library Association. This liberal membership policy was extended to the women of the community:

²⁶² William J. Rhees, *Manual of Public Libraries, Institutions, and Societies, in the United States and British Provinces of North America* (Philadelphia: J.B. Lippincott & Co, 1859), 407.

²⁶³ *Catalogue of the Louisville Mercantile Library; and a list of the newspapers and periodicals in the newsroom with an appendix, containing the library regulations and a list of the officers and life members* (Louisville: Prentice and Weissinger, 1843), 100.

“Ladies may be admitted to the privileges of the Library from \$3 in advance.”²⁶⁴ There are two possible explanations for the low price and the lack of detailed quarterly fees. First, there may have been an assumption that female members would constitute a small percentage of the membership and their use of the collection minimal. Second, it is possible that many women did not have excessive financial resources available to them and therefore a lower rate may prove less of an obstacle. The inclusion of young non-commercial members and female members in the fee structures demonstrates both inclusionary policies and a singularly middle class audience.

All of the regulations examined presented a governance structure. The election of officers appeared to be an important component to institutions. There were three different models for the leadership of a social library. In the most common model, the library was administered by a group, either referred to as Directors or Trustees. The second model was to elect individuals in singular roles such as “President” and “Vice President.” The third model was a hybrid of the first two, with a President and a group of directors or trustees. Other common officers include a treasurer and secretary. The position of Librarian was always an appointment made either by the directors or a library committee, which was, when there was a separate committee, also elected. The librarian position was that of an employee, whereas other positions were part of governance.

The election of officers was a significant component to these institutions for two reasons. The first is that it demonstrates the pervasiveness of the democratic philosophies that played out in even local institutions. Second, in most of the social libraries examined, membership required some sort of approval as well as financial resources. Therefore since the directors, for instance, had the ability to accept or reject individual memberships, they

²⁶⁴ *Catalogue of the Louisville Mercantile Library*, 100.

were able to dictate the nature of the institution. If the membership at large disagreed with such decisions, they had the ability to elect new directors. In reviewing director tenures, it does not appear that there was much volatility in leadership. This provision of the approval of membership was often mentioned in subtle passages, such as in the 1838 New York Library Society Library catalog: “Every person who shall pay to the secretary, for the time being *forty dollars*, for the use of society, may with the approbation of the trustees, or a majority of them, be admitted a member of this corporation...”²⁶⁵

Connected to the approval of members, library regulations also provided provisions for expulsion. This typically centered on the misuse or abuse of library materials, the non-return of loaned books, or dues and fees in arrears. Other articles worked directly to encourage proper behavior among its members. For example, the 1850 Regulations for the Mercantile Library Company of Philadelphia included several behavior rules including, “Conversation will not be allowed, except in a low whisper,” smoking and spitting on the floor is banned, and “members are forbidden to place their feet on the chairs, or against the book cases, or windows, or in any way to deface the rooms or furniture.”²⁶⁶ The Salem Athenæum (1842) similarly prohibits talking: “no conversations shall be allowed in the rooms, to the disturbance of any person.”²⁶⁷ These kinds of rules are similar to those of the student literary societies of colleges and universities of the eighteenth and nineteenth centuries, and some social libraries may have served the same function, but it is surprising

²⁶⁵ *Alphabetical and Analytical Catalogue of the New-York Society Library* (1838), xxiii.

²⁶⁶ *A Catalogue of the Mercantile Library Company of Philadelphia* (Philadelphia: Printed for the Mercantile Library Company, 1850), 9-10.

²⁶⁷ *Catalogue of the Library of the Athenæum, in Salem Massachusetts, with the by-laws and regulations.* (Salem: Printed at the office of the Gazette, 1842), x.

that an institution as exclusive as an Athenæum would feel the need to remind its members to be considerate.²⁶⁸

The hours of operation were also a common component to the library regulations. The institutions that include their hours of operation varied in the amount of access to the library, but, with the exception of the Louisville Mercantile Library Association, libraries were closed on Sundays and, for a few, the regulation mentioned closing on specific holidays (see Table 9). The hours were set for the convenience of their members. Several include evening hours. The Louisville Mercantile Library Association includes a few hours in the morning and the full hours in the afternoon and evening. It is noticeable that over a ten year period the hours for the Mercantile Library Company of Philadelphia more than doubled. The hours indicated in these library catalogs are certainly more substantial than those of the early days of social libraries.

²⁶⁸ MacLachlan outlines a variety of functions that college literary societies fulfilled, including social instruction, extracurricular learning, and behavioral patterns.

Library	Hours of operation	Specific closing
Library Company of Philadelphia (1835)	2 pm – sunset (April – September) 1 pm – sunset (October – March)	Sundays excepted
New York Society Library (1838)	9 am – 2 pm	Except Sunday, July 4, November 25, December 25, January 1 and “other holy days ordered to be observed by public authority” ²⁶⁹
Mercantile Library Company of Philadelphia (1840)	6 pm – 10 pm (20 February – 20 October) 5 pm – 10 pm (October 20 – February 20)	Sunday, Christmas, July 4, and New Year’s day excepted
Salem Athenæum (1842) ²⁷⁰	9 am – 1 pm 2 pm – sunset	Sundays excepted
Louisville Mercantile Library Association (1843)	8 am – 10 am 3 pm – 10 pm	(none)
Mercantile Library Company of Philadelphia (1850)	9 am – 10 pm	Sundays, New Year’s Day, Fourth of July, Thanksgiving Day, and Christmas

Table 9: Hours of operations from library regulations

It is noticeable that the “strict” social libraries and athenæums did not accommodate evening hours while the mercantile libraries did. This confirms the notion that the libraries were designed to serve intended audiences.

Like the hours of operation, as social libraries matured, the regulations became more formalized. The Mercantile Library Company of Philadelphia illustrates this formalization. In the 1840 regulations, there are 15 articles, covering the range of activities for the library: hours that the library is open, use of the reading room, lending policies, librarian duties,

²⁶⁹ *Alphabetical and Analytical Catalogue of the New-York Society Library* (1838), xxvi.

²⁷⁰ Note that at the Salem Athenæum, the Librarian was required to attend the library one hour a day to help patrons with charging materials and accepting dues. *Catalogue of the Library of the Athenæum, in Salem Massachusetts* (viii).

misuse of materials, how to leave the association, the introduction of non-members, and the prohibition of boys under fifteen years of age. By 1850, there are 22 articles and a separate section detailing the duties of the librarian in 13 points. Some articles remain steady; in 1840, Article 15 of the Regulations state “Boys under fifteen years of age, are prohibited from visiting the library; except to borrow a book, or return one for a member, avoiding all unnecessary delay; while in the library they shall not be permitted to handle the books.”²⁷¹ Similarly, in 1850, the regulations state: “minors under fifteen years of age, are prohibited from visiting the library, unless accompanied by elder members, except to obtain, or return a books for a member, and when at the library they are prohibited from handling books, papers or periodicals.”²⁷² Other articles in the regulations address new services that the library appears to offer including the provision of chessmen and chess tables, which is spelled out in three articles.²⁷³ It is this catalog as well that outlines several articles on proper behavior noted above.

Most striking is the detail provided on the librarian’s duties. The 1840 catalog include many of the later specifications, but these duties are largely integrated into the general regulations of the Association. By 1850, individual tasks are spelled out in detail. The third task is interesting in that it includes the act of classifying and charges the Librarian to “also keep a full and accurate catalogue for the use of the members.”²⁷⁴ Additionally, the Librarian is to “keep the rooms clean and well ventilated, and in good order.”²⁷⁵ But perhaps the most

²⁷¹ Article 15, *Catalogue of books belonging to the Mercantile Library Company of Philadelphia* (1840), xxii.

²⁷² Article XVIII, *A Catalogue of the Mercantile Library Company of Philadelphia* (1850), 10

²⁷³ Articles XIX, XX and XXI, *A Catalogue of the Mercantile Library Company of Philadelphia* (1850), 10.

²⁷⁴ *A Catalogue of the Mercantile Library Company of Philadelphia* (1850), 11.

²⁷⁵ *A Catalogue of the Mercantile Library Company of Philadelphia* (1850), 12.

significant is that an Assistant Librarian is provided: “The Assistant Librarian shall perform such duties as the principal Librarian may require of him, and, in the absence of that officer, shall have the charge of the Library.”²⁷⁶ With the expansion of library hours (see table 9) and the increasing size of the collections (from approximately 6,000 to 9,000 volumes²⁷⁷) it is not surprising that the library would require more than one custodian. In fact, this list of duties is surprisingly familiar to modern day librarianship with the exception of one task: the selection of materials.

Some librarians appear to have been very attached to their institutions. In a resignation letter written to the Board of the Library Company of Philadelphia, George Campbell states: “Having for twenty three years past held this situation with much pleasure and advantage to myself, and I trust not without some usefulness to others I do not relinquish it but with many regrets.”²⁷⁸ Campbell goes on to state his satisfaction in serving as librarian and his well wishes for the continued success of the library. It is not surprising that he was asked to work on the 1835 catalog for the library.

The audiences of libraries were different, and this is exhibited in the openness communicated through the regulations. On one end of the spectrum there was the inclusivity of the Louisville Mercantile Library discussed above, and on the other, the cloistering impact of the Athenæums. As discussed above, mercantile and mechanics’ libraries sought to increase their membership as a matter of survival. This business model influenced the collection of materials, including expansive access to fiction and inclusivity of membership.

²⁷⁶ *A Catalogue of the Mercantile Library Company of Philadelphia* (1850), 12.

²⁷⁷ *A Catalogue of the Mercantile Library Company of Philadelphia* (1850), x-xi.

²⁷⁸ Transcribed into the Minutes, Library Company of Philadelphia Records, 1794-1832.

The “strict” social library was also inclusive but less open and less business-like than its mercantile kin. In particular, new members needed to be approved for membership. Most of the “strict” social libraries, though, had provisions for non-members to use materials, typically for a deposit of double its value as well as a fee. For the Library Company of Philadelphia (1835), “if the book or books should belong to a set, then such person shall deposit treble the value of the volume or volumes which he shall so take out.”²⁷⁹

Athenæums were much less open than other social libraries. Not only did new members (or proprietors) have to seek approval to join the Athenæums, the institutions present a cloistered effect. In the Salem Athenæum, “no inhabitant of Salem, who is not a proprietor, or an authorized member of a proprietor’s family shall visit the Athenæum, unless attended by a proprietor.”²⁸⁰ Similarly, at the Redwood Library and Athenæum (1843), “no person, not authorized to receive books, shall be permitted to frequent the library, except in company with a member; nor shall any such person be allowed to take down books from the shelves.”²⁸¹ The exclusivity of the Athenæum is in contrast to that of the mercantile model, but the libraries performed somewhat different functions and served different audiences. McMullen, in his article, “The very slow decline of the American social library,” argues that despite the common perception that social libraries were obliterated with the rise of the public library movement, social libraries persisted, at lower frequency into the twentieth

²⁷⁹ *Catalogue of books belonging to the Library Company of Philadelphia* (1835), xxvii.

²⁸⁰ *Catalogue of the Library of the Athenæum, in Salem Massachusetts*, x.

²⁸¹ *A Catalogue of the books belonging to the company of the Redwood Library and Athenæum, in Newport, R.I. to which is prefixed a short account of the institution; with the charter, laws, and regulations* (Providence: Knowles, Vose, printers, 1843), xix.

century.²⁸² McMullen asserts through these statistics, that social libraries continued to be a significant institution throughout the development of the public library movement. McMullen provides evidence that the social library rather than disappearing, played a diminished yet still significant role in the formation of library structures in the United States. Table 10 demonstrates the resilience of social libraries during the explosive public library movement in the latter half of the nineteenth century.

Year	Strict	Other	Social total	Public	Total
1850	333	175	508	51	559
1875	707	447	1,154	404	1,558
1900	690	254	944	963	1,907

Table 10: Social and public libraries in existence, 1850, 1875, and 1900²⁸³

On the basis of these numbers, McMullen concludes: “For the country as a whole, a fair statement about the situation at the end of the nineteenth century would be that, while the public library had increased greatly in numbers, the social library had not decreased proportionately. Except in New England States, the new public libraries had not really replaced the old social libraries; essentially the public libraries had just caught up with the social libraries.”²⁸⁴

Two trends, though, that McMullen does not mention also provide perspective on this period in American library history. First, beginning in the 1820s and 1830s and on-going through the rest of the nineteenth century, social libraries serving specific populations, topics,

²⁸² McMullen, “The very slow decline,” McMullen takes on Shera’s assertion in *The Foundation of Public Libraries* that by the 1850s, the social library was all but dead. His critique of Shera focuses on the geographic limitations of Shera’s analysis. In contrast, McMullen demonstrates through statistics that the public library succeeds in becoming a more significant library type than the social library, including the ratio of social libraries to public libraries in the period between 1851 and 1876. In New England that ratio was five social libraries to four public libraries whereas the rest the country had a ratio of five to one.

²⁸³ McMullen, “The very slow decline,” 215.

²⁸⁴ McMullen, “The very slow decline,” 216.

or social groups began to proliferate in a way that extended the earlier motivations for founding social libraries. The motivations of social capital discussed earlier for membership may have given way to the emphasis on creating organizations to serve specialized group needs. Second, McMullen does not take into account the flood of philanthropic activity towards public libraries at the end of the nineteenth century, most notably exhibited by Andrew Carnegie, which can be credited for much of the activity in establishing and sustaining public libraries. In understanding the success of the public library movement and the comparative decline of social libraries, this kind of impact should not be underestimated. It may explain why many of the social libraries may appear as fleeting, others continued to wax and wane but were on-going beyond the early success of the social library movement.

In fact many of the athenæums and strict social libraries established during the height of the social library movement are still in existence today. Of the social libraries included in the sample for this study, the Library Company of Philadelphia, the New York Society Library, the New York Mercantile Library Association, the Charleston Library Society, the Redwood Library and Athenæum, the Mercantile Library Company of Philadelphia, the American Philosophical Society, the Providence Athenæum, and the Salem Athenæum are still in existence. The other three libraries (the Louisville Mercantile Library Association, the Mechanics' Institute of the City and County of Lancaster, and the Baltimore Library Company) were merged or subsumed by public libraries.

McMullen concludes his look at social libraries in the late nineteenth century with seven observations: (1) voluntary associations provided a means for accomplishing social goals and providing members with individual satisfaction; (2) population was not evenly distributed throughout the United States, creating an uneven public library development; (3)

migration patterns from east to the west included the migration of social institutions that had proven success; (4) urban development involved not only population explosions but also the creation of special population groups as well as a more blatant class structure; (5) social impulses to assist underprivileged elements became paramount; (6) the public library movement was still in its infancy; and (7) the delineation between social and public was not clearly fixed, with the formation of quasi-public or quasi-social libraries.²⁸⁵ McMullen neglects some of the other potential components of social libraries, such as the elements of social control that were threatened by the establishment of public libraries, an overriding intellectual and scientific culture that blossomed during the social library movement, and the competitive spirit demonstrated both between cities and within an international context. Whatever the cause for on-going social library development, it is clear that social libraries comprised an important part of the larger American library landscape, and for the first half of the nineteenth century, remained the most significant development.

Taken as a whole, the social library movement reveals some important themes in American culture. All social libraries had an educational element to them. The most exclusive, the athenæum, to which self-identified intellectuals belonged and continued their intellectual pursuits, striving to compete in an international community. The “strict” social library had similar themes to the athenæum, although a more general and open nature. The mercantile library embodied notions of self-education and commercial knowledge and skills. The Mechanics’ Institute was designed by employers to both enhance a worker’s utility through education and to control social behavior. Social libraries also carried with them social messages. Membership in an athenæum or “strict” social library involved a social acceptance process along with a financial commitment. Mercantile libraries actively sought

²⁸⁵ McMullen, “The very slow decline,” 221-223.

ways to remain relevant to their current and potential memberships and sought ways to promote themselves as a central component to their community. Mechanics' Institutes created the ability for employers to survey workers' leisure time with messages of good behavior while workers would, if they chose to, demonstrate their seriousness through participation and achievement in Institute activities. While the levels of social capital varied with the social library type, social capital in some form appears in them all.

CHAPTER 4:

SOCIAL LIBRARY CLASSIFICATION SYSTEMS

Seventeen library catalogs from social libraries predating the Civil War were examined to explore classification systems and their structure (see Table 11). These catalogs represent twelve social libraries and were identified from the catalog listing compiled by Charles Ammi Cutter in 1876 for the United States Bureau of Education's special report, *Public Libraries in the United States of America; their history, condition, and management*.²⁸⁶ Cutter's list documents 1,010 library catalogs, from Harvard College's catalog created in 1723 to an Oswego City, New York catalog published in 1876. In this list, Cutter included information on the library, state, year of publication, number of pages, number of volumes, a description, and the compiler if known. As part of the description, Cutter included information about the arrangement of items in the catalog using the abbreviation "Cld." or "Cl." for catalogs that were offered in a classified order (see Figure 1).

²⁸⁶ Cutter, "Library Catalogues" with "Table XII: List of printed catalogues of public libraries in the United States, arranged by the date of publication," *Public Libraries in the United States of America: their history, condition, and management. Special report, Department of the interior, Bureau of Education* (Washington: Government Printing Office, 1876), Table XII, 576-622.

229	Baltimore Mercantile Library	Md.	1842					Suppl. in 1844.
230	Salem Athenæum	Mass.	1842	171	9,000	Cld. (5 cl., wi. 60 div.) Imp.	No index	11 Thomas Cole. Suppl. of 13 pp. the same year.
231	Detroit Young Men's Society	Mich.	1842	43				
232	New York Law Institute	N. Y.	1842	120				L. H. Sanford.
233	Medical College of South Carolina	S. C.	1842	40				
234	University of Vermont	Vt.	1842	25		Sep. auth. catal. of pam., wi. biog. data		
235	Chicago Mechanics'	Ill.	1843					
236	Louisville Mercantile	Ky.	1843	99		Cld. (30 cl., with sub-div. under History and Geography.) Imp. Index of A., transl. and ed.		G. W. Noble, L.
237	Maine State	Me.	1843	105				
238	Worcester Lyceum	Mass.	1843	19				
239	Albany Young Men's Association	N. Y.	1843			Suppl. A.		
240	New York Law Institute	N. Y.	1843	116				
241	New York Society	N. Y.	1843			Suppl. Like catal. of 1838		
242	Zanesville Athenæum	Ohio	1843	72		A. n. p. n. d.		
243	Philadelphia Law	Pa.	1843		3,000			
244	Brown University	R. I.	1843	560	10,235	A., wi. brief biog. notices and imp.	No cont. Alph. subj. index, wi. cr. refs.	C. C. Jewett, L.
245	Redwood, Newport	R. I.	1843	95	4,047	Cld. (5 cl., 26 sections.) Imp.		C. G. Perry, D. King, N. H. Gould, Mr. Prioleau of S. C.
246	Hartford Young Men's Institute	Conn.	1844	359	9,000	A., wi. imp. and biog. data. Cld. index (13 cl.)		
247	Boston Library Society	Mass.	1844	336	10,000	A. and occas. T., wi. imp.	Cont.	G. L. Bullfinch, L.
248	Boston Mercantile Library Association	Mass.	1844	100		Diet. (A., T., some S. W.)	No imp. Some cont.	Gen. 11. Suppl. in 1846.
249	Groton First Parish	Mass.	1844	12		A., no imp.		
250	Lowell City School	Mass.	1844	66				4 annual suppl., 21 pp. each.
251	Fallsington Library Company	N. J.	1844	31				
252	Mechanics' Institute	N. Y.	1844	64				

Figure 1: Sample page from Cutter's listing in *Public Libraries in the United States of America* (1876).²⁸⁷

A list of those classified catalogs for social libraries was compiled and attempts were made to examine those catalogs. Seventeen out of a possible 50 catalogs were acquired and formed the sample. This sampling method was based on availability of the catalogs. Geographic and temporal diversity were achieved through this method.²⁸⁸

The catalogs in the sample also reflect the variety of social library types. Eight catalogs come from four “strict social” libraries as defined in Chapter 3: the Library Company of Philadelphia, The Charleston Library Society, the New York Society Library, and the Library Company of Baltimore. Four catalogs come from athenæums, which were libraries of intellectual societies: the American Philosophical Society of Philadelphia,

²⁸⁷ Cutter, 587.

²⁸⁸ The lack of substantial catalogs from the southern region of the United States reflects the lower number of libraries in that region as noted in chapter 3.

Redwood Library of Newport, Rhode Island, the Salem Athenæum, and the Providence Athenæum. Mercantile or mechanics' libraries comprise the remaining five catalogs. They include the Mercantile Library Association of New York, the Mercantile Library Company of Philadelphia, the Mechanics' Society of the City and County of Lancaster in Pennsylvania, and the Louisville Mercantile Library. The earliest catalog examined was from 1802 and the latest from 1858.

Library and Location	Date founded	Date of catalogs in sample	Number of volumes for sample catalogs²⁸⁹
Library Company of Philadelphia, Pennsylvania	1741	1807	18,391
		1835	43,884
		1856	18,000 ²⁹⁰
American Philosophical Society, Philadelphia, Pennsylvania	1742	1824	Not available
Redwood Library and Athenæum, Newport, Rhode Island	1747	1843	4,047
Charleston Library Society, South Carolina	1748	1826	12,000
New York Library Society, New York	1754	1813	12,500-13,000
		1838	25,000
Library Company of Baltimore, Maryland	1795	1802	Not available
		1809	7,231 ²⁹¹
Salem Athenæum, Massachusetts	1810	1842	9,000
Mercantile Library Association of New York	1820-1	1837	14,500
Mercantile Library Company of Philadelphia, Pennsylvania	1821	1840	6,000
		1850	10,500 ²⁹²

²⁸⁹ Unless otherwise noted, this number, when available, was derived from Cutter's table.

²⁹⁰ This number is the additional volumes added to the collection from the 1835 catalog.

²⁹¹ Stuart C. Sherman, "The Library Company of Baltimore" *Maryland Historical Magazine*, 39 (1940), 18.

²⁹² Rhees, 414.

Library and Location	Date founded	Date of catalogs in sample	Number of volumes for sample catalogs²⁸⁹
Mechanics' Society of the City and County of Lancaster, Pennsylvania	1829	1858	1,200 ²⁹³
Providence Athenæum, Rhode Island	1836 ²⁹⁴	1837	3,950
Louisville Mercantile Library Company, Kentucky	1842	1843	approx. 2,900

Table 11: Libraries whose catalogs comprise the sample by date of founding, with date of sample catalogs and corresponding number of volumes.

In order to understand the context of each classification scheme, the libraries and their classification schemes are described together. Emphasis on the founding of the library and any significant contextual events, locally and nationally are included in the analysis. There is evidence that social libraries were modeled after earlier efforts, thus the libraries and their classification systems are presented in the order of founding date (as outlined in table 11) and, if more than one catalog is examined, the classification systems are presented chronologically. Full versions of the classification schemes from the sample catalogs can be found in Appendices B-R.

The Library Company of Philadelphia

The Library Company of Philadelphia is perhaps the most famous of all social libraries. Its establishment in 1741 preceded other social libraries in the American colonies and was often heralded by other institutions as a model. It is consistently referenced by library historians as the impetus for the social library movement. While there is evidence of adoption of the Library Company of Philadelphia's model and motivation, it may be overreaching to credit it with the sole impetus for the social library movement, which served

²⁹³ As reported by Rhees in 1857, 360.

²⁹⁴ The Providence Athenæum is a combination of the Providence Library Company (1753) and the Providence Athenæum (1831).

a need of many leaders in a community to come together and debate topics of the day and share scarce intellectual resources.

The story of the establishment of the Library Company of Philadelphia has been well-told, even by Franklin himself. In his autobiography, Franklin recounts the beginnings of the notion for a library:

About this time, our club meeting, not at a tavern, but in a little room of Mr. Grace's, set apart for that purpose, a proposition was made by me, that, since our books were often referr'd to in our disquisitions upon the queries, it might be convenient to us to have them altogether where we met, that upon occasion they might be consulted; and by thus clubbing our books to a common library, we should, while we lik'd to keep them together, have each of us the advantage of using the books of all the other members, which would be nearly as beneficial as if each owned the whole.²⁹⁵

The idea and motivation have been variously assigned. Gray, in his history of the Library Company, asserts that Franklin borrowed the general idea of clubs from a visit to London: "there, among other things he learnt the principle of the club. The intellectual life of England in those days – its politics, its drama, its journals, its scientific societies – was fostered in coffee houses and nursed in tavern parlours and this secret Franklin brought back with him to America."²⁹⁶ Wolf instead credits Franklin's recognition that he and his friends were of limited means, that books were expensive at the time fueled his desire for easy access to his friends' books, which he borrowed frequently, and served as the foundation for his proposal.²⁹⁷ Both of the interpretations are surely part of the truth. Franklin established his first club, the Junto in 1727. This consisted of a group of men of similar circumstance for

²⁹⁵ Benjamin Franklin, *The autobiography of Benjamin Franklin* (New York: Washington Square Press, Inc., 1960), 87.

²⁹⁶ Austin K. Gray, *Benjamin Franklin's Library: a short account of the Library Company of Philadelphia, 1731-1931* (New York: The MacMillan Company, 1937), 3.

²⁹⁷ Edwin Wolf, *The Library of Benjamin Franklin* (Philadelphia: American Philosophical Society, Library Company of Philadelphia, 2006), 1.

debating on Friday evenings. It was to this group that Franklin made his proposal.²⁹⁸ As Franklin himself recounts, this early proposal was only short-lived: “It was lik’d and agreed to, and we fill’d one end of the room with such books as we could best spare. The number was not so great as we expected; and tho’ they had been of great use, yet some inconvenience occurring for want of due care of them, the collection, after about a year, was separated, and each took his books home again.”²⁹⁹

The failure of the book “clubbing” effort instigated Franklin to propose a more stable library endeavor. He and the members of the Junto “procured fifty subscribers of forty shillings each to begin with, and ten shillings a year” to establish the Library Company.³⁰⁰ Once twenty-five subscriptions had been collected, the Library Company was ready to proceed with the acquisitions of materials from London. The Library Company appealed to James Logan, scholar and bibliophile in residence in Philadelphia, to draw up a suitable list of works to acquire. Logan himself had long made his personal library available for use by its citizens and was well-respected for his bibliographic knowledge. Logan bequeathed his books, and the small building housing them, to the citizens of Philadelphia for their on-going use. That collection would eventually be joined with the Library Company. Logan’s list reveals some of the characteristics of the early social library and the city of Philadelphia itself. Gray’s analysis of the list provided by Logan concludes:

our forbearers were in heavy earnest when they inaugurated the first public library in America. Dictionaries, grammars, history, books of facts and dates – that is what they crave. For the young and gay the only fare is the *Spectator*, the *Guardian* and the *Tatler*. Yet for the times it is a remarkable list. For note – there is not one work of theology in it. Any other city in American of that

²⁹⁸ Gray, 3.

²⁹⁹ Franklin, 87.

³⁰⁰ Franklin, 87.

day – New York, Richmond or Boston, most of all – would have filled the list with heavy sermons and barren theomachies.³⁰¹

This trend in the collection of the Library Company did not change overly much. Wolf reports of the catalog of 1741 that approximately 33% of the collection was historical in nature, including geographies, voyages and travel narratives, 20% was literature, 20% was scientific in nature, 10% was philosophical, and 10% was on theology. The remaining collection comprised books on economics, social sciences, linguistics, and the arts.³⁰² Wolf concludes that the Library Company “flourished because it adopted a purchasing policy responsive to the needs of its intellectually alert, economically ambitious, but non elite membership.”³⁰³

The eighteenth century was a good one for the Library Company. Lewis Timotheé (later known as Lewis Timothy) accepted the role of librarian in 1731, succeeded by Franklin himself in 1733 for a short time, and then by William Parsons. A charter was obtained in 1742 and by that time the library had an excellent reputation, acquiring materials using subscription funds as well as numerous donations. A large collection of “curiosities” was gathered, as the Company began to accept subscriptions in kind and garnered other donations.³⁰⁴ The only way in which the Library Company faltered was the directors’ attendance to governance. Franklin tried different ways to motivate directors to attend meetings, including fines. One such penalty, the sending of two bottles of wine to serve as a proxy, had early success:

³⁰¹ Gray, 10.

³⁰² Wolf, 4-5.

³⁰³ Wolf, 6.

³⁰⁴ Gray, 15.

the Directors attended in force with great regularity – not, we may be sure, from motives of parsimony or prejudice against the consumption of wine, but in the hope that the other Directors would be represented by their proxies. But even that device lost vigor with time and in some years – in the eighteenth century – the bottles far outnumbered the Directors in the regularity of their appearance at the Board table.³⁰⁵

The Library Company moved to larger quarters in 1740, occupying an upper floor room in the State House. It remained in those quarters for 34 years. Throughout this time, the Library Company served several different audiences, including government and judicial officials as well as its standard membership. Jacob Duché reports of the library in 1774, “you would be astonished, my Lord, at the general taste for books, which prevails among all orders and ranks of people in this city. The Librarian assured me, that for one person of distinction and fortune, there were twenty tradesmen that frequented this library.”³⁰⁶ Perhaps this can be identified as the secret of the success of the Library Company. Unlike other social libraries, which often waxed and waned in terms of energies for the institution, the Library Company of Philadelphia does not suffer from this kind of legacy. Perhaps this longevity should also be credited to Franklin’s long and sustained interest in the Library Company. He remained actively engaged in the Library Company until his death in 1790. In fact his final act relating to the Library was the inscription to a stone in the building constructed for the Library Company in 1789 to the “Philadelphian youth then chiefly artificers... cheerfully instituted the Philadelphia Library, which tho’ small at first is become highly valuable and extensively useful...”³⁰⁷

³⁰⁵ Gray, 14-15.

³⁰⁶ As quoted in Gray, 20.

³⁰⁷ Gray, 34.

The Library Company also fared reasonably well during the Revolution, despite Philadelphia's occupation in 1777 and 1778. During that occupation, English officers made use of the books in the library, paying for that use. As Gray recounts, "on the whole they conducted themselves discreetly and gave the Librarian little trouble. Though in these years of war several books were lost, stolen or damaged, little blame for that has been laid at their door. They returned books punctually and observed all the regulations about slumber and civility."³⁰⁸ This experience was drastically different from other social libraries. One possible reason could be the reputation that the Library Company had by the time of the Revolution, both within the colonies and throughout Europe. Foreign correspondents had long provided donations of books and other materials. It could also have been that the Library Company's foundation was so well-established by the time of the Revolution that its attendance did not diminish throughout the Revolution. Following the British occupation, which is recounted as a surreal, "gay" time for the city, hardship settled into the city. Nonetheless, the library survived, and during peacetime the Library resumed business, including the acquisition of books from London.³⁰⁹

The Library Company, and Philadelphia itself, became the center of the new republic, hosting Congress itself until its move to New York. While Congress was housed in Philadelphia, the Library Company served Congress in its work. In fact, George Washington and his successor, John Adams, were elected honorary members of the Library Company.³¹⁰ During this time the Library Company erected its own building. The rent it was paying for its present quarters (then Carpenter's Hall, where it had moved to in 1773) was to double, and

³⁰⁸ Gray, 29.

³⁰⁹ Gray, 30-33.

³¹⁰ Gray, 33.

the library had outgrown the facility. The Library purchased two adjacent lots in 1789 and began construction. The building was completed in 1791 and the collection was relocated. In 1792, the heirs of James Logan approached the Library Company for the care of the Loganian collection, including the plot of land where the collection was housed. The Library Company continued on into the nineteenth century.

Throughout the first half of the nineteenth century, there was tremendous stability in the Library Company's custodians. Zachariah Poulson served from 1785 to 1806, George Campbell from 1806 to 1829, and John Jay Smith from 1829 to 1851, when he was succeeded by his son Lloyd P. Smith.³¹¹ A catalog was created in 1789, with supplements published in 1793, 1794, 1796, 1798, 1799, and 1801.³¹² As part of the transition from one librarian to the next, plans for a new catalog were made.

1807 Catalog

This classification scheme has two layers. The first consists of four classes: *Memory*, *Reason*, *Imagination*, and *Miscellanies*. These class names can be derived from Bacon's system of the organization of knowledge. However, the classes mirror exactly the classification system created by Thomas Jefferson, although there are some significant differences between Jefferson's classification system (at the time of the sale of his collection to the government to reconstitute the Library of Congress collection in 1815), which subverts the order that Bacon established from "*Memory, Imagination, Reason*" to "*Memory, Reason, Imagination*." The 1807 system includes *Sacred history* and *Ecclesiastical History* as part of the *Memory*, whereas Jefferson includes only *Ecclesiastical*. Additionally, the 1807 scheme

³¹¹ *Catalogue of books belonging to the Library Company of Philadelphia, Vol. III containing the titles added from 1835 to 1856. Together with an alphabetical index to the whole* (Philadelphia: Printed for the Company, 1856), xv.

³¹² Rhees, 406.

includes mechanical arts, such as *Agriculture and gardening* and *Arts and manufactures* as part of the *Reason* class, whereas Jefferson placed *Agriculture* and *Technical Arts* in *Reason* and *Gardening* in *Fine Arts* (Imagination). Where it was needed, additional subjects are indicated as part of the subclass name. For example, *Civil history* has an additional “including biography, antiquities, military and naval history, and civil history properly so called” note and natural history is represented by *Natural history, in all its branches*. The second level provides substantial granularity. There are 31 separate sub-classes, with *Reason* being the most heavily subdivided, constituting 22 of the subclasses. Beyond that, the titles were listed alphabetically by author, although the *Pamphlets* in the *Miscellanies* were placed in a parallel classification order.

A substantial amount is known about the construction of this catalog. It was created by Archibald Bartram, a printer and member of the Library Company. In a letter to Thomas Parke, then president of the Library Company’s Catalogue Committee, Bartram notes: “I hope I shall not be considered as too importune if again requesting thy attention to the subject of the Catalogue. Its arrangement will doubtless be severely scrutinized both by the friends and opposers of the plan, and as the reputation of the Committee is implicated, as well as my own, in the judicious performance of that plan, I am anxious that they should review the leading words I have chosen before the leaves are cut up for alphabetical distribution.”³¹³ He goes on to discuss the desire to deal with problems with the pamphlet collection, including the currency of some of its contents, and suggests that the pamphlets be arranged in some kind of system. Bartram provides a suggested system, noting that the “adoption of this or some better plan I am desirous of, that when the stranger makes its appearance in the world it

³¹³ Archibald Bartram to Thomas Clarke, 17 May 1806, LCP Records 7444.F.13, Library Company of Philadelphia, Philadelphia, Pennsylvania.

may not excite ridicule by its awkwardness nor be exposed to the sneers of those who may think they could have managed things much better.”³¹⁴ Bartram’s involvement in the creation of the Catalogue was reported first in the minutes of the Library Company on 6 March 1806.³¹⁵ It appears from entries in the minutes over the next year that Bartram received a total of \$2,098.76 for the creation and printing of the Catalogue.³¹⁶ The final payment to Bartram reflected the esteem the Committee had of his work: “The Catalogue Committee reported that the catalogues were complete and delivered and they recommend to the board in consideration of the merits of Mr. Bartram in arranging and correcting the catalogues to increase the sum agreed to be paid for the same to four hundred dollars, which the board consented to do.”³¹⁷

The catalogs were a revenue generator for the Library Company, reflecting the interest in the Library Company’s collections and the role that the Catalogue plays in that interest. At the same board meeting, “The Librarian [George Campbell Jr.] reported that of the Catalogues in his possession he has sold two hundred and twenty and has paid to the Treasurer four hundred and eighty two dollars and fifty cents the money received for the same.”³¹⁸ By 28 April 1808, the Library Company had earned \$724.50 on sales of the Catalogue, and the Library Company minutes recapitulation calculations (done in late April

³¹⁴ Archibald Bartram to Thomas Clarke, 17 May 1806, LCP Records 7444.F.13, Library Company of Philadelphia, Philadelphia, Pennsylvania. Emphasis in the original.

³¹⁵ Minutes, Library Company of Philadelphia Records 1794-1832, 4, 203.

³¹⁶ Minutes, Library Company of Philadelphia Records, 1794-1832, 4, 239.

³¹⁷ Minutes, Library Company of Philadelphia Records, 1794-1832, 4, 231-232.

³¹⁸ Minutes, Library Company of Philadelphia Records, 1794-1832, 4, 232.

or early May of each year) indicate that catalog sales continued until 1830, totaling approximately \$2,100.00.³¹⁹

The Library Company went through a change in leadership at the time of the creation of this catalog as well. Zachariah Poulson resigned as librarian at the 6 March 1806 Board meeting, and the secretary was instructed to “insert an advertisement in two of the daily papers of this city inviting proposals from persons willing to execute the duties of librarian in order that the same may be laid before the Board at the next meeting; the present librarian being requested in the mean time to continue the exercises of the duties heretofore performed by him.”³²⁰ In the next month’s meeting, George Campbell was elected Librarian, and in the May meeting, Poulson was elected treasurer.³²¹ Campbell served as Librarian for the Library Company until his resignation in 1829. Replacing Campbell as Librarian was John Jay Smith. Following a fire in 1831, which resulted in the loss of 392 volumes and the creation of a “Committee on the new Catalogue” in 1833, Campbell was drafted in 1834 to prepare a new catalog for the Library.³²²

1835 Catalog

Despite the fire in 1831, the Library Company of Philadelphia’s collection had increased in size that by 1832 it was deemed necessary to create a new catalog. This also afforded the opportunity to re-examine the classification system. In doing so, the 1835 catalog reflects a new classification system that was retained in the catalog that followed (1856, discussed below) and further expanded on by Lloyd P. Smith in a presentation at the

³¹⁹ Minutes, Library Company of Philadelphia Records, 1794-1832, 4 and 5. Recapitulations on various pages.

³²⁰ Minutes, Library Company of Philadelphia Records, 1794-1832, 4, 210.

³²¹ LCP minutes, v. 4. Library Company of Philadelphia, Philadelphia, Pennsylvania, 212 and 214.

³²² Minutes, Library Company of Philadelphia Records, 1794-1832, 6, 47 and 55.

American Library Association's Conference of Librarians at Cincinnati.³²³ The system consists of five classes: *Religion; Jurisprudence; Science and Arts; Belles Lettres*; and *History*. These classes are prefaced by a section called *Bibliography*. In the 1882 version of the classification system discussed by Smith, an additional class, "Bibliography and the history of literature" is appended to the end. In the 1835 classification system, each class is then subdivided into numerous subclasses and arranged according to subject. There are a total of 187 subclasses contained in the catalog, which should not be surprising given that the collection at this point is so large that the catalog itself is two volumes. The subclass titles are highly descriptive, and indicate that some subjects were treated as aggregate while others demanded their own space. For example, in the *Belles Lettres* class, *Poetry* is divided up into four subclasses:

- Treatises on Poetry
- Greek and Latin Poetry, and translations
- English Poetry
- French, Italian, and German Poetry, and Translations

Note the clumping of the classical languages, the singling out of English poetry and then the clumping again of foreign language poetry. There are similar groupings for other subclasses as well, with the order going from general to more specific. For example, in the *Science and Arts* class, natural history is represented by the following subclasses in order:

- Natural History, General Works
- Natural History of different countries, &c.
- Geology, Volcanoes, Earthquakes, Waters, &c.
- Botany, General works
- Zoology: Animals, Birds, Fishes, Insects, Shells, &c.

It is interesting that *Jurisprudence* occupies the second position in the classification system.

This catalog is the first of the social library classification schemes to put such an emphasis on

³²³ Lloyd P. Smith, "The Classification of Books" *Library Journal*, 7 (1882), 172-174.

legal materials, including eighteen subclasses. What is remarkable is that the classification scheme separates out not just United States legal materials from that of other countries, but provides a sub class for British, continental Europe, and Asia. This could reflect an increasing interest by the membership of the Library Company in conducting business with foreign countries.

1856 Catalog

The 1856 catalog is a supplement to the 1835 catalog for the Library Company of Philadelphia (discussed above). The classification scheme is structured with the same five classes and a prefatory bibliography section. As noted in the preface to the 1856 catalog, “As regards the classification of the body of the work, the method of the Catalogue of 1835, consisting of the five great divisions of Religion, Jurisprudence, Sciences and Arts, Belles Lettres, and History, each subdivided into appropriate heads, and the whole preceded by Bibliography, has been followed in the present volume.”³²⁴ The classification scheme, though, contains 172 subclasses and there are some differences between the two systems. While the order of subclasses was retained, not all subclasses from 1835 are included in the 1856 catalog and some new subclasses appear. For example, *Treatises on Toleration* (*Religion* class) is in the 1835 classification system, but not in the 1856, whereas *Medical Jurisprudence* concludes the 1856 *Jurisprudence* class, but is not present in the 1835 system. A comparison of these two class systems yields 201 unique subclasses. However, between 1835 and 1856, 27 subclasses titles changed in some way, either by including more specificity, creating a single subclass for multiples in the original, or in one case moving one topic from one subclass to another subclass (Eulogisms moved from Orations, speeches,

³²⁴ *Catalogue of the Books belonging to the Library Company of Philadelphia* (1856), vii.

Eulogisms, and Addresses in Belles Lettres in the 1835 system to Biography, Personal Narratives, Eulogisms in History in the 1856 system).

The 1856 scheme notes the appearance of sixteen new subclasses, including *Medical Jurisprudence* in the *Jurisprudence* class; *Ethnology*; *The Natural History of Man, and the Unity of the Human Race*; *Acoustics – Sound*; *The Naval Service, Naval Gunnery, Vessels of War, and Military Art – Historical Works* in the *Science and Arts* Class; *Recapitulation of Periodicals* in the *Belles Lettres* class; and *Maps, Plans and Charts*; *U.S. Coastal Survey Charts*; *Australia, New Zealand, and Van Diemen’s Land*; *History of Russia and Poland*; *History of China and Japan*; *History of Hindostan, and of the British Empire in the East Indies*; *History of Egypt, Oceanica, Polynesia*; *Public Documents, State Papers, &c., of the United States*; and *Particular History, arranged Chronologically in History*. The preface of the 1856 catalog includes highlights from the catalog’s additions to the collection, but it does not reveal the reasons for the appearance of these new subclasses. However, supposition points to the appearance of these subclasses and the changes in titles of others as an indication of a contextual relationship between the classification system and the world around them, and the concomitant availability of materials, which reflect these additional or revised subjects. Thus, bibliographic cataloging systems necessarily are derived from the materials in the collection (hence Hulme’s explanation of Literary Warrant in the early 20th century was in practice long before he identified the concept). For example, the 1835 catalog does not mention Australia yet the 1856 catalog includes a subclass on *Oceanica, Polynesia, Australia* in its *History* class. Australia’s colonization in 1841, and the numerous Pacific Ocean journeys took place during the gap between the two catalogs. Similarly, the 1856 catalog system includes a subclass for *U.S. Coastal Survey Charts*. These are a direct result

of the coastal survey commissioned in the 1840s by the U.S. Congress and lead by Ferdinand Hassler and then Alexander Dallas Bache.³²⁵

American Philosophical Society

The American Philosophical Society classified catalog was included in the sample as a comparative resource, since the American Philosophical Society, while still community-driven and voluntary, has alternative motives for both the operations of the Society and collecting works. That fact is reflected in their classification system. The establishment of the American Philosophical Society is entwined with that of the Library Company of Philadelphia through the person of Benjamin Franklin. In fact, Lingelbach, in his history of the library of the American Philosophical Society credits Franklin's Junto as the impetus for the initial American Philosophical Society: "in 1727 [Franklin] organized the Junto among the group of friends for study and discussion. A modest number of books was gradually assembled, and this early interest in a library was continued in the American Philosophical Society of 1743, which joined with the American Society in 1769 to form the American Philosophical Society held at Philadelphia for Promoting Useful Knowledge."³²⁶ Franklin was as active in the creation of the American Philosophical Society's library collection as he was with the Library Company of Philadelphia, most notably with the exchange of *Transactions* from many of the European academies and learned societies, a significant component of the collection. As scientific endeavors were being established in the New World, scholars needed a connection to the Old World with its center of scientific activity. As Lingelbach notes, this connection was emblematic of the scientific movement of the day:

³²⁵ Daniels, *Science in American Society*, 189-191.

³²⁶ William E. Lingelbach, "The Library of the American Philosophical Society" *William and Mary Quarterly*, 3rd ser., 3 (1946), 49.

“in search for the laws of the universe and of man, as the eighteenth century envisaged them, they developed a strong belief not only in the unity of science and learning, but also in their universal, rather than their national character. Scientists were citizens of the world, and their desire to share ideas and discoveries was equaled only by their faith in the dynamic power of ideas when applied to the practical affairs of life.”³²⁷ As discussed in the previous chapter, these ideas would evolve over time to become nationalistic, theoretical, and more professional as science evolved in the nineteenth century, but the eighteenth-century American intellectual community hungered for participation and acceptance, and the collecting drive of the American Philosophical Society with its interchange of scholarly output was part of that movement.

The Revolution forced the American Philosophical Society to suspend its activities, but the library was reasonably well protected. The Revolution had an impact on the Society, though, in that the Society reacted to the suspension by separating scientific endeavors from political events. The Act of Incorporation, written in 1780, stated: “it shall and may be lawful for the said society ... to correspond with learned societies as well as individual learned men, of any nation or country, upon matters merely belonging to the business of the said society, such as the mutual communications of their discoveries and Proceedings in Philosophy and Science; the procuring of books, apparatus, natural curiosities, and such other articles of intelligence as are usually exchanged between learned bodies for furthering their common pursuits...”³²⁸ This act further endorses the theme of universal science.

The American Philosophical Society enjoyed the benefaction of a second founding father in the person of Thomas Jefferson. He served as President, as Franklin had before him,

³²⁷ Lingelbach, 49.

³²⁸ As quoted in Lingelbach, 53.

from 1797 to 1814. It was during his years of influence that the Philosophical Society began to concentrate on Americana as a collecting mission. Lingelbach notes that this nationalistic trend in collecting coincides with the establishment of state historical societies, signaling a shift from a purely universal perspective to federal and state considerations, culminating in scientific works done by members of the Society.³²⁹

The Library through this period was in the able hands of John Vaughan, who served as Librarian from 1802 to 1841. Not only did he administer the library with enthusiasm and competence, but he retained the interest of others thorough correspondence. In an 1841 letter, Vaughan asserts: “Our library now consists of about 13,000 vols & is constantly increasingly, a small part by purchases but chiefly by donations from our citizens & from Learned Societies abroad & at home. We are in correspondence with more than 60 of the principal Academies & Literary Societies, & in return we send to them our publications, which consume two thirds of our income, without which we could not maintain our correspondence with them.”³³⁰

1824 Catalog

The American Philosophical Society classification provides an ample backdrop for the comparison of scientific classes below, but its contextual reflection is also noteworthy. For example, *Memoirs and Transactions of Scientific and Literary Institutions* forms the first class in the system. This is significant when considering the purpose of the Society. Being cut off from the intellectual community of Europe, colonists were eager to establish the Society in order to facilitate the exchange of transactions in order to remain aware of

³²⁹ Lingelbach, 56-59.

³³⁰ John Vaughan, *Account of the American Philosophical Society* (1841. Philadelphia: published for the Friends of the Library, American Philosophical Society, 1972), 8.

developments in the very active European scientific community. By establishing a Society, transaction exchange was easier to negotiate. There is also an impulse evident in the establishment of the American Philosophical Society to prove to the European community that their American counterparts were equal in terms of their scientific rigor and their scientific curiosity.

The classified catalog of 1824 includes 24 classes and numerous subclasses for each class, totaling 82 subclasses. The classification systems includes, at the class level, divisions of scientific disciplines (*Astronomy; Mathematics; Natural Philosophy; Chemistry; Natural History; Rural and Domestic Economy; and Medicine and Surgery*) as well as social scientific and literature classes. Most classes begin with a general subclass, with more specific or local subclasses following.

The construction of this 1824 catalog and its structure is discussed in its introduction. It begins by discussing the choice of a classified order: “they have had two objects principally in view, the one that the members might be able to find the books that they should want with the greatest possible ease, the other that those students who may wish to avail themselves of our collection, might see at one glance all that we possess relating to the subjects of their particular researches.”³³¹ It goes on to justify its subject granularity by predicting that “when [the library] shall have increased, (as is expected,) to a large number of books and manuscripts, these subdivisions, with such alterations and amendments as the state of the library at the time shall require, will be found to be highly useful and convenient.”³³² The introduction, then, turns to arrangement within subdivisions, seeking to provide a

³³¹ *Catalogue of the library of the American Philosophical Society, held at Philadelphia for promoting useful knowledge* (Philadelphia: printed by Joseph R.A. Skerrett, 1824), x.

³³² *Catalogue of the library of the American Philosophical Society*, x.

justification for its non-uniformity. For example, they note that biographies are organized by the “names of the distinguished men whose lives and actions have been thought worthy of being recorded,” historical documents, chronologically, medical works according to disease and so on.³³³ The Committee (including Peter S. DuPonceau and John Vaughan) constructing this structure concludes their discussion by dealing with its uniqueness: “the Committee acknowledge that they have not seen any catalogue of foreign or American libraries precisely so arranged; they have ventured on an experiment, not, however, without mature reflection, and with a strong hope that this method will be found useful in practice. Should it turn out otherwise, they flatter themselves that in a few years the number the books of this library will have so increased, as to require a new catalogue, in which the faults of the present one will be avoided.”³³⁴ This statement conveys an experimental attitude that speaks of the thoughtful nature of the Philosophical Society itself.

In a letter to Thomas Jefferson, Vaughan further discusses the quality and uses of the catalog:

I have the pleasure of sending you from the Socy. a copy of the Catalogue they have just completed; it has been arranged by M. Du Ponceau, who has given as much of his time as possible, ... Upon the whole we hope you will approve this first attempt... The undertaking has been very expensive, & we have been obliged *de nous cotiser* towards defraying the expence to share any funds we may acquire towards filling up the many chasms you will find under many of the heads. We hope, however, that this will be amply made up by the friends & wellwishers of our Society & of science, who may be able to assist us by their donations or their bequest.³³⁵

³³³ *Catalogue of the library of the American Philosophical Society*, x-xi.

³³⁴ *Catalogue of the library of the American Philosophical Society*, xi.

³³⁵ John Vaughan to Thomas Jefferson, 4 June 1824, as reprinted in the *Collections of the Massachusetts Historical Society*. (Boston: The Society, 1900), 21-22.

This letter demonstrates the various qualities of the Society, the challenges to creating a catalog, and the opportunities that are viewed by the library. He apologizes for any errors that may exist in the catalog, but assures Jefferson that these will be corrected in the next. He details the type of entries that were created and their utility. More importantly, though, he indicates the utility of catalogs in general by stating: “We hope it will stimulate other public societies to follow our example, & be the only means we have of embodying the knowledge of the bibliographical stock of the country, now widely scattered, & which never can be collected as in Europe in very large masses.”³³⁶ Vaughan then puts forth an idea of a distributed union catalog and the notion that once known, acquisition of needed materials would not be an obstacle for scholars. Finally, he indicates a parallel relationship between the Society and science, demonstrating the close association between the organization and the purposes for its forming. The connection to the catalog is all the stronger when considering that classification was the work that Du Ponceau contributed.

Redwood Library and Athenæum

The establishment of the Redwood Library and Athenæum shares much of its history with the Library Company of Philadelphia. In 1730, a group of “some of the most respectable men of the town of Newport” formed the Literary and Philosophical Society.³³⁷ As in Philadelphia, this society reflected the desire for discussion and structured learning: “the advantage of the association depended on a system of weekly debates and conversations, upon questions of utility or interest. The formation of a library was, subsequently, considered by them as one of the most powerful means of accomplishing their original purpose, ‘the

³³⁶ Vaughan to Jefferson, 22.

³³⁷ *A Catalogue of the books belonging to the company of the Redwood Library and Athenæum*, iii.

promotion of knowledge and virtue.”³³⁸ The Redwood Library, though, differs from Franklin’s invention in that “it did not begin with the pooled collections of several gentlemen, as was the case in the various ‘communities’ libraries that were created during the eighteenth century. The original collection represented what cultured, educated gentlemen of one of the five largest and most prosperous cosmopolitan cities in colonial America thought should be in a ‘public’ library.”³³⁹

The collection was made possible through a benefactor, Abraham Redwood, who, in 1747, pledged £500 sterling for the acquisition of books for the library. Redwood was a successful merchant and active member of the Literary and Philosophical Society. As part of this gift, Redwood “enjoined on the Society the duty of erecting an edifice, as a depository for such books as might be purchased.”³⁴⁰ Five thousand pounds was raised to pay for the building and land was donated for the location of the building, which was completed in 1750. Remarkably, the Library remains in this original structure today. It was decided in 1747, in recognition of Redwood’s gift, to call the society the Redwood Library Company.

Redwood remained active with the library until his death in 1788, serving as president for 41 years. The Library flourished during the colonial years. All acquisition was done through gifts and not through purchase. Instead, the resources of the Library Company were used to sustain officers’ salaries and maintain the building.³⁴¹ Proprietors and scholars were

³³⁸ *A Catalogue of the books belonging to the company of the Redwood Library and Athenæum*, iii.

³³⁹ Cheryl Helms, “The Redwood Library and Athenæum” *America’s Membership Libraries*, Richard Wendorf, ed. (New Castle, Del: Oak Knoll Press, 2007), 24.

³⁴⁰ *A Catalogue of the books belonging to the company of the Redwood Library and Athenæum*, iv.

³⁴¹ David King, *An historical sketch of the Redwood Library and Athenæum in Newport, Rhode Island* (Boston: Printed by John Wilson and Son, 1860), x.

generous to the Library in donating books, making the library a center of intellectual life in the colonies.

Its reputation was further emboldened by the attendance of Ezra Stiles, future president of Yale College and distinguished scholar and theologian. He was made an honorary member in 1755 and lived in Newport for twenty years, making constant use of the classical and theological materials in the library. He served as librarian for the Redwood Library during his tenure in Newport. Stiles is also credited with the promotion of the library through his European colleagues: “he held an extensive correspondence with European scholars, and the principal object of that correspondence, was to illustrate and perfect those researches and investigations in philosophy, history, antiquities and physical science, to which his mind had been prompted by the perusal of books, which he found on [the Library’s] shelves. His zeal for the diffusion of knowledge, led him to solicit for the library valuable works from European authors.”³⁴²

The combination of Stiles and Redwood ensured the success of the Redwood Library Company in its colonial years. The Library, though, did not fare well during the Revolution. Much of this can be explained by its location in Newport, which was occupied from 1776 to 1779. The Library naturally suspended activity during the Revolution, and many of its proprietors left their Newport homes to “seek shelter for themselves and their families in the more secure retreats of the country.”³⁴³ Redwood himself moved to a farm he owned in Massachusetts.³⁴⁴ As is common during war, and certainly a common story for social libraries established during the colonial era, the Library suffered, particularly in terms of its

³⁴² *A Catalogue of the books belonging to the company of the Redwood Library and Athenæum*, vi.

³⁴³ *A Catalogue of the books belonging to the company of the Redwood Library and Athenæum*, vi.

³⁴⁴ *A Catalogue of the books belonging to the company of the Redwood Library and Athenæum*, vi.

collection, although the building also sustained some damage. Almost half the collection was lost to theft during the Revolution. In fact, in attempting to reconstitute the collection in 1806, a letter was sent to the Newport Mercury pleading for the return of books belonging to the Library:

the long neglect of this institution by the proprietors, may possibly have furnished those who have books in their hands belonging to it, with an excuse for neglecting to return them; and some may have thought it was not incumbent on them to trouble themselves about books in their possessions, because they were not originally taken out by themselves. These may be the very best of poor excuses, and the company must accept them as such for the long detention of their books hitherto; but they hope those who have long obligingly had the keeping of their books, will now trust them to the care of real owners, and will not allow themselves to be satisfied with such reasons for further detention. A large portion of the Library books have, in one way or another, got upon the shelves of individuals in different quarters of the town, and many valuable sets have thus been broken and rendered useless. Before these depredations were committed upon it, it was an institution both valuable and ornamental to the town, and the society at large reaped the benefit of it. Let it again prosper, and that it may begin to prosper, let the books belonging to it be honorably restored.³⁴⁵

The Redwood Library Company suffered on additional setback during the post-Revolution period with the loss to death of its benefactor and most ardent supporter in 1788. The Library itself suffered a period of stagnation. It was revived with the arrival of James Ogilvie in Newport in 1810, who gave a lecture on the “advantages of public libraries, which contributed essentially to awaken the public to the claims of the Redwood Library on their generosity and support. He made the society a liberal donation of select and valuable books. From 1810 to the present time” states the Preface of the 1843 catalogue, “a very respectable interest has been maintained in the institution, and the funds placed at the disposal of the

³⁴⁵ Wilmarth S. Lewis, Preface, *The 1764 Catalogue of the Redwood Library Company at Newport Rhode Island*, Marcus A. McCorison, ed. (New Haven: Yale University Press, 1965), xiv-xv.

Society, have been judiciously managed in accomplishing the plans of its founders.”³⁴⁶ In 1833, the Redwood Library Company changed its name to the Company of the Redwood Library and Athenæum. As it moved forward, it enjoyed a “period of growth in the book collections, paintings, sculpture, natural history objects and a cabinet of curiosities... and other decorative arts” following the general pattern of athenæums.³⁴⁷

1843 Catalog

The Redwood Library and Athenæum is similar to the Salem Athenæum (discussed below) and Library Company of Philadelphia catalogs in the inclusion of the five classes; however, the order is different. It too begins with *Theology*, but then follows with *History*; *Jurisprudence*; *Government and Politics*; *Belles Lettres*; and finally *Science and Arts*. It also contains subclasses (many of which are labeled identically to that of Salem’s classification system), but again the order is often different. In the *History* class, it begins with *History and Chronology*, then *Biography*; *Voyages and Travels*; *Geography, Ethnology, and Statistics*; and finally *Antiquities, Mythology, Numismatics, Heraldry, and Genealogy*. The last class is the first listed in the *History* class of the Salem Athenæum catalog discussed below. There are similar identical subclasses in other classes (for example, *Political economy*; *Finance, money trade and commerce* can be found in both catalogs). A significant difference, though, is the treatment of *Theology*, which is the only class in the Redwood catalog that does not contain any subclasses.

One very interesting component of this catalog is that the classification scheme presented in the synopsis is not reflected in the order of the catalog. The actual catalog order also contains three classes not represented in the synopsis: *Fine arts*, *Maps and Charts*, and

³⁴⁶ *A Catalogue of the books belonging to the company of the Redwood Library and Athenæum*, viii.

³⁴⁷ Helms, 30.

Works presented by the order of the King of England. Figure 2 shows the two different classification systems presented in the single catalog:

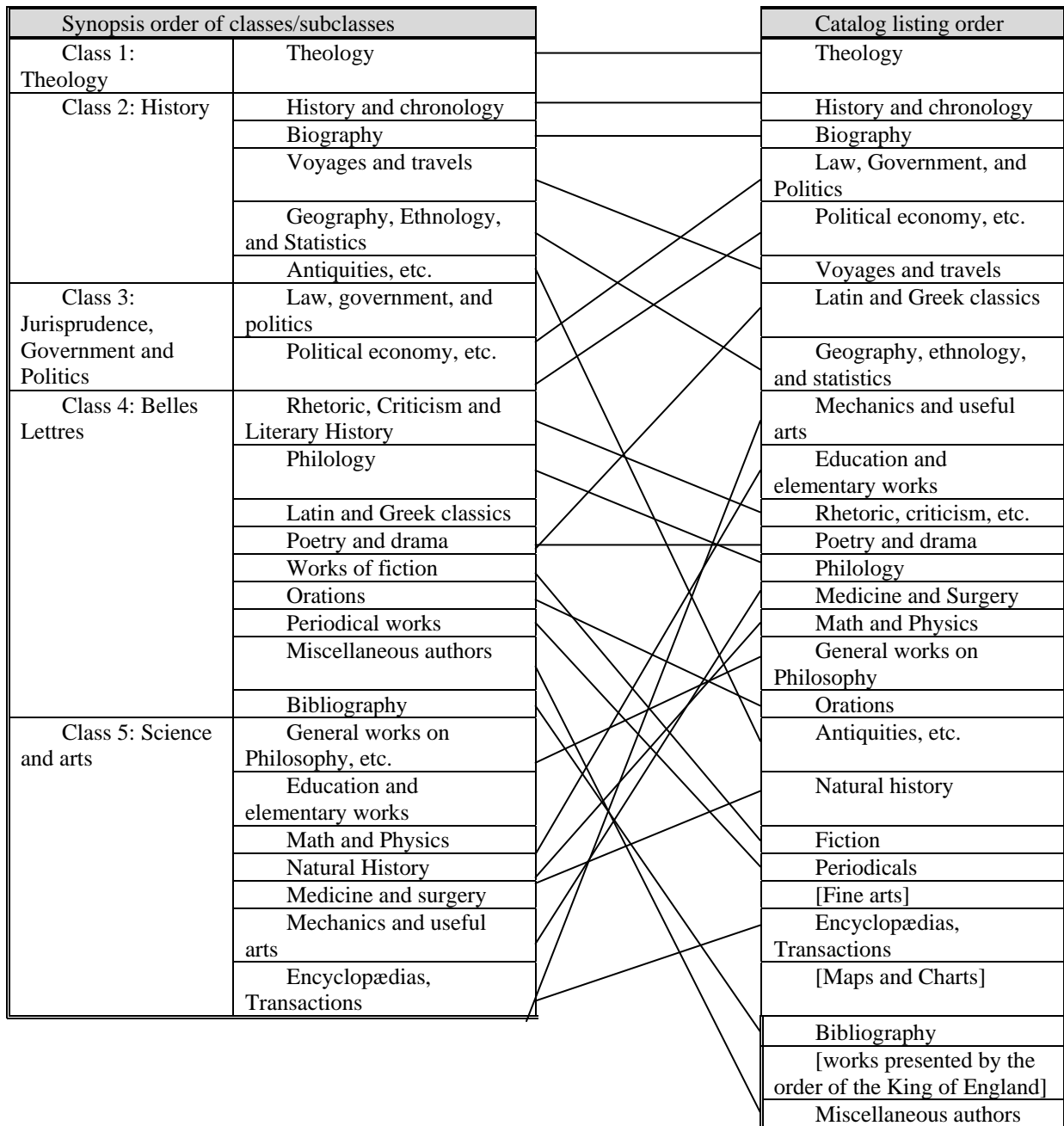


Figure 2: The changing location of classes between the synopsis and the actual arrangement of the catalog at the Redwood Library and Athenæum, 1843

The preface to the catalog contains an historical sketch, charter and regulations for the library but does not provide an explanation for the two different arrangements. One potential

explanation could be that different parties created the catalog listing of physical objects and the synopsis; another could be that the synopsis was created after the catalog listing was done. Nevertheless, the synopsis provides a perspective on the world of knowledge in its classes and subclasses, underscoring the importance of classification in its pedagogical function. Clearly the synopsis did not drive the order in the catalog.

Charleston Library Society

The Charleston Library Society was founded in 1748 by a small group of gentlemen with a unique purpose: “raising a small fund to ‘collect such new pamphlets’ and magazines as should occasionally be published in Great Britain.”³⁴⁸ Unlike other social library origins, this initial purpose speaks to a colony engaged in the political and intellectual movements of the home country, and the use of collective effort to connect to that core. Charleston itself was unique in its connection to Great Britain, in that the trade winds provided a direct route from England to the colony of South Carolina. Charleston enjoyed early and sustained prosperity based upon ample natural resources and this connection. This prosperity occurred despite very real natural disasters and political upheaval that the colony would experience in the eighteenth century.

After its initial inauspicious beginnings, the Library Society quickly became an institution that defined the elite community. As Raven notes,

the Library Society fostered a sociability that was fed by texts and London connections, but supported and encouraged by the institution of the library itself. It served as an intellectual and civic forum, a promoter of both formal and informal meetings and discussion ... and the hosting of social and political events and of scientific, natural history, and astronomical observations and experiments. The promise of an associated college was held out to member and citizens. With its regular dinners and the development of

³⁴⁸ *A Catalogue of the Books belonging to the Charleston Library Society*, (Charleston: printed by A.E. Miller, 1826), iii.

the library collection, establishing, eventually, a repository where books, instruments, and curios could be consulted, the Charleston Library Society was *the* center for cultivation in the region.³⁴⁹

Coupled with this intellectual and social component was the very real status of being a member of the Charleston Library Society. By 1750, the membership had increased to over 160 members, and in 1755 it received its charter from the Crown. Governors typically served as President of the society throughout the colonial period, and its development was swift: “The number of books on its shelves increased steadily and rapidly; and the books themselves comprising a large proportion of the ancient classical authors, reflected the enlightened character of the Society. This was the palmy period of its existence. It was, in large measure, a social club, and admission into it was eagerly sought by those who were leaders of the society of the town.”³⁵⁰ Of all the social libraries included in this study, the Charleston Library Society, during the colonial period, most clearly demonstrates the concept of social capital in relation to membership.

The Revolution was problematic for the Charleston Library Society, as is true for most of the social libraries included in this study. First, a fire in 1778 destroyed nearly half of the town of Charleston. This fire “broke out a little after midnight in the immediate vicinity of the Library. From the hour, the violence of a north wind which unfortunately blew, and the combustible materials with which our houses were usually built, the neighborhood was enveloped in flames before any effectual assistance could be rendered. The Library, which then contained, according to the statement of Dr. Ramsay, who was a member at the time,

³⁴⁹ James Raven, *London booksellers and American customers: the transatlantic literary community and the Charleston Library Society, 1748-1811*, (Columbia: University of South Carolina Press, 2002), 15.

³⁵⁰ Preface, *Catalogue of books belonging to the Charleston Library Society* (Charleston: News and Courier Book and Job Presses, 1876), iii.

between five and six thousand volumes almost totally perished.”³⁵¹ In fact, only 185 volumes were saved from the fire, and “many of these were volumes of mutilated setts [sic].”³⁵² The Library Society continued on through the Revolution despite the destruction of most of its collection; Charleston was occupied in 1780, but the Librarian at the time took charge of the collection and moved it “with him from place to place as circumstances compelled him to change his habitation, and that it was owing to assiduous care that the remnant of these Libraries were saved from entire destruction.”³⁵³

Following the Revolution, the Charleston Library Society did not enjoy the same rapid development it had in its colonial days. It enjoyed a moderate but steady increase to its collections, and in 1808 the collection numbered around 4,500 volumes.³⁵⁴ The catalog included in this study includes 12,000 volumes. The Preface to the 1826 catalog includes a chastisement that provides an explanation for the need of the Society:

It is no exaggeration to say, that if the sums which have been contributed by the citizens of this State since the peace of 1783 to literary and religious establishments in the Northern States had been applied to domestic institutions, we should long since have been furnished with all that our situation required; our children would not have been obliged to look abroad for means of instruction, nor would those who wish to engage in literary pursuits be compelled to feel and lament their inability to prosecute successfully any research, from the want of those means which in the present state of science can alone render any research successful. The knowledge of the age is recorded in the writings of the learned, and he has not access to these records, knows not the improvements of his own times. He lives with the generation which has preceded him, ignorant of the condition and attainments of the present world.³⁵⁵

³⁵¹ *A Catalogue of the Books belonging to the Charleston Library Society* (1826), v.

³⁵² *A Catalogue of the Books belonging to the Charleston Library Society* (1826), v.

³⁵³ *A Catalogue of the Books belonging to the Charleston Library Society* (1826), v.

³⁵⁴ *A Catalogue of the Books belonging to the Charleston Library Society* (1826), vi.

³⁵⁵ *A Catalogue of the Books belonging to the Charleston Library Society* (1826), vi.

It is not surprising given this kind of explanation that the classification system itself was created with due consideration of the world of knowledge and the role that a classification system could play in educating patrons.

1826 Catalog

The 1826 catalog for the Charleston Library Society is divided into six divisions. In discussing the decisions behind the creation of the catalog in its current form, the preface to the catalog states that the “objects for which Catalogues of books are consulted may be reduced to three. 1. To ascertain whether any given book is to be found in the Library to which the Catalogue belongs. 2. To learn what books on any specified subjects are contained in the Library. 3. To discover what editions of particular books, what specimens of early typography, what works from celebrated presses, are in the possession of the Library.”³⁵⁶ It goes on to note that meeting the first objective is done well through an alphabetical arrangement, but with such an arrangement the second objective is not served at all. Instead, “for the second of these objects, it is obvious that a systematic classification, where books are distributed according to their contents, will be the only sufficient and satisfactory arrangement. By this means all the books in a Library, on each branch of literature or science, in all languages and of all periods, are collected together and presented in one view; and the inquirer may at once discover the facilities, which such a Library will afford him in any particular pursuit, and its richness, or in our country more frequently its poverty, in each department.”³⁵⁷ The Preface dismisses the third object as not being universal but of only serving the interest of a select group of users. Of creating the classification system, the

³⁵⁶ *A Catalogue of the Books belonging to the Charleston Library Society* (1826), vii.

³⁵⁷ *A Catalogue of the Books belonging to the Charleston Library Society* (1826), vii.

preface states, “in forming a systematic Catalogue, care must be taken that the limits of each section be accurately defined, and that different sections and the divisions to which those sections belong, should, if possible, be so arranged that their connexion [sic] can be readily traced.”³⁵⁸ These statements are interesting for two reasons. First, they presage the Objects and Means, which Charles Ammi Cutter produced in his *Rules for a Dictionary Catalog*, considered to be fundamental to the construction of the modern catalog, which was published in 1883. The Charleston Library Society was already considering the audience and uses of the catalog long before Cutter began to analyze the problem at the Boston Athenæum. Second, they overtly acknowledge the relationship aspect of classificatory activities. Following these statements, they provide a clear outline of their approach to knowledge and how that is reflected in the classification scheme they have devised. This is an excellent example of the conscientious creation of a scheme that is driven from an understanding of knowledge:

All Literature proceeds from the understanding. Its sources are in the mind. It derives its power from the human intellect, and to its intellect it addresses its researches, it communicates its discoveries, it imparts its knowledge. Whatsoever has been devised by man, whatsoever has been revealed from on high, has been communicated and must be comprehended through the powers of understanding. It may not then be proper in an arrangement or classification of literature to commence with the inquiries which have been directed to those faculties from which literature had its origin, and without which it could have no existence.³⁵⁹

Therefore, they create the six divisions, beginning with the inquiries of rational man (Metaphysics – Logic), following with the duties that man owes to his Creator (Theology), the relationship of man to morality (Ethics), the relationship of man to each other

³⁵⁸ *A Catalogue of the Books belonging to the Charleston Library Society* (1826), vii-viii.

³⁵⁹ *A Catalogue of the Books belonging to the Charleston Library Society* (1826), viii

(Government, Politics, Jurisprudence), man's pursuits, improvements and discoveries in society, and finally, the history of man in society.

Of the six divisions, emphasis in the collection is given to the last three, constituting 296 pages of the 375 page catalog (78.9%). Each division is subdivided, and often those subdivisions are further subdivided. The granularity of this classification system is the most detailed example in the sample catalogs examined for this research. For example, the division *The History of Man in Society* is divided into ten subclasses. The third subclass is *History, Civil and Military* and that is subdivided into two subclasses, *General Treatises* and *Histories of Particular Countries*. Within the latter, there are 21 subclasses, including *Of American*, which then contains six subclasses. The third, *Of the United States* has five subclasses: *Of the Aborigines*; *General Histories*; *Of the Several States*; *Of the American Revolution*; and *Of the U. States since the Revolution*. This detailed structure reflects several modern principles of classification. First, there is an inheritance of concepts in the hierarchy. For instance, the subclass *General Histories* can be applied across the classification system (in fact, it is). However, given this structure, it is clear that the particular subclass represents the general histories of the United States. Similarly the order of the subclass, from general to specific is similar to other trends that we see in classification at the time. Additionally, at the lowest or second to lowest level, many subclasses are phrased as prepositional phrases. This technique provides a language mechanism that is seen in some of the other classification systems.

The sophistication of the classification scheme is striking. Indeed the relationship between the system and the prefatory explanation makes it clear that relatively sophisticated consideration went into the construction of the system and the catalog. For example, the preface reports,

the only alteration of any importance which has suggested itself in the progress of the work, is to arrange the works on Statistics with the works on Geography, immediately after the geographical description of particular countries. For although Statistics form a very important branch of political economy, it yet in fact happens that almost every statistics work contains some geographical notices, and every geographical work combines some portion of statistical information – in most, these subjects are so equally balanced that it becomes very difficult to locate the works when the *sections* are widely separated.³⁶⁰

The New-York Society Library

The New York Society Library was established in 1754 by prominent men in New York as a proprietary library, with members purchasing shares. The 1754 invitation in the *New York Mercury*, stated

a subscription is now on Foot, and carried on with great Spirit, in order to raise Money for erecting and maintaining a publick Library in the City; and we hear that not less than 70 Gentlemen have already subscribed Five Pounds Principal, and Ten Shillings per annum, for that purpose. We make no doubt but a Scheme of this Nature, so well calculated for promoting Literature, will meet with due Encouragement from all who wish the Happiness of the rising Generation.³⁶¹

The establishment of the New York Society Library is on the heels of the Library Company of Philadelphia. It flourished for twenty years, but suffered during the occupation of the British. In a lecture he delivered for shareholders entitled “A lecture on the Past, the present and the future of the New York Society Library,” John McMullen, Librarian in 1856 recounts, “this war threw the country into a state of confusion not easily realized at the present day, and New York being particularly exposed suffered severely. The Library was left as a spoil to the invading army. An eye-witness (Mr. John Pintard) has affirmed, that the British soldiers were in the habit of carrying away the books in their knapsacks, and bartering

³⁶⁰ *A Catalogue of the Books belonging to the Charleston Library Society* (1826), x.

³⁶¹ As quoted in Augenbraum, 148-149.

them for grog.”³⁶² Some books did survive. While it was not easy to recover following the Revolution, the New York Society Library recovered enough to serve the federal government when it was headquartered in New York from 1784 to 1789 and, like the Library Company of Philadelphia, has been called the “first Library of Congress.”³⁶³

The nineteenth century was a period of unsteady patronship and volatile politics for the New York Society Library. Glynn recounts the declining membership of the Society Library due primarily to the retention of cultural elitism. He states that, “in the aggressively egalitarian public sphere of Jacksonian New York the elite’s leadership was no longer taken for granted... public indifference was in large measure public resentment of municipal support for upper-class cultural institutions.”³⁶⁴ In reaction to this “indifference” and declining subscription rates, the Society Library raised the cost of shares and the annual fee, resulting in a \$40.00 annual fee in 1819. This is in comparison to strategies employed by other libraries in the city that tailored collection policies to guarantee membership (see the New York Mercantile Library Association below for an example of this). Glynn concludes that the “Society’s patrician leadership was mixed in complacency and lacked the energy and imagination to make fundamental changes.”³⁶⁵

The relationship between the New York Society Library and the New York Athenæum provides some insight into these turbulent years. The New York Athenæum was founded in 1824 and was immediately seen as a competitor to the Society Library. The

³⁶² John McMullen, “A lecture on the past, the present, and the future of the New York Society Library” (February 15, 1856). <http://www.nysoclib.org/testimonials2.html> [viewed on February 5, 2008].

³⁶³ Mark Bartlett and Sara Elliott Holliday, “The New York Society Library” *America’s Membership Libraries*, Richard Wendorf, ed. (New Castle, Del.: Oak Knoll Press, 2007), 67.

³⁶⁴ Thomas Glynn, “The New York Society Library: books, authority and publics in colonial and Early Republican New York” *Libraries & Culture*, 40 (2005), 506.

³⁶⁵ Glynn, 507.

Athenæum's tone was different in character, including a museum, a lecture series, and a collection of books. Succeeding primarily in the first two objectives, the Athenæum also succeeded in waking the Society Library from its complacency. It lowered the subscription rate from \$40.00 to \$25.00 in an effort to provide some competition while still focusing on the library collection.³⁶⁶ To complicate matters further, the two organizations were not exclusive in its membership or its leadership. This caused prolonged schisms among the Society Library leadership by creating pro-Athenæum and anti-Athenæum factions. Several attempts to join the two institutions were narrowly defeated until 1838. At that stage, pro-Athenæum leaders were elected and an agreement was brokered for the Athenæum to purchase shares for its members and to contribute its collection to the Society Library. Glynn describes the prolonged struggle as public and ungentlemanly, concluding that "in the 1830s the Society Library entered a critical period of self-definition in which it struggled to determine the purpose of its collection and the public it intended to serve."³⁶⁷ This period resulted in the creation of an institution that re-entered the cultural nexus of New York, hosting lectures or visits by some of the most prominent nineteenth century literary figures, including Ralph Waldo Emerson, Edgar Allen Poe, Charles Dickens, Henry David Thoreau, Daniel Webster, and William Makepeace Thackeray.³⁶⁸

1813 Catalog

The 1813 catalog is described by Keep as "a most presentable octavo volume of nearly 300 pages with which the half-dozen earlier pamphlet catalogues are not for a moment

³⁶⁶ Glynn, 509. See also Bartlett and Holliday, 69.

³⁶⁷ Glynn, 513.

³⁶⁸ Bartlett and Holliday, 70.

to be compared.”³⁶⁹ The compilation of the catalog was done by John Forbes, although supervision by trustees was also part of the process. This catalog was supplemented for twenty five years, and in 1837 another catalog was authorized by the Library Committee. This catalog was considered too expensive, and therefore, it did not materialize. In 1838, the catalog, which appeared to have been produced at no expense to the Library, was completed by Mr. Forbes again. It is described as “an octavo volume of about 350 pages, tastefully bound in cloth, must have commended itself as a model in library science for its day and generation. It met with flattering press notices...”³⁷⁰ Of the classification system in 1838, Keep notes that while the system was “modeled after earlier catalogues, [the classes] show a finer discrimination in arrangement...”³⁷¹

The 1813 catalog from the New-York Society Library is divided into sixteen classes. The titles are organized, alphabetically within the classes. This catalog represents approximately 12,500 volumes in the collection. It is clear that part of the aim of the catalog was to demonstrate the superior quality of the New York Society Library:

While other cities in the United States can boast of their public libraries, which are every year becoming more extensive and respectable, it would certainly be a mortifying reflection to an enlightened citizen of this flourishing metropolis, to find, upon comparison, that the city of New-York was holding an inferior rank in this particular; and that possessing all the ordinary advantages and means for the establishment of a large and splendid library, a taste and regard for literature and science, which always characterize a polished and refined community, where unfortunately wanting to realize a plan so conducive to the acquirement and diffusion of useful knowledge.³⁷²

³⁶⁹ Austin Baxter Keep, *History of the New York Society Library, with an introductory chapter on libraries in colonial New York 1698-1776*. (Boston: Gregg Press, 1973), 266.

³⁷⁰ Keep, 392.

³⁷¹ Keep, 393.

³⁷² *Catalog of the books belonging to the New-York Society Library; together with the Charter and By-laws of the same*. (New York: Printed by C.S. Van Winkle, 122 Water Street, 1813), 7.

This statement demonstrates the various “uses” these social libraries held in the various cities in the young county. As discussed in the previous chapter, various cities competed for recognition in intellectual and cultural endeavors. Similarly, it appears that cities also considered libraries to be a sign of intellectual community. That New York was seen as deficient in libraries must be rectified. One can only assume that in these kinds of comparisons, classification systems in catalogs would also come under some scrutiny.

The location of *Classics* as a second class presents an interesting aspect to classification laid out in the 1813 catalog. In later catalogs, the classics are not included as a separate class at this primary level. In fact, in the 1838 catalog from the New-York Society Library, the classics are a subclass of a subclass, meriting only a tertiary classification distinction. If one considers not only the audience but the timing of the 1813 catalog, it is not all that surprising that the classics warrant such high placement. Classical literature remained the mainstay of enlightenment thinkers, and educational curriculum focused almost solely on classical training. Movements fighting the classical curriculum model gained steam as the nineteenth century progressed.

The classification system progresses through the sciences to the historical and then social science arenas, and includes three different classes covering the literary world. Then, it turns to medicine and architecture as the last classes prior to three classes usually brought together under Miscellanies (*Magazines, Reviews, Translations of Learned Societies, and Newspapers; Miscellanies; and Pamphlets, &c.*). This inclusion of *Medicine and Surgery* and *Architecture, Civil, Military, and Naval* appears to be placed in an odd, add-on manner.

1838 Catalog

In contrast to the relatively basic classification system of 1813, the New York Society Library had developed a much more complex and structured classification system for its 1838 catalog. The collection had increased to 25,000 volumes by this time, and included 14 classes, 41 subclasses, with 12 of those subclasses being further divided. Additionally, the classes seem to represent intellectual spaces in much the same way as modern classification systems do. For example, *Belles Lettres* is organized into two sub-classes *Elementary and Theoretical* and *Proper*. *Elementary and Theoretical* is then subdivided into two more sub-classes, *Dictionaries and Grammars* and *Rhetoric, Oratory, Poesy, Philology, and Criticism*. *Proper*, on the other hand, is subdivided into seven sub-classes. These sub-classes are focused on genre but also on country of origin. The last sub-class in *Proper* is the *Greek and Latin classics and translations*.

Another aspect of modern library classification is the parallel order of sub-classes. The 1838 catalog does this to a certain extent, although there are some interesting departures. For example, the *Geography, Topography, Voyages and Travels* class has subclasses ordered: *Universal; Europe (including Great Britain and Ireland); Asia and Africa; American – North and South; Australia and Polynesia*. The *History* class has a slightly different approach: it also begins with *Universal*; then the sub-classes are as follows: *Mythology, Chronology, Antiquities, and Heraldry; Greece and Rome; England, Scotland, and Ireland; Europe; Asia and Africa; American – North and South*. Some interesting points related to this differentiation is that the *History* class is in chronological order as well as geographic divisions. In the geography et al. class, Great Britain and Ireland are included in Europe (with no mention of Scotland), but in *History*, these countries warrant their own

separate sub-class from Europe and are listed first. On the other hand, *America – North and South* is listed in both classifications as separate from other locations but together. The Monroe Doctrine, written in 1823, expressed an attitude of solidarity between North and South America from the United States perspective. It is possible that this attitude could account for this kind of grouping in the classification scheme.

There are other adjustments between the 1813 and 1838 classification systems that should be noted. In the 1813 classification system, fiction was included as part of the general literature section. In 1838, these works have been shunted to the very end of the classification system under a class heading *Novels*. They are included after the various polygraphy classes: *Transactions; Periodical Works; Polygraphy; Bibliography; and Pamphlets*. In most classification systems, these miscellaneous classes round out a classification system. In the 1838 classification system, though, novels are included as the last class. This is an interesting placement, given the debates in the next decade over the inclusion of fiction in public libraries and the negative effects of fiction on the members.

Additionally, the odd placement of medicine and architecture noted in the 1813 classification system find their way to the larger classes of *Science* and *Arts*, respectively. The order of the scientific disciplines, however, does not undergo a change, even though science itself was evolving rapidly in the early nineteenth century. In examining the classes of the 1813 system, *Mathematics, Natural and Experimental Philosophy, Astronomy, Chemistry, and The Arts* are followed by *Natural History, Botany, Agriculture, &c*. In 1838, these classes are placed under the class *Science*. This is divided into *Exact*, which includes, in this order, *Arithmetic and Mathematics* and *Astronomy*; and then *Natural*, which includes, in this order, *Natural Philosophy, Chemistry, Natural History*, and, then, the *Anatomy*,

Medicine and Surgery sub-class concludes the *Natural* sub-class of *Science*. In comparing the order, while some of the titles have been mildly adjusted, there is consistency.

The Library Company of Baltimore

Early nineteenth-century Baltimore presents an interesting environment for the life of a social library. In his history on the Library Company, Sherman notes the lack of literature in Baltimore and the presence of circulating libraries attempting to meet the needs of the community. Baltimore was a seaport town that was flourishing as a result of exports. In the decade from 1790 to 1800, Sherman notes that exportation of wheat and tobacco out of Baltimore increased sevenfold.³⁷³

The founding of the Library Company in Baltimore is documented through a series of letters written to the *Baltimore Daily Repository* in 1793. Through this interchange, the letters described a social library modeled after the Library Company of Philadelphia: A Citizen writes,

Let the number of shares be indefinite, and the subscription continue ad infinitum – Each share be equal to ten pounds – Every subscriber be obliged to pay for each share subscribed, ten shillings annually, in addition to the original subscriptions... The subscribers to choose twelve directors, a treasurer and secretary, annually, from their own body, vesting the directors with authority to constitute such bye-laws as they may judge useful for the internal government of the institution, and a discretionary power to order and select such books as they best approve of, regard being had to the value of the funds...³⁷⁴

In fact, the original constitution, signed in January 1796, bears much resemblance to the “strict social” library model and the political structures of the day. Annual meetings, traditional governance roles, and traditional social controls constitute the various articles in

³⁷³ Stuart C. Sherman, “The Library Company of Baltimore” *Maryland Historical Magazine*, v. 5 (1905), 7.

³⁷⁴ A Citizen, 2 February 1793, reprinted in “The Library Company of Baltimore” in *Maryland Historical Magazine*, 12 (1917), 300-301.

the constitution. For example, article 9 articulates the responsibilities of the librarian: “the Librarian shall give security for the faithful discharge of the Duties committed to him in such sum as the Directors may determine” while article 11 addresses the membership: “A member may be expelled, for any Misconduct, disgraceful to the Institution, and likely to impair its utility...” with stipulations for how expulsion was to take place and the recompense of the subscription rate.³⁷⁵ Non-members were also granted access to the books, but had to leave double the value of the book as a deposit.

The Library Company hired a librarian, John Mondesir, at a rate of two hundred dollars a year, who was required to open the library Monday through Saturday in the middle of the day, equaling twenty four hours of access a week.³⁷⁶ The Librarian was not responsible for book selection; instead, there was a separate committee. The first catalog was created in 1798. There is no extant copy of that catalog, but Evan’s *American Bibliography* accounts for its existence. It is not clear what format that catalog took.³⁷⁷

The history of the Library Company of Baltimore is not fully fleshed out. The 1820s and 1830s were periods of tremendous industrial growth, and the publication of supplements to the 1809 catalog indicates that the Library Company was flourishing (supplements were created in 1816, 1823, 1831, and 1841). Other aspects of Baltimore life were also thriving. Free education and the lyceum movement were both successes on the social landscape. But by 1844, the Library Company was merged with the Maryland Historical Society and the

³⁷⁵ Constitution, reprinted in “The Library Company of Baltimore” in *Maryland Historical Magazine*, 12 (1917), 308.

³⁷⁶ Sherman, 9.

³⁷⁷ Sherman, 11.

Mercantile Library Association and in 1854 ceased to exist as an independent entity.³⁷⁸

Perhaps this was a result of its exclusionary nature. As Sherman notes, “The Library Company of Baltimore... was not a classless society. It catered to a select group of merchants and intellectuals who could afford to own a share in the company costing fifty dollars, plus an annual contribution of five to ten dollars. The Directors failed to keep their institution in tune with the times by making its services available to the common man with limited income.”³⁷⁹

1802 Catalog

The classification scheme in the 1802 catalog consists of eleven classes, beginning with theological and metaphysical classes, moving to scientific, and then social scientific classes, historical and related topics, and finally language and literature classes, concluding with a miscellanies category. The classification system has only one level of analysis; within classes, the works are arranged by size and then sub-arranged by author. It is interesting to note that most class names include multiple topics: for example, the historical class title is: *History, antiquities, chronology, and biography*. This seems to indicate an acknowledgment of these various subjects and their relationship to each other, but the lack of further granularity suggests that either the collection could not sustain that granularity or that it was unnecessary to make clear distinctions between the titles.

1809 Catalog

The 1809 catalog created by the Library Company of Baltimore is a significant departure from the other classified catalogs in this study. The classification scheme contains 26 classes, but these classes are arranged alphabetically in the synopsis, eliminating any of

³⁷⁸ Rhees, 79.

³⁷⁹ Sherman, 21.

the educative functions that a classification scheme has and creating a discrete topics list instead. Despite this, the addition of 15 classes indicates an increasing granularity to topics and an explosion to the collection. In analyzing the 1809 collection, Sherman notes it was “characteristic of subscription libraries of the period, being more an academic than a popular one. Theology represented the largest single class, followed by History, Politics, and Fiction, which were equally represented. There was a rather large collection of books on such practical subjects as agriculture, husbandry, manufactures, domestic economy, and rural improvement.”³⁸⁰ For example, in the 1802 catalog, the scientific disciplines were covered in two classes: *Natural philosophy, arts and sciences* and *Physic and Surgery*. In 1809, we see the appearance of classes: *Agriculture, gardening, rural improvements, and domestic economies; Chymistry [sic]; General Science; Mathematics and astronomy; Natural history; and Physic, anatomy, and surgery*. As another example, the 1802 classification system treated *Belles lettres, criticism, classics, grammar, dictionaries, and ancient Latin and Greek authors* as a single class. In 1809, the classes covering these topics include: *Belles lettres and criticism; Classics; Grammar and dictionary*; and no indication where the “Ancient Latin and Greek authors” materials are placed. In addition, ecclesiastical history moves from *Theology, biblical learning, and ecclesiastical history* in 1802 to *History, civil and ecclesiastical* in 1809.

Similar to the 1843 catalog of the Redwood Library and Athenæum, the order of the classes within the 1809 catalog does not exactly mirror its arrangement in the synopsis (see Table 3), although it is not significantly different either. The new order does not provide any more salient reasoning than an alphabetic arrangement of classes. For example, *Dictionaries* are placed in the middle of the system between *Charts and History, Civil and Ecclesiastical*.

³⁸⁰ Sherman, 18-19.

A few classes later, *Miscellaneous* is located between *Naval* and *Natural History, Botany*. Between *Novels and Plays*, and *Poetry* is *Physic, Surgery, Pharmacopœia, Anatomy*. There appears to be no overarching approach to the order or even a consistency in class names between the two systems.

Synopsis	Order in catalog
Agriculture, gardening, rural improvements, and domestic economies	Agriculture, gardening and rural improvements
Antiquities, chronology, and mythology	Antiquities and chronology
Architecture, painting, music, &c.	Architecture and arts, dancing, music, and sculpture
Belle letters and criticism	Belle Lettres
Biblical	Biblical
Biography	Biography
Chymistry	Chymistry
Classics	Classics
Education	Education
Ethics, logic, and metaphysics	Ethics (morality)
General science	General science, Farriery
Geography and topography	Charts
Grammar and dictionaries	Dictionaries
History, civil and ecclesiastical	History, civil and ecclesiastical
Law	Law
Mathematics and astronomy	Mathematics
Military and naval	Naval
Miscellaneous	Miscellaneous
Natural history	Natural history, Botany
Novels, tales, and romances	Novel
Physic, anatomy, and surgery	Physic, surgery, pharmacopœia, anatomy
Poetry and the drama	Plays, poetry
Political	Political
Political economy and commerce	Economy (political), commerce
Theology	Theology
Voyages and travels	Tours, travels, voyages

Table 12: Synopsis and actual order of classes in the 1809 Library Company of Baltimore catalog

Salem Athenæum

The Salem Athenæum was incorporated in 1810, but its foundation predates the Revolution. It was the result of a merger of two libraries established in the eighteenth century: the Social Library (1760) and the Philosophical Library (1781). The Social Library was formed at the behest of the Monday Evening Club, a group of prominent and affluent citizens.³⁸¹ In accordance with the patterns for establishing social libraries, it was determined that a library would assist the Club's pursuits into literature and philosophy. The community in Salem, though, was more homogeneous than most other urban areas. Most of the original members of the Monday Evening Club were graduates of Harvard College, for example.³⁸² Ashton credits these early efforts for the successful foundation of the Athenæum in the nineteenth century: "the collections of these societies originating in colonial and Revolutionary days and the interest in learning and literature they had fostered, constituted the basis upon which the Athenæum was established."³⁸³

Once established, the Athenæum experienced the usual pattern during the first half of the nineteenth century. It had proprietors who were able to borrow books, from 9:00 am to sunset. In the beginning, the librarian was on duty for only one hour a day, but the Athenæum rooms and books were available to its members throughout the day, operating on what appears to be an honor system. Ashton notes of the librarian, "to be discriminating and critical with regard to books was not a requisite of the librarian; the duties of the office were chiefly clerical, and the salary was slight, -- twenty-five dollars a year from 1810 to 1843,

³⁸¹ Cynthia Wiggins, *Salem Athenæum: a short history* (Salem: Forest River Press, 1971), 4.

³⁸² Wiggins, 5.

³⁸³ Joseph N. Ashton, *The Salem Athenæum, 1810-1910* (Salem, 1917), 9.

when it was increased to fifty dollars.”³⁸⁴ As a result, librarians were typically young men and their tenures brief. Other organizations and activities within Salem meant that interest in the Athenæum waxed and waned. Political, economic, social and cultural forces all impacted the library’s progress. Significant bequests helped to ensure its survival during these early years, including one thousand dollars in 1838 from the estate of Nathaniel Bowditch, a founder.³⁸⁵

The library began producing catalogs at the outset of its establishment, the first being issued in 1811, and others following in 1818, 1826, and 1834. Annual supplements to the catalogs began in 1833.³⁸⁶ The 1842 catalog, though, is remarkable because it was the first systematic presentation of the holdings of the library. This arrangement served multiple purposes, as stated in the catalog’s “Introductory remarks”: “the systematic arrangement presents at a glance the degree of completeness in the several departments. In some, many deficiencies occur. These, we trust, will ere long be filled by the same liberality that has raised the Athenæum to its present condition.”³⁸⁷ The use of the catalog for this kind of collection development was not uncommon. For example, the 1811 Athenæum Catalog was alphabetic in nature and blank pages were left at the end of sections for new acquisitions.³⁸⁸ It is clear that the catalog was intended to be a working document for proprietors. The 1842 catalog served the library, though, demonstrating areas of collecting needs at the same time it

³⁸⁴ Ashton, 15.

³⁸⁵ Ashton, 21.

³⁸⁶ Ashton, 23.

³⁸⁷ *Catalogue of the Library of the Athenæum, in Salem Massachusetts*, [iv].

³⁸⁸ Ashton, 7.

provided proprietors with information on the holdings. It is only through a systematic arrangement that this could be subtly achieved.

1842 Catalog

The Salem Athenæum classified catalog contains six classes: Theology, Jurisprudence, Government, and Politics, Science and Arts, Belles Lettres, History, and Pamphlets. These classes are relatively consistent with others presented in other catalogs, but they are a direct derivative of the classification system developed and used by the Library Company of Philadelphia in its 1835 and 1856 catalogs. It is interesting, though, that it does not list the 1835 catalog from the Library Company of Philadelphia in its holdings but the Athenæum did own the 1807 catalog from that library. The prominence of *Theology* (with detailed subclassing) is not surprising given the religious nature of the Salem community. This Salem catalog represents the only classified catalog in the sample from the religiously conservative New England states. Rhode Island (Redwood Library and Athenæum and Providence Athenæum catalogs are in the sample) is a New England state, but it was not religiously conservative in the way that the other New England states were. Rhode Island enjoyed religious diversity, rather than religious homogeneity of earlier settlement patterns. There are other contrasts with the earlier Athenæum classification system, which preferred historical and literary classes to those of scientific or religious topics. The Salem Athenæum seems to be the opposite of that model.

Despite these differences, there are some aspects of the classification system that do seem to be appropriate for an athenæum community. For example, *History* begins with a subclass for *Antiquities, mythology, numismatics, heraldry and genealogy*. The inclusion of numismatics speaks to the target audience of the athenæum. *Belles Lettres* includes *Ancient*

Latin and Greek Authors and also *Translations of Greek and Latin Authors* at a time when these classes in other catalogs have disappeared. *Science and Arts* includes *Encyclopædias, Journals, and Publications of Learned Societies*. This inclusion demonstrates the desire that the Athenæum be a vehicle for access to the larger intellectual community.

The classification system does present a relatively granular approach to subjects. In particular the *Theology* class is very finely divided. There are twelve subclasses, including *Parænetic Theology* and *Fathers of the Church*. *Theology* also includes various denominations, including a subclass on *Jewish Antiquities, History, Literature*, and a final subclass on *Various Religions and Superstitions*.

Mercantile Library Association of the City of New York

The Mercantile Library Association of New York formed as a corporate body in 1823. The idea behind the association was “to liberalize the minds of that great body of young men who form the rising hope of our active and varied commerce; to enlarge and invigorate their capacity by solid knowledge; to elevate their spirits and their morals by familiarizing their moments of leisure with whatever is fair in the actions of other times or excellent in science, was the truest method of advancing, not only their individual respectability, but their utility to others and their own ultimate success, led the clerks in general, of New-York, to set on foot, in the year 1820, the existing association.”³⁸⁹ Even though the library quickly established a substantial collection (by 1821, the Library had about 1,000 volumes), the early history of the Mercantile Library Association is somewhat elusive. Its first five years are “imperfectly traced” even in 1837 when a catalog was published with a

³⁸⁹ *Systematic Catalogue of the books in the collection of the Mercantile Library Association of the city of New York*. (New York, 1837), iii.

brief history attached.³⁹⁰ It did, though, have startling success over the next fifty years; until 1875, it was the fourth largest library in the United States, containing 160,000 volumes with 8,300 active members.³⁹¹

The Mercantile Library Association was formed under the aegis of William Wood, who “persuaded young merchants’ clerks that they could improve themselves and their situations by investing a few hundred dollars...” indicating that this would be an advantage for employers by keeping clerks “away from taverns and billiard rooms.”³⁹² In 1830, the Clinton Hall Association, a group of older merchants interested in public cultural institutions in New York offered to assist the Mercantile Library Association in gaining funds for the construction of its own building. Membership and collection size continued to grow through the 1830s, and the Mercantile Library Association faced few of the challenges that other early social libraries encountered. The 1837 *Systematic Catalogue* preface concludes:

these leading facts in the history of our association ascertain a rapidity of progress in its prosperity, a recognized utility and efficiency, and a growing popularity full of pride for those who have been patrons of our institution, and full of hope for those who reap its benefit. Apart from the usual advantages of literary bodies and the pomp of learned name, we have created, out of the zeal, the taste, and the liberal spirit of a class, held almost careless of any praise but that of gain, an institution diffusing knowledge and the refined sentiments to a body of youth more numerous, and of a destination more important to the general offices of life than the greatest and most frequented university of Europe nourishes with science.³⁹³

These strong words of pride indicate that the Association felt that it was meeting its objectives.

³⁹⁰ *Systematic Catalogue*, iii.

³⁹¹ Augst, “The business of reading,” 275.

³⁹² Augenbaum, 154.

³⁹³ *Systematic Catalogue*, iv-v.

1837 Catalog

The 1837 catalog is the sixth created by the association. At that time, the preface indicates that the association had 3,500 members and 14,500 volumes in its library. The preface asserts, “these leading facts in the history of our association ascertain a rapidity of progress in its prosperity, a recognized utility and efficiency, and a growing popularity, full of pride for those who have been the patrons of our institution, and full of hope for those who reap its benefits.”³⁹⁴ Augst asserts that the success of the Mercantile Library Association can be understood through the acute willingness to serve the reading tastes of its members rather than succumbing to the moral structures that restricted library collections and often meant lackluster support. This is especially the case following the public library movement, which served the reading tastes of all classes. Augst argues that “reading was valued and practiced within one complex social context, to assess in tangible ways how habitual acts of thinking and feeling become the enterprise of a particular profession and institutional community.”³⁹⁵ Essentially, Augst argues that library collections like those of the Mercantile Library were part of the development of a class of people negotiating the market culture that was developing during the antebellum period.

The preface explains the purpose behind the classified catalog that was created in 1837. This is the first classified catalog created:

in devising its form, the directors were led to adopt the idea to which, as far as the necessity of very rapidly preparing it permitted, execution has been given in the present performance. This idea was, of a list in which the books should be enumerated according to the scientific classification of knowledge, and each in that minuter division to which it more directly relates; in such sort that the student may, with no assistance but his catalogue, find, in a body, all that

³⁹⁴ *Systematic Catalogue*, iv.

³⁹⁵ Augst, “The business of reading,” 270.

is proper to each matter of learning, and whatever the collection contains to elucidate it.³⁹⁶

The preface goes on to say, “The directors, in a word, were led to consider that a library is useful just in proportion as it possesses a guide to its contents; an index that, to the savant, saves his time and pains; and to the young adventurer in knowledge, going to sea for the first time, supplies a compass and a chart.”³⁹⁷ The adventurer metaphor provides the first solid indication in the catalogs examined of a direct connection between classification and education. It is not surprising that this should be present in a catalog of a mercantile library rather than from a “strict” social library. Mercantile and later mechanics’ associations were established for the betterment of those members of society who did not have traditional educational avenues available to them. This is in contrast to other social library types, which were often populated by the educated, trained to study and desirous to continue both their understanding and their social capital by such an association. The preface goes on to identify some of the features that the catalog entries provide, stating that these features are “as capable of rendering the catalogue serviceable, as a book of reference and a guide in reading, to those no longer possessing access to our collection, or even those attached to other institutions.”³⁹⁸

Attention to the education of members is seen in the document created by James Kent, *A Course of Reading*, which constitutes a listing of titles, specific translations, and sometimes comments on content. Kent provides judgments on the works that he includes in his *Course* to provide guidance for his readers. For example: “the narration is beautiful and

³⁹⁶ *Systematic Catalogue*, v.

³⁹⁷ *Systematic Catalogue*, v.

³⁹⁸ *Systematic Catalogue*, vi.

eloquent”³⁹⁹; “They are exceedingly amusing and instructive portraits of Roman society and contemporary characters”⁴⁰⁰; “... is an admirable work”⁴⁰¹; “a work of profound research, and displaying a free and vigorous spirit of inquiry and criticism.”⁴⁰² As with most works like this, it does not include titles that the author does not recommend: “the catalogue consists of *select* books in the English language and with which it would be useful and ornamental for every gentleman, in every business and pursuit, to have some acquaintance. The classification and variety of the selection are intended to meet the various tastes and habits of thinking of the numerous members of the Mercantile Library Association.”⁴⁰³ The classification that Kent refers to includes: Ancient literature, modern literature, American history, travels, voyages, biography, poetry, prose fictions, science, constitutional and commercial law, elements of moral science, evidences of natural and revealed religion, and miscellaneous. It is interesting that this classification does not directly mirror the classification of the 1837 catalog, given that the work was created just three years after the catalog under examination here.

The catalog from the Mercantile Library Association of the city of New York uses the three Baconian categories, *History*, *Philosophy* and *Poetry*, with a fourth class for polygraphs. These main classes are then divided into 146 subclasses in total. While not highly structured, as was seen in the Charleston Library Society, this classification system includes similar specificity in terms of categories. For instance, there are 36 different

³⁹⁹ James Kent, *A Course of readings, drawn up by the Hon. James Kent for the use of the members of the Mercantile Library Association* (New York: Wiley and Putnam, 1840), 14.

⁴⁰⁰ Kent, 15.

⁴⁰¹ Kent, 17.

⁴⁰² Kent, 20.

⁴⁰³ Kent, 8.

categories covering the global exploration. These categorizations begin with collections, move onto circumnavigations, and then narrow to specific countries. Following the class for circumnavigations, are multiple continents: *Europe and Asia*; *Europe and Africa*; *Asia and Africa*; *Asia and America*; *Africa and America*; *America and Europe*; at this point the classes deal with continents separately *Europe*; *Asia*; *Africa*; *America*, but are not specified at the continent level. *Australia and Polynesia* is also inserted between *Asia* and *Africa*. The pattern of the individual countries is maintained in the historical works section as well, with the one exception of the *German States* and *Switzerland*. In the travels section, the *German States* precede *Switzerland*; in the historical works section, *Switzerland* comes first. One interesting aspect to this catalog is that Natural History is included in the History class rather than the Philosophy class. The Philosophy class contains Mathematics and Natural Philosophy, while History contains Natural history, medicine, and phrenology subclasses.

The sophistication of this catalog is similar to that of the Charleston Library Society. It is not surprising, then, that the preface to this catalog also provides some justification for the scheme. The classification system serves as a complement to the world of knowledge rather than a reorganization of it.

Mercantile Library Company of Philadelphia

The Mercantile Library Company of Philadelphia was established in 1821, one year after the New York Mercantile Library. A description of the founding of the library speaks to its mercantile character: “the Mercantile Library of our city was of very humble origin, but its birth was presided over by men who were then the foremost in commercial activity and influence, and who have left behind them in accumulated fortunes or in honored families, or remembered worth, monuments of excellence that should guide those who would now

emulate their careers.”⁴⁰⁴ The actual library was established in relatively short order, going from the first meeting in November 1821, to the enrollment of three hundred members and an election for directors exactly two months later. The library opened its doors in March 1822. A librarian was employed from the outset at a salary of \$100 per year, and he was required to open the library from 6:00 pm to 10:00 pm evenings as well as the keeping of the library itself.⁴⁰⁵ As recounted, “forty-one applicants were found ready to accept these responsibilities and emoluments.”⁴⁰⁶

As is typical in the social library structure of the time, a committee was appointed to make book selections for the library. By 1824, this committee had acquired 1500 volumes and the Association had 380 members. In 1825, newspapers entered the collection, including three from Philadelphia and two from New York.⁴⁰⁷ This was the first of many moves to make the Mercantile Library relevant to its intended audience and thus secure its sustainability. In 1827, lectures began to be offered, first on mercantile law, but generally evolving to other topics, “intended to impart information and solid instruction on subjects of importance to business men. The well-known names of their authors guarantee their excellence.”⁴⁰⁸

The Mercantile Library enjoyed moderate success, experiencing less of the vagaries of social, political or economical forces than other institutions. By 1850, the company had 1,357 members, its own building, which allowed it to gain income through rental of unused

⁴⁰⁴ *Essay on the history and growth of the Mercantile Library Co. of Philadelphia*, 3.

⁴⁰⁵ *Essay on the history and growth of the Mercantile Library Co. of Philadelphia*, 3-5.

⁴⁰⁶ *Essay on the history and growth of the Mercantile Library Co. of Philadelphia*, 5.

⁴⁰⁷ *A Catalogue of the Mercantile Library Company of Philadelphia* (1850), v.

⁴⁰⁸ *Essay on the history and growth of the Mercantile Library Co. of Philadelphia*, 6-7.

rooms, and a collection of 10,500 volumes.⁴⁰⁹ By 1857, it increased its hours from 10:00 am to 10:00 pm.⁴¹⁰

1840 Catalog

The classification system used in the 1840 catalog of the Mercantile Library Company of Philadelphia consists of sixteen classes. These classes are then subdivided into more specific topics. For example, the *History* class is divided into eight subclasses (*American; Asia and Africa; Europe; General or Universal; Sacred, Oriental and Profane; Chivalry; Military; and Chronology*). This order is significantly different than other subdivisions of historical materials. Some interesting deviations: *America* is listed first and there is no mention of Latin America; *General or Universal* follows rather than leads the subclasses. The inclusion of additional classes of *Sacred, Oriental or Profane, Chivalry, Military, and Chronology* was not common in the historical subclasses of the catalogs of the time.

Taken in the context of the target audience for mercantile libraries, though, the classification system appears sensible. It begins with a *Commerce* class, followed by *Law and Government*, and then *Arts, Manual*. These classes speak directly to the needs of the target audience, which included men of business, involved in the economy and governing of the town. In addition, the specificity of some of the subclasses demonstrates an educational construct to the classification system. For example, the Natural Sciences subclasses make distinctions between geology and mineralogy, medical sciences and anatomy, physiology and a subclass for physiognomy and phrenology. The Natural sciences class concludes with a subclass “Practice of Medicine,” which brings it back to the mercantile aspect of the library.

⁴⁰⁹ *A Catalogue of the Mercantile Library Company of Philadelphia* (1850), ix-x.

⁴¹⁰ Rhees, 415.

There are some interesting aspects to the classification system, though. First, there is a class for *Foreign Language* which lists the major European languages as well as Greek and Hebrew. It is unclear from the classification systems what sorts of works are included in the *Foreign Languages* class although it is assumed that these are works that were in these languages. However, this class is not included in the literature section of the classification system, which includes two classes: *Novels and Tales* and *Belles Lettres*. As a matter of fact, *Foreign Languages* follows *Natural Sciences* and precedes *Philosophy*. This *Philosophy* class is also curious because it includes some of the physical sciences, *Astronomy and Optics*, but then turns to *Education, Logic and Rhetoric*, and then moves to *Metaphysics, Mathematics*, and concludes with *Natural Philosophy*. The next class is *Novels and Tales*, which leads the literature section. One final curiosity of the classification system is the placement of classes: *Miscellaneous, Periodicals, and Works of Reference* is placed following *Geography*, and *History* follows *Works of References*, with *Natural History* following, and then *Biography*. Finally *Religion and Theology* is the last class.

Only three classes are not subdivided in this classification system: *Novels and Tales*; *Biography*; and *Religion and Theology*. For the first two benefit from the utility of an alphabetic arrangement, the first by author or title, and the second by subject of the biography. The lack of subclasses in *Religion and Theology*, though, is interesting given the detailed dissection of that class in other systems. That and its placement as the last class leads to the speculation that religion and theology were not high priorities in this library.

1850 Catalog

The 1850 classification system for the Mercantile Library Company of Philadelphia is different from the 1840 catalog in two significant ways. First, the 1850 system contains 38

classes, and only one class (*Government*) is subdivided. Second, there are some interesting re-arrangements from the 1840 subclasses as well. For example, *Geography* is followed by *American History* and then *American Travels*. In the 1840 system, *Geography* is subdivided into *Travels* and *Voyages*, but in 1850, *Geography* represents a separate class from travels. The pairing of History and then Travels is repeated for Europe and then Asia and Africa, and is concluded with *General and Ancient History* and *General Travels and Voyages*. *Biography* then follows. *Religion* remains at the end of the classification system, but it is not the last class in this new catalog. *Miscellany* is the penultimate class, with *Foreign Languages* ending the system. *Books of Reference* and *Periodicals, Newspapers, &c.*, and *Pamphlets* now appear in the middle of the classification system and follow the initial groups of classes on economies, government and politics, and then sciences and arts, but precedes the groups of classes on history and the miscellaneous classes found at the end of the system. Another difference is the inclusion of the *Philosophy* subclasses (*Astronomy; Optics; Education; Mathematics; and Metaphysics and Ethics*) with the other branches of science. In the 1850 classification system, following *Manufactures and Trades, Botany, Chemistry, Geology and Mineralogy, Medicine, Natural Philosophy, Astronomy, Educational Treatises, Mathematics, and Metaphysics and Ethics* are the order of the scientific classes.

Other parts of the system are surprisingly consistent between the two catalogs, though. While the classes in the group of literatures are not exactly identical in both catalogs, this section begins with *Novels and Tales*, and then moves to the more scholarly aspects of literature, and concludes with *Poetry and Drama*. Overall, the target audience remains consistent with its opening with commerce, law, government, and then a move to the mechanical arts.

A note in the introduction to the 1850 catalog makes some curious remarks about the classification system employed:

The classification works in Part 1st, has been necessarily in some degree inaccurate. The previous incorrect arrangement in many cases could not be changed while the books were constantly issued from the Library. The classification being but a copy of the actual arrangement of the works on the shelves, the proper divisions of the titles according to subjects is restricted by regard to convenience in placing the books.⁴¹¹

This statement is interesting for several reasons. First, it references an aborted catalog in 1849, which “owing to unfortunate circumstances... was so incorrectly performed.”⁴¹² In what ways was that 1849 catalog effort unsatisfactory? Was that earlier failure reflected in later the classification scheme? Given that the 1840 and 1850 schemes differ dramatically, it would be interesting to know if there were disputes over new classes or even arrangement. Second, the issue of creating a catalog of a collection that is in circulation is mentioned. It is reasonable to consider that the creation of the entry would require books to be at some point physically in the library, but there is a suggestion that there is more to the construction of classification than physical presence of books. Finally, the association with physical shelf location can undermine the analysis and discursive rigor of this classification system. However, the Mercantile Library Company operated under an open shelves structure, allowing members to browse the collection and select books on their own. Rhees notes,

this library afforded its members a facility which is unusual, if it is not peculiar to this institution – the book-cases are left open to inspection; thus giving to each of the members as free a use of the books, as if they were in his private library. The place requires, to render it as useful as possible, the actual division of the books in classes on the shelves as exhibited in the classified catalogue.⁴¹³

⁴¹¹ *A Catalogue of the Mercantile Library Company of Philadelphia* (1850), x-xi.

⁴¹² *A Catalogue of the Mercantile Library Company of Philadelphia* (1850), x.

⁴¹³ Rhees, 414.

This appears to help reinforce the potential significance of the classification system despite the warning about room on the shelves. It is the beginning of what we see in other libraries where physical and intellectual locations overlap, allowing patrons to enter one system using the other.

Mechanics' Society of the City and County of Lancaster

The Mechanics' Society of the City and County of Lancaster was formed in 1829 and chartered in 1831. Its early history speaks to the zeal with which Americans were addressing the needs of education. Proximity to Philadelphia may also have influenced the creation of the Society's library. Lancaster County is located in the southeastern portion of Pennsylvania, approximately 80 miles west of Philadelphia, where libraries were thriving. As Haverstick recounts in his "History of the Mechanics' Library," the society was the "outcome of a series of meetings of prominent and public-spirited citizens of Lancaster, who had at heart the establishment of a society in the interests of the mechanic arts, and especially to meet the needs of apprentices..."⁴¹⁴ Education was the main component of the society's work, including individual tutoring and public lectures. The library was a central feature of the education mission and had continuous success. Haverstick reports that by 1844, the library had as many as 10,000 volumes.⁴¹⁵ It might be puzzling, then, that Rhees reports in 1857 that the library contains 1,200 volumes,⁴¹⁶ except that the Society suffered the vagaries of individual interests and economic fluctuations of the time. The Mechanics' Society was able to build its own hall in 1839 for around \$7,000, but their subscriptions were only \$3,677

⁴¹⁴ David C. Haverstick, "History of the Mechanics' Library" *Papers and addresses of the Lancaster County Historical Society*, 9, (1905), 335.

⁴¹⁵ Haverstick, 340.

⁴¹⁶ Rhees, 360.

for that year. This presented a deficit for the society of around \$3,300.⁴¹⁷ Early efforts were made to alleviate the debt. As Haverstick reports, the Mechanics' Society was liberal in its membership policy early on: "the society was originally organized for the benefit of mechanics, and especially apprentices, and none but such could become members. But as early as 1837 this provision was modified to apply only to the officers and standing committees."⁴¹⁸

Haverstick identifies 1843 as the turning point for the Society. The Society was still \$2,666 in debt. It took only a year or two to close the library doors, and in 1852 it sold its hall for \$4,000 and other property for an additional \$1,400. This allowed the Society to settle its debt and to invest the additional funds. That money was encumbered by the society to real estate but the interest on those investments was applied toward the purchase of books. In 1854, the Society secured a room above a shoe store and reopened its library.⁴¹⁹ It is unclear from the brief history provided by Haverstick what happened to the 12,000 volumes of a decade before. This second library, though, endured into the twentieth century.

1858 Catalog

This catalog represents the single example of a classification system created for a Mechanics' institution. The differences in the membership and the purposes for these institution types have been noted above, and the connections to the classification system are clear. The classification system contains fourteen classes. The general order of the materials includes *Biography and History*, then a class: *German, French, and Spanish Works*. The inclusion of foreign language works may reflect the large number of recent emigrants to the

⁴¹⁷ Haverstick, 344.

⁴¹⁸ Haverstick, 344.

⁴¹⁹ Haverstick, 345-346.

area? Order does not seem to have been considered for this catalog, though, as it has *Poetry*, *Miscellaneous*, and then *Religious Works*, *Scientific*, *Philosophical*, & *Mechanical*, and then *Works of Fiction*, &c. It concludes with a class *Papers* and then *German* at the very end. The *German* class refers to German periodicals received by the library. This is not surprising, given that Lancaster is located in the heart of the German community settled in Pennsylvania. The *Miscellaneous* class contains works that would fit into other classes, such as Washington Irving's *Knickerbocker* and works by William Shakespeare. The classification system itself is also not very sophisticated, but the library's collection was also not terribly well-developed in 1858. The sophistication of the classification system does reflect the sophistication of the library. This is a normal situation for mechanics' institutions whose establishment were directed by a desire to uplift (and control) the young men that filled their factories. The impending Civil War put an end to that impulse and Mechanics' institutions did not make a significant reappearance following the end of the war. At that time, the public library movement had a firm hold in the country, and more and more cities and towns were turning to a public library structure to serve the needs of the community.

Providence Athenæum

Formerly established in 1836, the Providence Athenæum that produced the catalog in question is actually a union of two social libraries, the Providence Library Company (1753) and an organization also named the Providence Athenæum (1831). The Providence Library Company is a further suggestion of the influence of Franklin and the creation of the Philadelphia Library Company. As Leonard and Worthington note in their history of the Athenæum, "whether or not Franklin's influence had anything to do with the forming of the Providence Library Company, there existed here some lack of books and the same curiosity

for them. And it takes no engineer to sight a parallel between the experiences of Franklin in Philadelphia and Stephen Hopkins, one of the prime movers in Providence.”⁴²⁰ Stephen Hopkins, a Quaker politician, was active in the affairs of the colony, a signer of the Declaration of Independence, and eventually became governor of Rhode Island. The impulse to form a library company seems natural in this kind of person.

The Library Company was formed once the necessary changes in Providence had taken place, but it was formed while Providence was still in the process of becoming an urban entity. In the first half of the eighteenth century, Providence was primarily agricultural. It evolved, though, into a trading center and commercial port, second only to Newport in the colony. The establishment of the Library Company preceded “a post office, public market house, book shop, printing press or newspaper, before Benefit Street was fully laid out.”⁴²¹

The Library Company experienced many of the usual obstacles for libraries, including a fire in 1758, relocation, and collection depletion. In interesting ways, though, the Library Company expanded its usage by opening its collection to court personnel when it moved to the Court House in 1758, to school masters in 1769, and to the college in 1770 until its own library could be established.⁴²² With this use came a period of flourishing for the Library Company, and a relatively unique aspect to this social library appears. Many other social libraries opened their doors to non-members, typically allowing non-members to borrow books for deposit and fee, but the Providence Library Company appeared to target audiences that would have direct use of the collections. The results of this open door policy

⁴²⁰ Grace F. Leonard and W. Chesley Worthington, *The Providence Athenæum: a brief history, 1753-1939* (Providence; Privately printed, 1939), 11.

⁴²¹ Leonard and Worthington, 13.

⁴²² Leonard and Worthington, 21-22.

had a deleterious effect on its collections, though, and like the Redwood Library in Newport, appeals were made through the local press with lists of missing books. As with the Redwood Library, this kind of effort does not appear to have much of an effect.⁴²³ The life of the Providence Library Company in the nineteenth century prior to its enjoinder to create the second Providence Athenæum is unclear, although it was certainly still in existence, contributing 1,680 volumes to the Athenæum.⁴²⁴

The first Providence Athenæum was organized in 1831. Leonard and Worthington call its establishment “puzzling” as it is unclear why there was impetus to establish the Athenæum with the Providence Library Company already in existence. Nonetheless, the group creating the Athenæum raised \$3,500, obtained a charter, opened a reading room, and within nine months acquired 1,159 volumes.⁴²⁵ The first annual report of the new Athenæum, published in 1837, reports “from that time (i.e. 1831) till its union in 1836 with the Providence Library, for the purpose of forming an enlarged institution, suited to the wants, and creditable to the liberality and intelligence of the community, the Providence Athenæum steadily put forth all its energies for the accomplishment of the noble object which it was established to promote.”⁴²⁶

One catalog was produced for the first Providence Athenæum (1833). The catalog used a classified structure, including 16 classes, and closely resembles the classification system included in this study (see Table 13). Differences indicate an increasing sophistication in terms of some topics. Most notable are the different treatment for literature

⁴²³ Leonard and Worthington, 22-23.

⁴²⁴ Joseph Leroy Harrison, “The Providence Athenæum II” *New England Magazine* (1911), 190.

⁴²⁵ Leonard and Worthington, 25-26.

⁴²⁶ As quoted in Harrison, 188-189.

classes and the miscellaneous materials. For the literature classes, the 1833 classification system only has two classes: *Literature and Belles Lettres* and *Fiction*. The 1837 classification system has four classes for literature: *Classics and Translations*, *Rhetoric and Belles Lettres*, *Fiction*, and *Poetry and the Drama*. For the miscellaneous categories, the 1833 bundles several components of the class, while in 1837, these are separated into five different classes.

1833 catalog	1837 catalog
Antiquities and the Fine arts	Antiquities and the Fine arts
Biography	Biography
Geography and Ethnology	Geography and Ethnology
History and Chronology	History and Chronology
Jurisprudence	Jurisprudence
Literature and Belles Lettres	Classics and Translations
Fiction	Rhetoric and Belles Lettres
Mechanics and Useful Arts	Fiction
Natural Philosophy	Poetry and the Drama
Natural History	Mechanics and Useful Arts
Moral Philosophy	Natural Philosophy and Mathematics
Philology	Natural History
Periodical Publications	Medicine and Surgery
Poetry and the Drama	Moral and Intellectual Philosophy
Religion	Religion
Miscellanea; containing Miscellaneous Dictionaries and Collections; Political Economy; Medicine; and Miscellaneous Writings	Philology
	Political Economy and Statistics
	Periodical Publications
	Miscellaneous Dictionaries
	Collectanea
	Miscellaneous
	Bibliography

Table 13: 1833 Catalog of the first Providence Athenæum and 1837 catalog of the second Providence Athenæum

The Athenæum began discussions as early as 1832 on the possibility of uniting the two libraries.⁴²⁷ In reviewing this history, it almost seems that the group who established the

⁴²⁷ Leonard and Worthington, 27; Harrison, 190.

first Providence Athenæum sought to overthrow or overtake the Library Company. If that was the motive, it took four years to accomplish this, because it was not until 1836 that the formal agreement is set in place. In creating the joint library, books were purchased from the individual libraries for a total 4,080 volumes, and members of the individual libraries agreed to exchange shares for membership in the new Athenæum. The doors opened on October 10, 1836, and Samuel W. Peckham was appointed as librarian.⁴²⁸ Peckham served the Athenæum for sixty years, first as librarian from 1836 to 1838 and also as secretary, director and president successively.⁴²⁹

1837 Catalog

The Providence Athenæum catalog has 22 classes. It starts in the historical areas, and then moves onto Belles Lettres classes, the sciences, with *Religion* placed far down as the fourteenth class in the system. This is not surprising in terms of the type of audience that athenæums attracted. Historical and literary topics were one of the main reasons for the formation of athenæums. The classification system concludes with five different classes representing miscellaneous classifications (*Periodical Publications; Miscellaneous Dictionaries; Collectanea; Miscellaneas; and Bibliography*). Aside from the placement of Religion, there are not very many peculiarities to this classification system. Following Religion is Philology and Political Economy and Statistics, which seemed to be appended to the end, before the beginning of the five miscellanies classes.

⁴²⁸ Leonard and Worthington, 28.

⁴²⁹ Leonard and Worthington, 47.

Louisville Mercantile Library Company

The Louisville Mercantile Library was established in 1842 through the collection of \$6,000 that allowed the acquisition of nearly 3,000 volumes.⁴³⁰ Other library efforts had begun and failed in Louisville, including the Louisville Library Company in 1816, which “perished, as so many of the townspeople did in the virulent fever epidemic of 1822. That catastrophe nearly depopulated Louisville; culture had to yield to more pressing problems after that epidemic passed.”⁴³¹ Other short lived library-related ventures in Louisville include the Mechanics’ Institute (1835), the Kentucky Historical Society (1838), and the Louisville Franklin Lyceum (1840). These efforts seemed to dissipate as quickly as they formed. The Mercantile Library Association had a similar fate: “after a few years of prosperous and useful life, including winter lecture courses, it languished.”⁴³² By 1850, indifference among the merchant class caused the Mercantile Library to become public.

This brief history demonstrates the patterns of frontier life. As Americans moved westward, they replicated institutions from the east, and moved more quickly through the various stages. Life on the frontier was also more precarious, as the fever epidemic of 1822 demonstrates. The history of early libraries in Louisville shows an early volatility seen in other communities, but that volatility was much more compressed and short-lived before Louisville settled on government-control of the library with custodial responsibilities being assumed by the government.

⁴³⁰ *Libraries and Lotteries; a history of the Louisville free public library* (Cynthiana, Ky.: The Hobson Press, 1944), 13-14.

⁴³¹ *Libraries and Lotteries*, 11.

⁴³² *Libraries and Lotteries*, 14.

1843 Catalog

Given the volatility of the community, a classified catalog in 1843 is surprising. The classification system for the Louisville Mercantile Library Company contains 25 classes. Similar to the other mercantile library classification systems examined, commerce and commercial law have a significant placement. In this catalog, *Commerce* is second only to *Antiquities and Fine Arts*. However, geographical and historical topics are listed after the commercial interests and before the political materials. Scientific classes are listed following the literature classes and begins with a class for *Mechanics and Useful Arts*, and *Religion* is placed towards the end of the system. The classification system concludes with six classes that cover the various kinds of miscellaneous materials, including *Periodical Literature*; *Miscellanea*; *Miscellaneous Dictionaries*; *Collectanea*; *Bibliography*; and *Periodicals and Newspapers*. It should be noted that the two classes *Philology, Logic and Education* and *Political Economy and Statistics* are placed immediately preceding the miscellaneous materials, giving these two classes a less prominent position. This is puzzling given the general aim of mercantile libraries to uplift and simulate traditional or classical education.

One possible explanation for the classified nature of the Louisville Mercantile Library's catalog may be imitation. In examining the holdings of the Library, it is noticeable that the Mercantile Library owned the 1837 Providence Athenæum catalog. The similarities between these two systems are striking (see Table 14). Not only are the classes generally in the same order, the names of classes are almost universally identical. The ways in which the systems deviate speak to the nature of the libraries themselves. For example, the insertion of "Commerce and Commercial Law," "General Geography," and "Periodicals and Newspapers" in the later catalog comprises classes that would be of interest to a mercantile

community in contrast to that of an athenæum. Where classes do not consistently match up, this result is due to these additional classes.

Providence Athenæum (1837)	Louisville Mercantile Library (1843)
Antiquities and the Fine Arts	Antiquities and the Fine Arts
	Commerce and Commercial Law
	General Geography
Biography	Biography
Geography and Ethnology	Geography and Ethnology
History and Chronology	History and Chronology
Jurisprudence and Politics	Jurisprudence and Politics
Classics and Translations	Classics and Translations
Rhetoric and Belles Lettres	Rhetoric and Belles Lettres
Fiction	Fiction
Poetry and the Drama	Poetry and the Drama
Mechanics and Useful Arts	Mechanics and Useful Arts
Natural Philosophy and Mathematics	Natural Philosophy
Natural History	Natural History
Medicine and Surgery	Medicine
Moral and Intellectual Philosophy	Moral and Intellectual Philosophy
Religion	Religion
Philology	Philology, Logic, and Education
Political Economy and Statistics	Political Economy and Statics
Periodical Publications	Periodical Literature
Miscellaneous Dictionaries	Miscellanea
Collectanea	Miscellaneous Dictionaries
Miscellaneous	Collectanea
Bibliography	Bibliography
	Periodicals and Newspapers

Table 14: A comparison of the Providence Athenæum (1837) and Louisville Mercantile Library (1843) classification systems

The Louisville Mercantile Library also owned the 1837 catalog of the New York Mercantile Library Association. It could be assumed that a mercantile library would rather choose to imitate another mercantile library's classification system. When examined, though, the classification scheme of the New York Mercantile Library may have been considered less accessible given its Baconian classes and extensive subclass structure. The Providence

Athenæum, which lays out the twenty-two classes, with little subclass structure to it (subclasses exist for *Geography and Ethnology* and *History and Chronology* and are present also in the Louisville Mercantile Library Association scheme). It may also be that the Providence Athenæum system was the easiest to imitate. The New York Mercantile Library Association's system is complex and detailed in its subclass structure in a way that the Providence Athenæum's system is not. Detailed subclasses such as *Pure mathematics, mixed mathematics* and *Fine arts, architecture, landscape gardening* may have had little utility for a newly established library's collection.

These are, unfortunately, just speculations. The Louisville Mercantile Library's catalog does not include prefatory material discussing the catalog's form or its creation. It includes an appendix that provides the regulations of the library, a list of officers and proprietors, and a list of life members, but it does not include any indication of the form of classification system or justification for its form. The absence of this evidence leaves researchers to speculate on the reasoning behind the order, although given the similarity between the two catalogs, it is clear that some sort of emulation was taking place.

In looking at the general character of the classification schemes as they are presented in the catalogs, there is a variety of structures present. Generally, the classification scheme increases in complexity, including a variety of subclasses of various levels of granularity with the size of the collection. For example, the Library Company of Philadelphia catalog in 1807 had four classes (*Memory, Reason, Imagination* and *Miscellaneous*) with 31 subclasses. The Library at that point had 18,391 volumes. By 1835, the library holdings had increased to 43,884 volumes, and the classification scheme had five classes with 187 subclasses.⁴³³ The catalog ranged in the number of classes from 4 to 38 classes with an average of 14.6 classes

⁴³³ Volume count from Cutter, subclasses were counted from the catalogs.

over the 17 catalogs. As demonstrated, catalogs with a low number of classes create the necessity for subclasses in order to divide the book in the library into meaningful groupings. Other catalogs settled with the granularity at the class-level. For example the library company of Baltimore 1802 catalog had 11 classes; its 1809 catalog, the class count had grown to 26.

There is an evolutionary level to the classes and their granularity. The New York Society Library 1813 catalog was organized into 16 classes. In 1838, their catalog had 14 classes and 41 subclasses. Of those 41 subclasses, 11 of them are further subdivided. The catalog for the Charleston Library Society published in 1826 provides another excellent example of granularity. Throughout the catalog, classes and subclasses are subdivided multiple times. For example, the *History* class is divided into two subclasses: *Chronology* and *History, civil and military*. Under that second subclass, there are two subclasses: *General* and *By country or nation*. The subclass *By country and nation* is further divided by *Ancients* and *Moderns* and then those are subdivided by country names. This is the most extreme example of granularity in the 17 catalogs examined.

In considering the distinctions made between categorization and classification discussed in Chapter 2, these classification systems provide evidence of a more refined understanding of the relationship between the two. The sophisticated systems exemplified by the Charleston Library Society are closer to Jacob's definitions of classification, but the systems exemplified by the Library Company of Baltimore or the Mechanics' Institute of Lancaster indicate a closer relationship to categorization. Perhaps, then, differentiation between the two activities should be delineated on levels of granularity rather than on the basic act itself.

Similarly, the structures presented evolve into hierarchical relationships through these sophisticated systems. The catalogs representing smaller collections, not surprisingly, have little hierarchical structure, settling on one level of classes. For example, the Mechanics' Society of the City and County of Lancaster, Pennsylvania catalog (1858) accounts for approximately 1,200 volumes and contains only 14 classes and no subclasses. Similarly, the Library Company of Baltimore catalogs (1802 and 1809) also does not have subclasses, and the collection in 1809 numbered 7,231. Size alone, though, does not determine the level of specificity a classification system has. The Redwood Library and Athenæum catalog (1843) had a collection of 4,047 volumes, but its classification system has five main classes with 23 subclasses. The Providence Athenæum catalog uses hierarchy in only two classes:

Geography and Ethnology and *History and Chronology*. The collection size is under 4,000.

Perhaps rather than collection size, hierarchical systems are developed over time. The Charleston Library Society catalog is by far the most granular and detailed in its hierarchical structure, and it is also the catalog with the most detailed explanation of the philosophical groundings of the classification system.

The order of classes and the relationship that these classification systems have with the organization of knowledge are discussed in the following chapter, where warrant is explored through a comparison with Francis Bacon's organization of knowledge, with an analysis of the placement of Fiction and Theology, and an exploration of the science classes. A final comparison on classification system emulation concludes that chapter.

CHAPTER 5:

CLASSIFICATION SYSTEMS COMPARATIVE ANALYSIS

Classification systems convey implicit messages about the concepts being classified and the relationships between those concepts. The idea of warrant addresses those messages. This chapter explores the warrant of the classification systems examined for this study. To accomplish this, a comparison to Francis Bacon's organization of knowledge is done. Sayers identifies the warrant of Jefferson's classification transferred to the Library of Congress along with his collection in 1815 as a modification of Francis Bacon's principles for the organization of knowledge.⁴³⁴ Smallwood, in his examination of early scientific endeavors in the United States, casually credits Bacon's organization for the structure of the classification system for the library of the College of Charleston in South Carolina.⁴³⁵ Given the prevalence of Bacon's organization in classification research, it is used as a comparative tool to explore the notion that in the nineteenth century, America was Baconian in its outlook on knowledge that manifested itself through classification systems in the various libraries represented. Following this comparison, the location and treatment of religion, fiction, and the sciences are more closely examined to illustrate how classification reflects sociocultural understandings of the world. In the end, classification systems provide a lens into the

⁴³⁴ Sayers, 123.

⁴³⁵ William Martin Smallwood, *Natural history and the American mind* (New York: Columbia University Press, 1941).

intellectual constructs and provide evidence that knowledge was experiencing volatile evolutionary stages during the first half of the nineteenth century.

Sir Francis Bacon

Sir Francis Bacon is often credited as one of a select few who have had a lasting impact on the intellectual development of the Western world. His works coincide with the highly productive Renaissance period, and he was a contemporary of scholars such as Galileo and Kepler. Given the impact of his intellectual output and his involvement in the Court life of British royalty, a great deal of scholarship has focused on him, and the broad outlines of his life are relatively well known.

Born to a prominent family in England, Bacon was educated at Cambridge and studied law at Gray's Inn based upon a "medieval curriculum" consisting of the *Trivium* (grammar, rhetoric, and dialectic), *Quadrivium* (arithmetic, geometry, astronomy, and music) and the three philosophies (moral, natural, and metaphysical).⁴³⁶ He worked as a barrister in the late sixteenth century, was knighted by James I in 1603, and achieved the rank of Lord Chancellor in 1618 and Viscount St. Albans in 1621. A bribery conviction caused his dismissal from the chancellorship that same year, and due to deteriorating health, he spent his remaining years studying natural philosophy. He died in 1626 at the age of sixty-five.⁴³⁷

Bacon was a prolific writer, primarily of philosophical works and began publishing in the 1590s. He did not see these philosophical works as sidelines to his law and political careers. On the contrary, "the grand design unifying Bacon's career in government, and

⁴³⁶ Markku Peltonen, "Introduction" in *The Cambridge Companion to Bacon*. Markku Peltonen, ed. (Cambridge: Cambridge University Press, 1996), 3.

⁴³⁷ Mary Hesse. "Bacon, Francis" in *Dictionary of Scientific Biography*, Charles Coulston Gillispie, ed. (New York: Charles Scribner's Sons, 1970), v.1, 372-377; Peltonen, 1-24; and Saul Fisher, "Bacon, Francis (1561-1626)" in *Encyclopedia of the Scientific Revolution from Copernicus to Newton*, Wilbur Applebaum, ed. (New York: Garland Publishing, Inc., 2000), 65-71.

efforts to reform the natural sciences was the vision of Great Britain as an efficient, centralized, and expansionist monarchy. This design was, above all, knowledge-based.”⁴³⁸ Through his writings, he made linkages between science, knowledge and power, and continued on this theme throughout his career.⁴³⁹ Many scholars speak of Bacon’s belief in a new era of science and philosophy. This belief is exemplified by three interrelated components: religion, politics, and philosophy.

Bacon’s understanding of the role of religion in intellectual arenas was a departure from other thinkers of the time who embedded theories within an intellectual context. Personally, Bacon was not anti-religious. In fact, he was a moderate member of the Church of England.⁴⁴⁰ His theories, though, were based upon principles that were not fundamentally theological. This is exemplified by his approach to understanding the natural world. Bacon was “no teleologist who consecrated final causes (explanations in terms of purpose or end) to God, and banished them from natural philosophy altogether.”⁴⁴¹ This stance, though, should be regarded in a context of other challenges to theological interpretations, most notably by Copernicus and Galileo. Bacon himself did not directly challenge known principles in the same way, but at the same time he believed in a separation between religion and science. Most notable is his use of religious imagery to discuss his non-religious scientific ideas. Peltonen notes that “the Christian virtues of humility and charity play a prominent role in Baconian natural philosophy: the lack of vanity was a measure of the truth of scientific works, and man’s scientific works were considered to be charitable blessings...Bacon’s

⁴³⁸ Fisher, 65.

⁴³⁹ Peltonen, 6.

⁴⁴⁰ Hesse, 372. See also Peltonen, 19.

⁴⁴¹ Fisher, 66.

doctrine of idols suggested that opposition to new science was a form of heresy which need to be smashed by Baconian induction – ‘as if by divine fire.’”⁴⁴² It is not wholly clear what kind of impact this kind of rhetoric would have at a time when religious convictions were strongly felt and where it appeared that science was presenting challenges to accepted doctrine.

Bacon was politically active during his lifetime, in addition to his philosophical works and his attendance to the law. The sixteenth and seventeenth century social structures required patronship, and Bacon was an ambitious man. He achieved political successes and also experienced some serious challenges in his lifetime. He was included in the highest court circles, advising King James I, but he fell from grace in 1621. His crimes at that time were bribery, but it is suspected that the conviction was based on political motivations.⁴⁴³ It is not clear what impact this political climate had on the development of Bacon’s theories, but it does seem probable that it had an impact on the reception of his ideas, at least while he was living.

While Bacon was moderate in his religious and political views, he challenged the dominant discourse of philosophy. He created “an *anti*-encyclopedia dedicated to the notion that knowledge should grow”⁴⁴⁴ and was intent on replacing an Aristotelian construct of laws and truths with a “conception of science as a discovery of the unknown.”⁴⁴⁵ The culmination of his philosophical work was an uncompleted magnum opus, *Instauratio magna* (The Great Instauration). This was intended to comprise six parts, three parts of which he did not

⁴⁴² Peltonen, 19.

⁴⁴³ Peltonen, 12. The crime was the receipt of gifts from men whose cases he had tried.

⁴⁴⁴ Fisher, 65.

⁴⁴⁵ Peltonen, 14.

produce but had planned.⁴⁴⁶ Bacon's classification of knowledge was penned early in his career as part of *The Advancement of Learning*, but was again included in *De augmentis scientiarum*, part I of the *Instauratio*, and published in 1623. In this work, he mapped out the entire world of knowledge with the objective of identifying areas that needed cultivation. This provided further justification for his new methodology, the inductive approach.⁴⁴⁷

Bacon's classification of knowledge has been covered in numerous works on classification theories. In order to understand that classificatory structure, scholars have focused on three aspects: the creation and order of his three main divisions (memory, imagination, and reason), the relationship of Baconian classification to Aristotelian classification, and the connections to his other philosophical theories. Bacon's classification of knowledge remains one of his longest lasting legacies. He is repeatedly credited with the philosophical foundations for library classification systems. Sayers notes, "there have been many schemes of classifications, many of them unique in the sense that they have not been used by anyone besides their authors; but it is not too daring to say that almost every scheme from the seventeenth century until the present has been affected in a greater or lesser degree by the scheme of Bacon."⁴⁴⁸ Therefore, it will be fruitful to understand Bacon's scheme as he laid it out and, in contrast, to both Aristotle, who remains as influential as Bacon, and that of Conrad Gessner, who was an immediate predecessor to Bacon and created a classification scheme for his booksellers' catalogs in his *Pandectorium*.

Bacon's classification is first outlined in *The Advancement of Learning*, published in 1605. He elaborates on this classification in his later work *De Augmentis*, (1623), but the

⁴⁴⁶ Fisher, 66-67.

⁴⁴⁷ Peltonen, 15; Fisher, 65.

⁴⁴⁸ Sayers, 106-107.

overall structure of the classification remained the same. The two versions vary most significantly with the location of the mechanical arts. Fisher notes that this change was due to his view on technology. For Bacon, “technology... was the engine of history. History was not propelled by social struggle, economics, stellar influences, or the rise and fall of empires and religions but by technological change.”⁴⁴⁹ His classification focuses on the three faculties of the mind: history, poesy, and philosophy, but he sees these three faculties as interdependent and interactive.⁴⁵⁰ A great deal has been written about the philosophical meaning of these three faculties. The general scheme includes:

⁴⁴⁹ Fisher, 65.

⁴⁵⁰ Anthony Quinton, *Francis Bacon*, (Oxford: Oxford University Press, 1980), 39.

History (Memory)

Natural History divided into traditional understandings of natural history and then the irregulars of history, such as monsters, witchcraft, and marvels.

Civil History divided into ecclesiastical, civic, antiquities, and “perfect history” which includes chronicles, lives, relations, appendices to history such as orations and letters, and so on.

Poesy (Imagination)

Narrative

Dramatic

Parabolic such as fables and allegory

Philosophy (Reason)

Divine (natural theology)

Natural including speculative and operative

Human including the philosophy of humanity, body, soul and civic philosophy

Figure 3: Francis Bacon’s Chart of Human Learning⁴⁵¹

Olivieri posits that Bacon’s choice of the faculties is connected to the theories of the rational soul as well as the Galen-Nemesian tradition of the three ventricles of the brain. He concludes that these theories provided an “essential physiological basis from which to study

⁴⁵¹ Adapted from Sayers, Table III.

man, in his highest powers of knowledge, from an experimental point of view.”⁴⁵² Sayers confirms this by noting that Bacon’s conception of theology diverges from what we traditionally understand as theology. For Bacon, philosophy “springs from the mind of man, not from the Divine Mind.”⁴⁵³ It is clear from the literature that Bacon’s classification needs to be considered within the larger construct of his philosophies toward science, man and learning.

Bacon’s organization of knowledge is traditionally considered to be in conflict with Aristotle’s classification, but Vickery asserts that even though Bacon himself attacked Aristotle’s ideas, he did not contradict them. Instead, he provided a new interpretation. In particular, Vickery points to the similarity between Bacon’s history, poesy, and philosophy and Aristotle’s theoretical, practical, and productive:

In his writings, Bacon frequently attacked Aristotle. He denied that knowledge could be divided into theoretical, practical and productive, and instead suggested a division into history, poetry and philosophy. The first of these was a ‘descriptive’ science based on memory, furnishing the data on which ‘speculative’ philosophy, based on reason, went to work. But the ‘production of effects’ – the practical and productive aspects of knowledge – followed directly on the knowledge of causes which philosophy provided, and therefore Bacon included the ‘production of effects’ as an ‘operative’ part of Natural philosophy.⁴⁵⁴

These theoretical and philosophical differences are not that evident in the classification system he constructed. Classes are the same, but the meanings behind the classes were changed.⁴⁵⁵

⁴⁵² Grazia Tonelli Olivieri, “Galen and Francis Bacon: Faculties of the soul and the classification of knowledge” in *The Shapes of Knowledge from the Renaissance to the Enlightenment*, Donald R. Kelley and Richard H. Popking, ed. (Dordrecht: Kluwer Academic Publishers, 1991), 73.

⁴⁵³ Sayers, 108.

⁴⁵⁴ Vickery, 152.

⁴⁵⁵ Vickery, 152.

One aspect of Bacon's philosophies that has not been discussed in library and information science literature is his principle of induction. Broadly defined, Bacon distinguished between two methodological approaches to scientific inquiry. The first he named "anticipation", which he connected with traditional approaches to scientific inquiry. This anticipation was rooted in formulating theories and are "merely systems for the nice ordering and setting forth of things already invented; not methods of invention or directions for new works."⁴⁵⁶ Regarding Bacon's understanding and critique of the anticipatory approach, Urbach argues that it did not, as it has been interpreted, discount the necessity of the hypothesis in the scientific process. It was not speculation, which was a natural part of scientific inquiry, but the "dogmatic defense of speculations and the tendency to regard them as infallible or unalterable" that provided fodder for Bacon's criticism.⁴⁵⁷ For Bacon, "anticipating nature is a highly conservative method, whose theories either just cover, or recapitulate, the data, or else, once advanced, are rigidly protected from alteration or replacement, however unfavourable the evidence. And, in keeping with this conservatism, the theories produced by the method of anticipation are included to deal just with surface phenomenon, rather than with underlying physical causes."⁴⁵⁸

In contrast to traditional approaches, Bacon suggested a methodology he called interpretation. This encompassed the role of observation and extends beyond what is directly observable. This interpretation embodies his theory of induction. Included in this theory is a fault line along which theories can be judged. For instance, theories that merely explain

⁴⁵⁶ Francis Bacon, *Novum Organum*, as quoted in Peter Urbach, *Francis Bacon's Philosophy of Sciences: An Account and a Reappraisal*. (La Salle, Ill.: Open Court, 1987), 27.

⁴⁵⁷ Urbach, 35.

⁴⁵⁸ Urbach, 30.

existing data were anticipatory in nature, while theories that presented new predictions were deemed interpretive.⁴⁵⁹ Most commonly understood about the inductive process is the gathering of data, from which interpretive methodologies can take place. To Cannon, a historian of science, Baconianism means “something like the collection of facts, lots of facts, in all sorts of places, and on queer applied subjects; the absence of an analytical theory or of sophisticated mathematical tools; the belief that a hypothesis will emerge somehow from the accumulation of facts; and so forth, and so on.”⁴⁶⁰ For example, Morse makes the connection of the inductive approach and the role that knowledge has played for humans by stating “since the rise of the inductive method (the direct antithesis of the method of the schoolmen and mediæval theologians) the race has been steadily advancing from one observed and verifiable fact to another, assembling related facts in ever-increasing aggregates and from them, by induction, arriving at ever more comprehensive natural laws.”⁴⁶¹

Inductive philosophies have had a direct impact on scientific methodologies. Daniels argues that Baconian philosophy was a dominating scientific principle during the antebellum period in the United States. “Experimental philosophy” became fashionable, and there was a universal acknowledgement of Bacon and Newton’s methods. He argues that early nineteenth-century scientists were “struck by Bacon’s eloquent appeal for the study of facts as opposed to idle speculation, and despite the apparent contradictions in practice, this is what Baconian philosophy meant to them.”⁴⁶² Daniels sees the vagueness of Baconianism as

⁴⁵⁹ Urbach, 53.

⁴⁶⁰ Susan Faye Cannon, *Science in Culture: The Early Victorian Period* (New York: Dawson and Science History Publications, 1978), 73.

⁴⁶¹ Sidney Morse. *A Map of the World of Knowledge*. (Baltimore: The Arnold Company, 1925), 43.

⁴⁶² George H. Daniels. *American Science in the Age of Jackson* (New York: Columbia University Press, 1968), 65.

an essential aspect of its application. He identifies three results from the adaptation of Baconianism: 1) empiricism, which rested on the fact that all science must be based on observation, growing from individual fact to broad generalization; 2) an anti-theoretical science, which sought to avoid hypotheses and rely on only what could be directly observed; and 3) a taxonomic thrust. All of these methods, it was thought, would lead to a rationalized understanding of the universe. Challenges to Baconian philosophy were based upon the role of observation and Bacon's own religious antipathy, but these criticisms came during a heavily evangelical time in American history.⁴⁶³ Cannon asserts that Alexander von Humboldt embodied and brought more to the fore the vague concepts of Baconianism in the early nineteenth-century.⁴⁶⁴ That Humboldt was a tireless gatherer of facts supports the idea that he was Baconian. Humboldt's influence to science, though, extended to accurate instrumentation to gather those facts and travel to various places to gather direct information to gain a more integrated understanding of the world and its component parts. Humboldt, like Bacon, did not discount speculation or hypothesis entirely, but used it to present broader ideas from the data he had experienced himself. Cannon asserts that it is just this kind of Humboldtian approach that provided the groundwork for Darwin's *Origin of Species*.⁴⁶⁵

Whether Bacon or Humboldt can be assigned the role of having the greatest influence over American science is a question for others to dispute. However, consideration of the

⁴⁶³ Daniels, *American Science in the Age of Jackson*, p. 66. As an example of the adoption of Bacon, Daniels discusses Samuel Tyler, a Maryland attorney and American philosopher. Tyler penned a discourse on the Baconian philosophy in the 1840s (with a revised edition in 1877). In this discourse, he argues that Bacon completes the philosophy of Aristotle rather than contradicting it, and that the "whole of philosophy is founded upon experience, and is nothing more than a classification of the facts and phenomena presented in nature." (Samuel Tyler, as quoted in Daniels, p. 71.) Tyler equates science with classification, which is achieved by comparison on the basis of identity (entirely alike) or analogy (alike in some ways).

⁴⁶⁴ Cannon, 74.

⁴⁶⁵ Cannon, 86.

nature of this influence might raise some interesting issues for classification theory. It is surprising that this aspect of Bacon's philosophy has not been directly explored in library and information science literature. Some questions that remain unanswered include the connections between the larger scientific environment and the way that library and information science is practiced and explored from research discipline points of view and what aspects of librarianship are legacies of the adoption of inductive approaches. How do empiricism, an anti-theoretical approach, and the integrated nature of classification express themselves in library and information science activities in the nineteenth century? Does a Baconian framework help us better understand librarianship in that time?

One example from classification theory demonstrates what can happen when Bacon's influence on library and information science is considered. Wyndham Hulme, in creating his theory of literary warrant, notes that,

one of the greatest defects in the system of class cataloguing, and one of the great causes of the superiority of the larger alphabetical subject catalogues, in spite of the want of system in the latter, is that the framers of the class catalogues have in the past offered their work as something too sacred to be touched, a thing not to be lightly tampered with, as the secret of its compilation rests with themselves and with them only. But this attitude is wholly unscientific. There need be no mystery about the business. Class systems are the result of an imperfect survey of literature. Finality has not been reached even as regards past literature, and when we bear in mind the growth of literature and its perpetual tendency toward specialisation (*sic*), it is obvious that class systems are also subject to the law of growth, and their publications offers merely a basis upon which the intelligent librarian should graft his improvements.⁴⁶⁶

Hulme uses principles that might be considered direct derivatives of Baconian philosophy to discuss the issues extant in library classification systems. The parallels seem obvious: he critiques those classification systems that are inflexible just as Bacon sought to eradicate the

⁴⁶⁶ E. Wyndham Hulme, "The Principles of Cataloguing" in *Library Association Record*, 8, (1906), p. 35.

old logic that was a barrier for new understandings. His principle of warrant in contrast to philosophical values as a basis for classification is based upon literature itself, or the data gathered. The concept of literary warrant is discussed in detail in a previous chapter, but it is an important example of the sorts of parallels that may be found in theories, which though not directly connected to classification literature, pervade thinking about classification systems.

Baconian warrant of Social Library Catalogs

To gain an overview comparison metric and to explore potential warrant, Bacon's organization of knowledge as published in *The Advancement of Learning* is used. The catalogs examined represent proto-modern classification systems as they are derived from a period that precedes the homogenization of modern, professionalized librarianship.

To provide a comparison with Bacon's organization of knowledge, a methodology called "superclassing" was developed. While some classification systems began with the high level classes that Bacon uses (e.g., the Library Company of Philadelphia (1807) and the Mercantile Library Association of the City of New York (1837)) most of the classification systems did not explicitly refer to Bacon's own high-level classes. Therefore, the classification systems were examined for patterns of class proximity and grouping was done. For example, the Providence Athenæum's superclassing was done by recognizing that the first five classes listed all map to Bacon's class Memory. The next group contains four classes, which map to Imagination, and the remaining eight map to Bacon's Reason (see Figure 4).

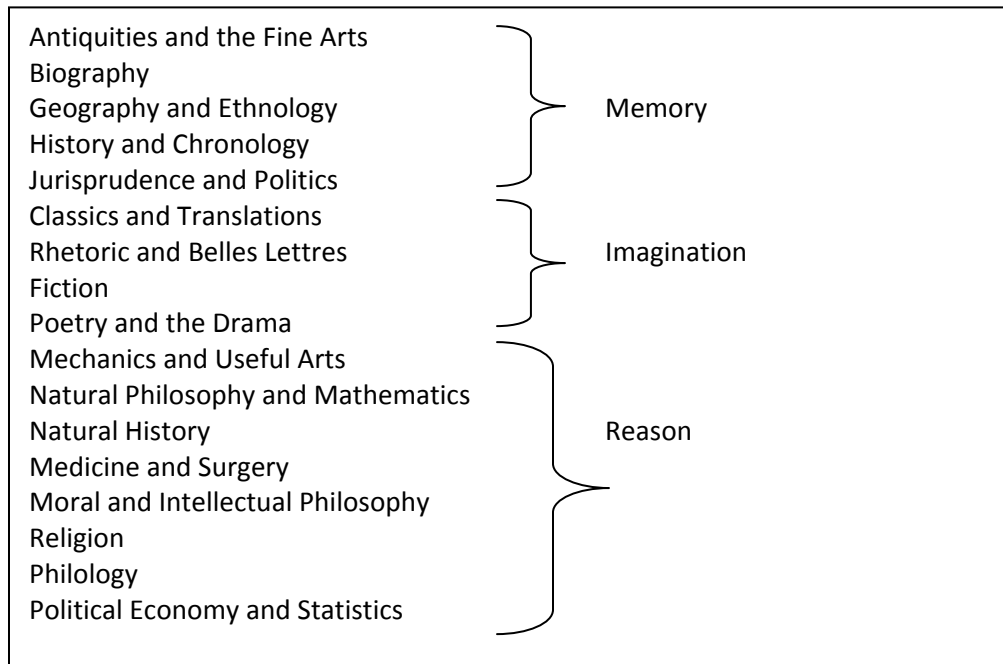


Figure 4: Example of Superclassing for the Providence Athenæum (1837) classification system

For each catalog, the order of classes was examined to see if superclasses were detectable. Some catalogs did not match the superclasses, but a majority of them allowed for this kind of superclassing. One category of subjects, which oscillated between the superclasses, was those that were associated with social sciences today. These were at times grouped with Reason and in other cases with Memory. Aside from this anomaly, 13 of the 17 (76.5%) catalogs allowed for superclassing.

Several observations emerge from this comparison (see Table 15). First, there is no steadfast agreement on the order of these superclasses. In looking at the first superclass only, seven of the catalogs list classes associated with Reason first, while the remaining five list classes associated with Memory. In looking at the placement of Imagination, it alternates between the second superclass and the third superclass.

With the exception of the American Philosophical Society, which lists a Polygraphy class first (named as *Transactions*), the seven other catalogs that include a Polygraphy

superclass last. Bacon did not have a category for polygraphy because he was creating an understanding of knowledge, not a bibliographic classification system. The concept of polygraphy can only be understood in the context of general works or works of multiple authorship (such as Transactions of Scientific or Literary Societies). This superclass represents the miscellaneous or general materials that do not form part of any other superclass, because they are classed according to format or are called “miscellanies.” Generally this superclass is not further analyzed or divided into detailed subclasses. One interesting exception to this, the 1807 catalog of the Library Company of Philadelphia, compiled by Barnard, puts *Pamphlets* last, and within that, provided a detailed analysis according to topics of the pamphlets.

Bacon	Memory	Imagination	Reason
Library Company of Baltimore (1802)	Reason	Memory	Imagination
Library Company of Philadelphia (1807)	Memory	Reason	Imagination
New York Society Library (1813)	Reason	Memory	Imagination
American Philosophical Society (1824)	Reason	Memory	Imagination
Charleston Library Society (1826)	Reason	Imagination	Memory
Library Company of Philadelphia (1835)	Reason	Imagination	Memory
Providence Athenæum (1837)	Memory	Imagination	Reason
Mercantile Library Association of New York (1837)	Memory	Imagination	Reason
New York Society Library (1838)	Reason	Imagination	Memory
Salem Athenæum	Reason	Imagination	Memory
Louisville Mercantile Library (1843)	Memory	Imagination	Reason
Redwood Library and Athenæum (19843)	Memory	Reason	Imagination
Library Company of Philadelphia (1856)	Reason	Imagination	Memory

Table 15: Superclass comparison to Bacon's organization of knowledge for 13 classification systems

The Charleston Library Society classifications system stands out because they are the only catalogs that could not be divided into three mutually exclusive superclasses. In the Charleston Library Society system (see Appendix G), Reason and Imagination alternate before proceeding to Memory.

Four catalogs were not amenable to superclassing. These include the 1809 catalog of the Library Company of Baltimore, the 1840 and 1850 catalogs of the Mercantile Library Company of Philadelphia, and the Mechanics' Society of the City and County of Lancaster catalog published in 1858. These four presented different challenges, though, to the superclass process. The 1809 catalog from the Library Company of Baltimore, for example, was classified, but those classes were then presented in an alphabetical arrangement. As noted in Table 12 from the previous chapter, the synopsis, which is alphabetical, and the actual order of classes in the catalog are different. Even so, the actual order does not lend itself to superclassing. This finding suggests that the order of the classes was not significant; there were no underlying messages to be conveyed by the classification.

In contrast, the catalogs from the Mercantile Library Company of Philadelphia presented a different challenge. These catalogs depart from a general trend to accommodate various classes. For example, in the 1840 catalog, *Foreign languages* appears between *Natural sciences* and *Philosophy*, which includes subclasses on *Astronomy*, *Optics*, *Education*, *Mathematics*, and so on. Similarly, *Miscellaneous*, *Periodicals*, and *Works of reference* precede *History*, which is then followed by *Natural history*. The 1850 catalog is less problematic, although it retains the *Books of reference* and *Periodicals*, *Newspapers*, *&c.*, *Pamphlets* precede a group of classes that would be reflected as imagination, and it concludes with *Natural history*, *Religion*, *Miscellany*, and finally *Foreign languages*.

Finally, the Mechanics' Institute 1858 catalog demonstrates perhaps the most extreme version of a classification structure to serve strictly the collection and its users. For example, foreign language works (German, French, and Spanish) form the third class. While some classes appear to map to other classification systems, the emphasis of this library's collection

as reflected in the classification scheme is on historical works (including biographies, voyages and travels), fictitious works (including poetry), and ready reference materials such as encyclopedias and magazines. Also notable is a *Juvenile department* class, which does not appear in any other classification system examined. Therefore, the Lancaster classification system represents a significant departure from the classification systems of earlier social libraries. This departure may be accounted for by an evolving sense of library purpose, although the catalog itself does not acknowledge any shift. It is interesting to note that while the collection is classified in the catalog, the classification system does not appear to convey a traditional construct for knowledge or present a new knowledge structure.

Social library type does not appear to be a significant variable in the comparison with Bacon's organization of knowledge. For example, for strict social libraries, the variability of order is maintained (see Table 16). Of the seven catalogs from "strict" social libraries, only the Library Company of Philadelphia (1807) places Memory before Reason, however, three of the seven have Imagination classes last, while the other four place it in the middle position. In fact, the latter four catalogs present an inversion of the Bacon's classification of knowledge. Despite this, the catalogs beginning in 1826 from "strict" social libraries to have consistent ordering. This may not be significant, though, given that those catalogs represent only two libraries, and for the Library Company of Philadelphia, represents a continuation of the same scheme.

Bacon	Memory	Imagination	Reason
Library Company of Baltimore (1802)	Reason	Memory	Imagination
Library Company of Philadelphia (1807)	Memory	Reason	Imagination
New York Society Library (1813)	Reason	Memory	Imagination
Charleston Library Society (1826)	Reason	Imagination	Memory
Library Company of Philadelphia (1835)	Reason	Imagination	Memory
New York Society Library (1838)	Reason	Imagination	Memory
Library Company of Philadelphia (1856)	Reason	Imagination	Memory

Table 16: "Strict" social library superclass comparison

The group of four catalogs from athenæums is even more variable (see Table 17). Reason is first in two, while memory is first in the other two. Similarly, imagination is last in two and in the middle in two.

Bacon	Memory	Imagination	Reason
American Philosophical Society (1824)	Reason	Memory	Imagination
Providence Athenæum (1837)	Memory	Imagination	Reason
Salem Athenæum (1842)	Reason	Imagination	Memory
Redwood Library and Athenæum (1843)	Memory	Reason	Imagination

Table 17: Athenæum superclassing comparison

In comparing by social library type, the only similarity that can be noted is in the two mercantile library catalogs that were compared (the Mercantile Library Association of New

York, 1837; and the Louisville Mercantile Library, 1843). Both of these catalogs have Memory as the first superclass. One, though, follows Bacon's organization and the other Jefferson's order. It could be supposed that these works would potentially have more appeal to the members of a mercantile library than perhaps the topics grouped in Reason. This suggests that strict social libraries and athenæums placed a higher importance on reason (with the exception to the Providence Athenæum and the Redwood Library of Newport, Rhode Island), while Mercantile libraries placed a higher importance on Memory. One explanation for this could be the intention behind the creation of the social libraries themselves and their membership. As noted above, many of the early social libraries were established by the intellectual and financial elite of the communities. They were established for the exchange of ideas as much as for the access to materials. Mercantile libraries, a later invention, were established to address a business class. With the increasing popularity of education and the accompanying social capital that goes along with membership, libraries were seen as a vehicle for the business class. Mercantile libraries served a different clientele with different needs, a more general educational experience. It is supposed that Mechanics' libraries also reflect this difference, particularly with the inclusion of a *Juvenile department* class. In looking at the overall classes for the Lancaster catalog, the classes reflect a somewhat unsophisticated presentation of topics. This lack of sophistication may have suited the needs of the users, apprentices and young mechanics without access to formal education.

Another analysis point was geographic distribution. Because of the potential impact of proximity, catalogs from Philadelphia and from New York were compared to see if locality would create greater agreement in class order (see Tables 18 and 19). Four catalogs were examined from Philadelphia (Library Company of Philadelphia, 1807; American

Philosophical Society, 1824; Library Company of Philadelphia 1835; and Library Company of Philadelphia, 1856).

Bacon	Memory	Imagination	Reason
Library Company of Philadelphia (1807)	Memory	Reason	Imagination
American Philosophical Society (1824)	Reason	Memory	Imagination
Library Company of Philadelphia (1835)	Reason	Imagination	Memory
Library Company of Philadelphia (1856)	Reason	Imagination	Memory

Table 18: Philadelphia libraries superclass comparison

Bacon	Memory	Imagination	Reason
New York Society Library (1813)	Reason	Memory	Imagination
Mercantile Library Association of New York (1837)	Memory	Imagination	Reason
New York Society Library (1838)	Reason	Imagination	Memory

Table 19: New York libraries superclass comparison

Given that the 1856 catalog is a supplement to the 1835 catalog, it should not be surprising that the 1835 and 1856 catalogs from the Library Company of Philadelphia are identical in the classification plans, with five classes. Some differences exist in the subclasses as the collection developed, but the five classes remained the same. These classes are referenced by Lloyd P. Smith, librarian at the Library Company from 1851 to 1886, in his presentation at the Librarians Convention of 1853. In 1882, Smith writes of the classification system: “Whether the classification itself is more or less logical than that of others who have

attempted this hard and thankless, but needful, task, it is not for me to say. It has at least the merit of not being made out of nothing, but rather of having been evolved from a preexisting system which has the approval of some of the best bibliographers of Europe, and which has been tried for centuries, and not found wanting.”⁴⁶⁷ Smith’s confidence in the classification system indicates the reason why it was not adjusted between the two catalogs. Comparing these catalogs with the other Philadelphia catalogs does not indicate that proximity affected the ways in which classification was constructed. The 1807 catalog presented classes in the order of Memory, Reason, Imagination; the 1824 catalog for the American Philosophical Society ordered the classes Reason, Memory, Imagination; and the later Library Company of Philadelphia catalogs were ordered Reason, Imagination, and Memory.

The influence of Bacon on the construction of these classification systems can certainly be overstated. Additional research into the compilers, their education, and outlook would be necessary in order to make formal statements about the warrant of these systems. However, given that over 75% of the systems examined bear some resemblance in the groupings of concepts does indicate some shared understanding of nature of these topics. Further research would help to illuminate the overall influence of Bacon not only on classification systems but also on structures of scientific inquiry and may provide a more nuanced analysis of the role that Bacon has in the discourse of early nineteenth-century America.

Religion, Fiction, and Science

Beyond the comparison to Bacon’s organization of knowledge, there are other messages that could be conveyed through these classification systems that are relevant to the context of creation of these catalogs. As discussed above, the early nineteenth century was an

⁴⁶⁷ Lloyd P. Smith, 174.

intellectually volatile time for the United States. Whereas political experimentation appears to have been played out on a local level in the governance of social libraries, intellectual evolutions took place on a new sociocultural landscape. Urbanization and industrialization were beginning to solidify their hold on northern American states, while southern states clung more steadfastly to an agrarian, slave-holding social structure. At the same time, settlers pushed westward and took eastern structures with them where they were developed at an increased pace.

Three areas of knowledge were chosen for exploration in order to gain a clearer understanding of the intellectual turmoil of this period. Religion, fiction, and science present interesting points in which to discuss or illustrate the degree of change in knowledge structures over the 50 years explored. As discussed in chapter 3, these three areas of knowledge had significant roles in the Early Republic and Antebellum American intellectual history. The classification systems were examined to see if there was evidence of the volatility discussed in the intellectual realm or if these systems presented a traditional or alternative understanding these ideas.

The placement of religion indicates a general change in the perception of religious knowledge as distinct from other areas of knowledge. Religious knowledge loses its primacy over the eighteenth and nineteenth century through the emergence of Enlightenment philosophies, upheaval in the political and intellectual realms, and as the professionalization of science comes to the forefront. This is an interesting shift because American society is not becoming irreligious during this time. The early nineteenth century has a forceful religious identity. The Great Awakening, the “burnt over” district, revivals, and other strong religious movements all took place in the early nineteenth century. This is true across all the areas of

the United States. However, despite this religious zeal, religion as an area of knowledge becomes segmented and no longer occupies the central component of these classification systems. This could be due to the concept of religious plurality that is a foundation for the American governmental structure.

The changing nature of religion in early nineteenth-century America is suggested in the changing location of the religion or theology class in the systems under study. Table 20 provides the location of a religion or theology class in all the classification systems based on relative location. As with other aspects of this analysis, there is no clear pattern that can be detected. Religion classes are ranked in various locations as the century moves forward. While it does not lose its ‘first class’ place completely (Baltimore Library Company, 1802, New York Society Library, 1813 and 1838, Library Company of Philadelphia, 1835 and 1856, Salem Athenæum, 1842, and the Redwood Library and Athenæum 1843 all list religion as the first class), in many systems it does not hold that first position.

Library	Class name	Rank of class	Class after	Class before
Baltimore Library Company (1802)	Theology, biblical learning, and ecclesiastical history	1 out of 11	NA	Metaphysical, moral philosophy, discourses and treatises on morality
New-York Society Library (1813)	Theology, ecclesiastical history, sacred criticism, religious controversy	1 out of 16	NA	Classic authors, Greek and Latin
American Philosophical Society (1824)	Religion	9 out of 24	Medicine and surgery	Moral sciences
Charleston Library Society (1826)	Theology	2 out of 6	Metaphysics – Logic	Ethics

Library	Class name	Rank of class	Class after	Class before
Library Company of Philadelphia (1835)	Religion	1 out of 5	NA	Jurisprudence
Mercantile Library Association of the city of New York (1837)	Philosophy – Theology	2 out of 4 class, 2 out of 11 subclass	Moral sciences (logic, metaphysics, education, ethics, morals)	Superstitions
Providence Athenæum (1837)	Religion	15 out of 22	Moral and intellectual philosophy	Philology
New-York Society Library (1838)	Theology	1 out of 14	NA	Law
Mercantile Library Company of Philadelphia (1840)	Religion and theology	16 out of 16	Biography	NA
Salem Athenæum (1842)	Theology	1 out of 6	NA	Jurisprudence, government and politics
Redwood Library and Athenæum (1843)	Theology	1 out of 5	NA	History
Louisville Mercantile Library Company (1843)	Religion	17 out of 25	Moral and intellectual philosophy	Philology, logic and education
Mercantile Library Company of Philadelphia (1850)	Religion	36 out of 38	Natural history	Miscellany
Library Company of Philadelphia (1856)	Religion	1 out of 5	NA	Jurisprudence
Mechanics' Society of the City and County of Lancaster (1858)	Religious works	6 out of 14	Miscellaneous	Scientific, Philosophical & Mechanical

Table 20: Comparison of religion or theology classes in sample classification systems⁴⁶⁸

⁴⁶⁸ Note that the 1807 Library Company of Philadelphia catalog has religious categories throughout the classification scheme and therefore could not be singled out, and the 1809 Library Company of Baltimore catalog is listed alphabetically.

When looking at the name of the class, *Religion* and *Theology* appear to be interchangeable, although it appears that there may be a trend toward naming the class “Religion” as time progresses. This could perhaps be further evidence of the secularization of knowledge as was discussed above.

Some observations that can be made are the relative importance of religion in the mercantile and mechanics libraries: of the five examples of mercantile and mechanics’ libraries, religion never occupies the first position of the classification system. In fact, religion is placed later in those social library types and in the American Philosophical Society. This could be because these institutions had specific user-bases and the primary interest of their users was not religion. In the mercantile and mechanics’ library, commercial works were usually listed first, along with other civic topics; in the case of the American Philosophical Society, which as noted above is an exception in many ways and is not considered a traditional social library, science takes precedence over all other topics.

Despite the evolution of intellectual space, religion remains in the primary position for a majority of these catalogs. Over time, though, it can be concluded that rather than all knowledge coming from the religious sphere, civic knowledge begins to take a position of primacy and religion, while still present (it occupies either a class or subclass in each of the systems examined) occupies another intellectual space rather than a foundation for all knowledge. For example, in the Library Company of Philadelphia in 1835 and 1856, *Religion* is first class, but it sits alongside *Jurisprudence* and *Science and Arts, Belle Lettres*, and *Miscellanies* as classes.

A similar analysis was performed for fictitious works in the class structures. The role of fiction in the early nineteenth century was a controversial topic. With official establishment of the Boston Public Library in 1852, Denning recounts:

Even a hasty glance at the array of titles in the new catalogue detects a preponderating seriousness. The aim of the founders had been faithfully cherished; the lapse of two generations had but deepened and quickened the purpose of the management to cultivate and gratify that ‘Taste for polite Literature’ and ‘eager Thirst after Knowledge and Wisdom,’ confidently supposed to exist in the far-away days of 1754. For example, the section devoted to ‘Fictitious Writings’ is the smallest in the whole classification. A perusal of its attractions fails to discover anything more sensational than ‘Clelia, an excellent new Romance by the exquisite pen of M. de Scudery,’ or ‘Louisa, or the Lady of the Hay-Stack, from the French.’ One may well speculate on what might be the long-distance theories of the unknown Irish author of ‘Negro equalled by few Europeans.’ Some human touches would seem assured in the ‘Historical Dictionary of Love, containing Anecdotes of Persons eminent for their Virtues and Vices,’ to say nothing of ‘Sketches of the History, Genius, Disposition, &c. of the Fair Sex.’⁴⁶⁹

Library	Class name	Rank of class	Class after	Class before
Baltimore Library Company (1802)	Novels, tales, fables, and romance	10 out of 11	Poetry and plays	Miscellanies
New-York Society Library (1813)	Fictitious writings, novels, romances, and fables	11 out of 16	Poetry and drama	Medicine and Surgery
Library Company of Philadelphia (1835)	Belles Lettres – Works of Fiction, Wit, and Humour, Imaginary Voyages and adventures, Fables in the English Language	5 out of 6 classes, 14 out of 26 subclasses	Greek, Latin, French, and other languages	History of fiction

⁴⁶⁹ Keep, p. 269.

Library	Class name	Rank of class	Class after	Class before
Mercantile Library Association of the city of New York (1837)	Poetry – Poetry, drama, fiction	3 out of 4 classes, 1 out of 2 subclasses	(subclass) Fine arts, architecture, landscape gardening, music, painting, sculpture	NA
Providence Athenæum (1837)	Fiction	8 out of 22	Rhetoric and Belles Lettres	Poetry and the drama
New-York Society Library (1838)	Belles lettres – Proper – Romance and faetiae	5 out of 15 class, 2 out of 2 subclasses, 4 out of 7 tertiary subclasses	Poetry and drama	Literary essays, letters and orations
Mercantile Library Company of Philadelphia (1840)	Novels and tales	7 out of 16	Philosophy	Belles Lettres
Salem Athenæum (1842)	Belles Lettres – Works of fiction and humor, apophthegms, proverbs, dialogues	4 out of 6 classes, 8 out of 11 subclasses	Poetry	Orations, addresses, speeches
Redwood Library and Athenæum (1843)	Belles Lettres – Works of fiction, humor, proverbs, dialogues, etc.	3 out of 5 classes, 5 out of 9 subclasses	Poetry and the drama	Orations, addresses, speeches, etc.
Louisville Mercantile Library Company (1843)	Fiction	10 out of 25	Rhetoric and Belles Lettres	Poetry and the Drama
Mercantile Library Company of Philadelphia (1850)	Novels and tales	18 out of 38	Periodicals, newspapers, &c., pamphlets	Essays and literary criticism, history of literature

Library	Class name	Rank of class	Class after	Class before
Library Company of Philadelphia (1856)	Belles Lettres – Works of Fiction, Wit, and Humour, Imaginary Voyages and adventures, Fables in the English Language	5 out of 6 classes, 15 out of 25 subclasses	Greek, Latin, French, and other languages	French, Italian, German Drama
Mechanics' Society of the City and County of Lancaster (1858)	Works of fiction, &c.	8 out of 14	Scientific, philosophical & mechanical	Encyclopedies and magazines

Table 21: Comparison of fiction classes in sample classification systems⁴⁷⁰

Contrary to the general trend of increasing the amount of fiction in the collections and thus its appearance in the classification systems, Glynn notes that at the New York Society Library, fiction decreased from just over 8% of the collection to less than 4%. Of this he comments,

The Society's new leadership purposefully removed fictional works from the shelves in fulfillment of its campaign promise to develop a collection that was more substantial, more improving than a popular circulating library. This was a remarkable policy that was directly contrary to the trend in public libraries during this period. Fiction in public collections continued to be a controversial issue throughout the nineteenth century, but at the same time that they decried the public's appetite for popular novels, librarians and library managers grudgingly purchased them in increased numbers.⁴⁷¹

The issues over fiction demonstrate the beginning of contested boundaries and the on-going use of the phrase “useful knowledge” in the construction and maintenance of these institutions. Nonetheless, fiction makes a dramatic appearance in the classification systems, appearing in 11 of the 17 catalogs examined, appearing under the class name *Novels and tales, Fictitious writings*, or just plain *Fiction*. Placement moves from the end of the

⁴⁷⁰ Excludes the Charleston Library Society which did not include a single identifiable fiction class and the American Philosophical Society which included only *Literature and fine arts* rather than a clear fiction class.

⁴⁷¹ Glynn, “The New York Society Library”, 517.

classification system to the middle, so it appears to be a more than begrudging addition to the collection. The appearance of this class indicates a growing acceptance of fiction in social libraries. This is particularly true of the mercantile libraries, which are dependent on membership. It is also significant that the athenæums and “strict” social libraries have a more tenuous relationship with fiction in their classification systems than do the mercantile or mechanics’ institutes. For example, the class names are associated with “Belles Lettres” in three of the systems. This foretells the future battle over inclusion of fiction in public libraries, which were intended to serve their populations in a similar manner to the mercantile libraries. During the public library movement, fiction was controlled and endorsed by those whose membership would more likely fall in the “strict” social libraries or athenæums.

The evolution of science in the classification schemes provides an interesting subset of classes to examine. Science was undergoing a rapid change in its structure and place in American society during this time. This dynamic state is reflected in the classification systems examined for this study. As should be expected, early classification systems have broad labels for scientific classes, such as ‘natural philosophy, arts and sciences’ (Baltimore, 1802), but for those catalogs that demonstrate increased granularity, science becomes a complex arena of knowledge, including chemistry, botany, and mineralogy.

There are some interesting relationships between the various subdivisions of science as seen in these systems. These relationships can be tied to the development of thought that was taking place in American society as outlined above. For example, the location of mathematics in the classification systems varies based on its connection to astronomy and other related scientific endeavors. Mathematics appears in the area of philosophy more often

than in science, and when those areas are separated (from history to philosophy), astronomy and physical sciences are related to mathematics.

The location of chemistry moved back and forth between the natural history classes and the natural philosophy classes. For instance, in the 1838 catalog for the New York Library Society and the 1824 catalog for the American Philosophical Society, chemistry is listed as the bridge between natural philosophy and natural history. In the 1837 catalog for the Mercantile Library of New York it is included in the natural history class, but in the 1813 catalog of the New York Library Society it is part of *Mathematics, Natural and experimental philosophy, astronomy, chemistry and the arts* which is distinct from *Natural history, botany, agriculture, &c.*

In a similar fashion, medical topics were placed in a wide variety of locations; they were associated with other scientific classes in some schemes and not in others. As noted in Chapter 4, in the New York Society Library catalog of 1813, *Medicine and Surgery* are placed at the end, just before *Architecture, Civil, Military, and Naval* and after the class for fiction. Given that some of the leading scholars during the first half of the nineteenth century were medical men, particularly in Philadelphia, this ambiguous understanding of the placement of medical materials is puzzling.

A few systems included *Publications of learned societies* as part of the scientific classes. This subclass was present in both the 1842 and 1843 catalogs. It is an interesting acknowledgement that the learned societies publications being collected were those in the scientific activities. Given that the scientific community did not immediately enjoy governmental support, scientific endeavors were done through societies. One of the primary motivations for the “strict” social libraries and athenæums was to provide an arena for

intellectual and scientific exchange among the members. Exchange with other learned societies was a part of this motivation.

The presence of phrenology, the study of the bumps and fissures of skulls provides an interesting example of the immediacy of these classification systems. This topic was included in the 1835 Library Company of Philadelphia catalog and the 1837 catalog for the Mercantile Library Association of the city of New York, but disappears from the 1850 catalog for the Mercantile Library Company in Philadelphia. The inclusion of phrenology in the classification systems parallels the development of the science of phrenology itself.

Phrenology was imported from England in the person of George Combe, who visited the United States from 1838 to 1840. The new science of phrenology spawned the creation of phrenology societies, and included many of the nation's leading scientific men. But phrenology only enjoyed a brief period as a serious science. As Riegel recounts that the discrediting of phrenology was due to a lack of serious research beyond the initial leaders. As he concludes, "later phrenologists merely accepted the masters, modifying or philosophizing about them, but not carrying on the research necessary to keep phrenology's feet upon the ground... Most damaging of all was the rise of the 'practical phrenologist'. This practitioner, frequently without training, sought to capitalize the new science and make it pay dividends. For practical purposes, he was a fortune teller."⁴⁷² With the discrediting of phrenology by the end of the 1840s, it disappears from classification systems.

These three areas in the classification systems provide a comparative realm for understanding the intellectual climate of early nineteenth-century America. Religion remains a significant component to American intellectual thought; however, knowledge begins to

⁴⁷² Robert E. Riegel, "The Introduction of Phrenology to the United States" *The American Historical Review*, 39, (1933), 77-78.

look more and more secular as the century moves forward. Despite this secularization of knowledge, religion is included as a class and is still being held in library collections. It is not eliminated from classification systems altogether but does experience an evolution both in class name and in the decreasing primacy of the class. In contrast, fiction is less prominent in the early library catalogs but gains a solid presence in later catalogs, paralleling its presence in the American cultural market. In addition the class names *Fiction* and *Novels and tales* become commonplace in classification systems. Finally, the changes in science classes over the 50 year period demonstrate that the classification systems reflected the ways in which classification systems can reflect the turmoil of discovery. An interesting further study would be to focus solely on the scientific classes and look at how the publication of *The Origin of Species* impacted the classification structures, since this work clearly had an impact on other knowledge structures.

One final aspect of these classification systems is the potential for emulation between libraries. Initially, this study was predicated on the fact that the individuals creating the classification systems were working in relative isolation. Prior to the 1853 Convention discussed in the Prelude, individuals in charge of collections did not have a focused community within which to discuss the various challenges they were facing. Despite this lack of community, libraries had access to other systems because they owned other library catalogs. Table 22 illustrates the various library catalogs from the sample included in other sample libraries.

Library	Catalogs owned
New York Society Library (1813)	Library Company of Philadelphia (1807)
Charleston Library Society (1826)	Library Company of Philadelphia (1807) Baltimore Library Company (1809) American Philosophical Society (1824)
Library Company of Philadelphia (1835)	Baltimore Library Company (1809) American Philosophical Society (1824) Charleston Library Society (1826)
Providence Athenæum (1837)	Library Company of Philadelphia (no dates) American Philosophical Society (1824)
Mercantile Library Company of Philadelphia	Library Company of Philadelphia (1835) New York Mercantile Library Company (1837)
Salem Athenæum (1842)	Library Company of Philadelphia (1807)
Redwood Library and Athenæum (1843)	Library Company of Philadelphia (1807 and 1835) Providence Athenæum (1837)
Louisville Mercantile Library Association (1843)	New York Mercantile Library Association (1837) Providence Athenæum (1837)
Mercantile Library Company of Philadelphia (1850)	New York Mercantile Library Association (1837)

Table 22: Catalogs from sample libraries owned by other sample libraries

There are a few different reasons why libraries would own other library catalogs, most notably to account for the contents of the collection of other libraries. The only direct evidence that we have for classification system emulation is between the Providence Athenæum and the Louisville Mercantile Library Association.

Classification systems convey messages that are read and understood by classificationists as well as the eventual users of the system. Early nineteenth-century American social libraries used catalogs for a variety of reasons. Placing the holdings in a classified order not only displayed the holdings but made judgments on the relationships

between subjects. As noted in chapter 4, the catalogs examined demonstrated a variability of organizations of knowledge in the sample. When looked at comparatively, however, patterns emerge.

The comparison to Bacon's organization of knowledge provides some insight to the potential influence his philosophy may have had on American classification development. A method of "superclassing" or recognizing neighborhoods of classes was developed in order to provide a comparative framework. Thirteen of the seventeen catalogs were amenable to superclassing according to Bacon's structure. There is little agreement on the order of the superclasses among the 13 catalogs. Only 2 of the 13 systems directly mirror Bacon's order. This suggests that while Americans were essentially Baconian in the development of classes and the creation of neighborhoods, they were less tied to the philosophical underpinnings that formed the focus of Bacon's *Advancement of Learning*. Social library type and geographic proximity were examined to discern whether these could influence system development, but neither demonstrated clear impacts in the classification system. Catalog order, while only occasionally following Bacon's lead, may simply reflect the community, which the particular social library served.

In summary, the oversight provided by the comparison to Bacon provides one view of the classification systems examined. Religion, fiction, and scientific classes were examined further to identify more concrete changes over time in the development of the systems and to make connections to the volatility of the intellectual and sociocultural climate of the early nineteenth century. Patterns detected include a secularization of knowledge, with religion moving away from the primary position, the emerging importance of fiction in classification systems, and the development of more sophisticated approaches to scientific classes. These

areas demonstrate the reflective nature of classification systems during the period. At the end of the nineteenth century, classification systems began a period of homogenization and their structural maintenance became unwieldy. Similar reflections are not evident in these general systems of the late 1800s. The early classification systems included in this study, however, provide a window into the intellectual environment during a period of knowledge contestation.

CHAPTER 6:

CONCLUSION

The Librarian's Convention in 1853 was the first opportunity that librarians from across the country to congregate and compare systems. Classification was well represented at that convention through the efforts of Romain Merlin and Lloyd P. Smith. Their presentations given on the topic of classification demonstrate that librarians were interested and invested in the structure and meaning behind these systems. This research looks at the classification systems created before consensus on systems could build.

The classification systems analyzed above provide a unique window into early nineteenth-century American thought. Ideas, users, and collections all intersect in the classification systems to convey messages both to their contemporary audience and to the historian. As Scrivner notes, "the principles of construction of a catalog as an expression of the needs and values of the users of the libraries they record, and the relationships of a catalog as a cultural artifact to the intellectual milieu of its time."⁴⁷³ Studying classification systems is the study of that cultural artifact as an aspect of intellectual history

Prior to the widespread adoption of the card catalog, manuscript inventories and published books catalogs were the most common way for libraries to manage and communicate their holdings. Published book catalogs, though, had an accompanying expense for libraries that could have been seen as prohibitive. Despite this, Cutter's survey of

⁴⁷³ Scrivner, 427.

American book catalogs uncovered over 400 printed book catalogs prior to the Civil War. While most catalogs were presented in alphabetical order, either by title or author, a small, but significant number were presented in classified order. This classified presentation would add to the expense of a catalog as systems needed to be devised, but proponents of this approach used the same philosophical arguments that are in play today for the advantages of classification.

Classification systems operate on multiple planes. While primarily viewed by library patrons as a location device, classification systems also carry messages about intellectual locations and relationships. These messages are part of the warrant of the classification system: the underlying structural definitions that draw the classification system together. Studies into the warrant of classification systems have been done by a variety of different scholars, but warrant has not been discussed as a component of discourse. Yet, warrant is an important tool for the analysis of classification systems in order to develop a more nuanced understanding of how classification systems contribute to the deciphering of the discursive structures reflected in the materials in a collection. Discourse, as explained earlier, is the meaning of the underlying structures of knowledge.

The early nineteenth century provides an interesting landscape in which to explore these issues of warrant. As part of nation-formation, the United States experienced social, cultural, political and intellectual upheaval. Exploration and industrialization provided new pressures on a society that was working on defining itself and its place in the world. Institutions were formed to provide social environments where the free exchange of ideas and collective knowledge could be exchanged. Social libraries were one such institution. They provided access to knowledge by creating and maintaining collections. Some social

libraries also provided a location for members to participate in the interchange of ideas. As the nineteenth century progressed, social libraries were created for segments of society that focused on educational opportunities and social uplift.

Francis Bacon's organization of knowledge published in *The Advancement of Learning* provides a comparative framework for understanding the warrant extant in early nineteenth-century America. In looking at the classification systems created for social libraries from the sample, neighborhoods of classes were compared to Bacon's classes: *Memory*, *Imagination*, and *Reason*. Nearly 75% of the systems were comparable to Bacon's, but the order of the classes varied widely. The classes that were related to *Memory* and *Reason* were found in all the different positions (first, second, or third); *Imagination* was located either in the second or third position. Despite this, these classification systems seem to be fundamentally Baconian, although there is some question about whether or not they were philosophically aligned. Geographical and social library type comparisons did not provide evidence that emulation or philosophical proclivity were taking place.

Analysis of classes representing religion, fiction and science were also done to elucidate the impact of the changing social, cultural and intellectual landscapes on classification. This analysis provides further evidence that classification systems are reflective of the context in which they are created. Religion classes show signs of losing primacy in knowledge structures over the period represented by the sample. Conversely, fiction classes gained in prominence, appearing in all the catalogs by the end of the period represented by the sample. Finally, scientific classes increased in granularity for those libraries whose collections justify it and scientific discovery and transformation are reflected in the classification systems.

Some limitations to this research exist. Concrete evidence on the intentionality of the classification system creation was elusive for most of the catalogs in the sample. In addition, data on system creators was not practicable based on the fact that compilers were often not included in catalog information. This information would have enhanced the contextual analysis of the classification systems and could have provided insight into system creation. For example, contextual information might reveal relationships or exposure to Bacon's philosophical writings and allow for a more concrete interpretation of the role that Bacon's ideas had on the creation of the classification system.

Future research

The boundaries of this current study could be expanded. A single library type was chosen for this study, but in order to gain a more broader picture of the intellectual intersection within classification systems in the early nineteenth century, other libraries should be examined. These would include college libraries and personal libraries. Another area that would be important to consider is the interaction of patrons with the catalogs that are produced. Research into the use of the libraries may provide some insight into how patrons interacted with the catalogs. Documents like Kent's *Course* provide some evidence of programmatic approaches to knowledge and learning within social libraries.

In depth research on identified compilers could provide more insight into the motivations and ideas behind the construction of the classification system. While many catalogs do not provide identifying information on the person or persons responsible for the compilation (and thus constructing the classification system), archival research may unearth some valuable information about the inventors of these systems. The education, profession, and philosophical attributes may provide some insight into the influences of the system under

study. This kind of research would benefit from many in-depth analyses of individuals, but if enough of these individuals can be studied, a more general picture of the system creators and patterns may be discernable.

On-going research into the concept and utility of warrant as a component of discourse is necessary. Classification provides important insights into the implicit messages being communicated. This is particularly important given current interdisciplinary and transdisciplinary trends, when classification perceptions can hinder or assist in creating new connections between traditional disciplines. This needs to be achieved through historical treatments of classification systems to uncover the factors that comprise the concept of warrant and on-going analyses of contemporary classification systems to uncover the impact that warrant is having on our understanding of knowledge today.

APPENDIX A:
SAMPLE CATALOGS

Library and date of catalog	Date founded	Number of volumes	Compiler	Other catalogs created[‡]
Library Company of Baltimore (1802)	1795	Not available	Unknown	1798, 1804, 1809, 1816(s), 1823(s), 1831(s), 1841(s)
Library Company of Philadelphia (1807)	1741	18,391	George Campbell	1795, 1835, 1856
Library Company of Baltimore (1809)	1795	7,231	Unknown	1802, 1816(s), 1823(s), 1831(s), 1841(s)
New York Library Society (1813)	1754	12,500-13,000	Unknown	1773, 1793, 1825(s), 1827 (Italian books)
American Philosophical Society (1824)	1742, 1780	Not available	John Vaughn, Peter Du Ponceau	
Charleston Library Society (1826)	1748	12,000	Unknown	1802, 1806, 1811, 1816(s), 1818(s), 1831(s), 1835(s), 1845(s), 1847(s)
Library Company of Philadelphia (1835)	1741	43,884	Bertrand	1795, 1807, 1856
Mercantile Library Association of New York (1837)	1820	14,500	Edw Johnston	1821, 1825, 1828, 1830, 1840, 1844, 1850, 1852(s), 1856 (novels and tales), 1856, 1856(s)
Providence Athenæum (1837)	1836	3,950	Samuel W. Peckham	1833, 1839(s), 1852, 1853
New York Library Society (1838)	1754	25,000	Unknown	1841(s), 1850
Mercantile Library Company of Philadelphia (1840)	1821	6,000	Unknown	1822, 1824, 1828, 1832(s), 1850, 1856(s)

Library and date of catalog	Date founded	Number of volumes	Compiler	Other catalogs created[‡]
Salem Athenæum (1842)	1810	9,000	Thomas Cole and Dr. H. Wheatland	1809, 1811, 1818, 1826, 1834, 1842, 1849(s), 1858
Redwood Library and Athenæum (1843)	1747	4,047	Christopher G. Perry, David King, Nathan H. Gould, and Mr. Prioleau of South Carolina	1816, 1829, 1860
Louisville Mercantile Library Association (1843)	1842	~2,900	G.W. Noble	1828
Mercantile Library Company of Philadelphia (1850)	1821	10,500	Unknown	1822, 1824, 1828, 1832(s), 1840, 1856(s)
Library Company of Philadelphia (1856)	1741	18,000	Unknown	1795, 1807
Mechanics' Society of the City and County of Lancaster (1858)	1829	1,200	Unknown	-----

[‡] (s) indicates that the catalog is a supplement.

APPENDIX B:

CLASSIFICATION SYSTEM OF THE LIBRARY COMPANY OF BALTIMORE (1802)

A Catalogue of Books &c. belonging to the Library Company of Baltimore to which are prefixed, the act for the incorporation of the company, their constitution, their by-laws, and an alphabetical list of the members. Baltimore: Printed by Prentiss & Cole, 1802.

Theology, biblical learning, and ecclesiastical history
Metaphysics, moral philosophy, discourses, and treatises on morality
Natural philosophy, arts and sciences
Physic and Surgery
Law, politics, trade, and commerce
History, antiquities, chronology, and biography
Voyages, travels, and geography
Belles letters, criticism, classics, grammar, dictionaries, and ancient Latin and Greek authors
Poetry and plays
Novels, tales, fables, and romances
Miscellanies

APPENDIX C:

CLASSIFICATION SYSTEM OF THE LIBRARY COMPANY OF PHILADELPHIA

(1807)

A catalogue of books belonging to the Library Company of Philadelphia to which is prefixed, a short account of the institution with the charter, laws, and regulations. Philadelphia: Printed by Bartram & Reynolds, no. 58 North Second Street, 1807.

Memory

- Sacred history
- Ecclesiastical history
- Civil history – including biography antiquities, military and naval history, and civil history properly so called
- Natural history, in all its branches
- Voyages and travels
- Geography and topography, with maps, charts, and plans

Reason

- Theology
- Mythology
- Ethics; or the moral system in general
- Grammars, dictionaries, and treatises on education
- Logic, rhetoric, and criticism
- General and local politics
- Trade and commerce, treatises on annuities and insurance
- Law
- Metaphysics
- Geometry
- Arithmetic and algebra
- Mechanics
- Astronomy, astrology, and chronology
- Optics, pneumatics, hydrostatics, hydraulics, phonics, and gnomics
- Navigation and naval architecture
- Civil architecture
- The military art
- Heraldry
- Anatomy, medicine and chemistry

Agriculture and gardening
Arts and manufactures
Experimental and natural philosophy, and elementary treatises on the
arts and sciences

Imagination

Poetry and the drama
Works of fiction, with, and humor
The Fine Arts

Miscellanies

APPENDIX D:

CLASSIFICATION SYSTEM OF THE LIBRARY COMPANY OF BALTIMORE (1809)

A Catalogue of Books &c. belonging to the Library Company of Baltimore to which are prefixed, the act for the incorporation of the company, their constitution, their by-laws, and an alphabetical list of the members. Baltimore: Printed by Eades and Leakin, 1809.

Agriculture, gardening, rural improvements, and domestic economies
Antiquities, chronology, and mythology
Architecture, painting, music, &c.
Belles letters and criticism
Biblical
Biography
Chymistry
Classics
Education
Ethics, logic, and metaphysics
General Science
Geography and Topography
Grammar and Dictionaries
History, civil and ecclesiastical
Law
Mathematics and Astronomy
Military and Naval
Miscellaneous
Natural History
Novels, tales, and romances
Physic, Anatomy, and Surgery
Poetry and the Drama
Political
Political economy and commerce
Theology
Voyages and Travels

APPENDIX E:

CLASSIFICATION SYSTEM OF THE NEW YORK LIBRARY SOCIETY (1813)

Catalogue of the New York Society Library. New York: Van Winkle, 1813.

Theology, Ecclesiastical History, Sacred Criticism, Religious Controversy
Classic Authors, Greek and Latin
Ethicks, Logic and Metaphysics
Mathematics, Natural and Experimental Philosophy, Astronomy, Chemistry, and the Arts
Natural History, Botany, Agriculture, &c.
Civil and Military History, Antiquities, Mythology, Chronology, Biography, and Memoirs
Politics Legislation, Political Economy, Commerce and Revenue
Geography, Topography, Voyages, and Travels
Education, Dictionaries, Grammars, Philology, Belles-Lettres, and Criticism
Poetry and Drama
Fictitious Writings, Novels, Romances, and Fables
Medicine and Surgery
Architecture, Civil, Military, and Naval
Magazines, Reviews, Translations of Learned Societies, and Newspapers
Miscellanies
Pamphlets, &c.

APPENDIX F:

CLASSIFICATION SYSTEM OF THE AMERICAN PHILOSOPHICAL SOCIETY (1824)

Catalogue of the Library of the American Philosophical Society held at Philadelphia for Promoting Useful Knowledge. Philadelphia: Published by order of the Society, printed by Joseph R.A. Skerrett, 1824.

Memoirs and Transactions of scientific and Literary Institutions

Memoirs and transactions
Academical Discourses

Astronomy

Theoretical Astronomy
Practical Astronomy
Astronomical Tables and Almanacs

Mathematics

Algebra and Arithmetic
Geometry in General
Infinitesimal Calculus
Mathematical Tables
Miscellaneous

Natural Philosophy

General Treatises
Electricity and Magnetism
Meteorology and Pneumatics
Optics
Hydrostatics and Hydraulics
Coins, Weights, and Measures
Machines and Instruments
Miscellaneous

Chemistry

General Treatises
Essays on Particular Subjects
Miscellaneous

Natural History

In General
Animal Kingdom
Vegetable Kingdom

Mineral Kingdom
 Rural and Domestic Economy
 Medicine and Surgery

- Medicine in General
- Anatomy and Physiology
- Theory and Practice of Physic in General
- Treatises and Essays on Particular Diseases
- Surgery and Obstetrics
- Materia Medica and Therapeutics
- Miscellaneous

 Religion

- Sacred Writings
- Liturgies, Catechisms, Confessions of Faith, &c.
- Ecclesiastical History and Documents thereto belonging
- American Churches
- Theological and Religious Writings
- Controversial Writings
- Bible and Missionary Societies

 Moral Sciences

- Logic, Metaphysics, and Ethics
- Education

 Jurisprudence

- Law of Nature and Nations
- Municipal Codes and laws, and Commentaries thereon
- Criminal and State Trials
- Miscellaneous

 Biography

- General
- Particular

 History and Chronology

- General
- Local and particular

 Historical Documents

- Collections
- Separate documents
- Historical Registers and Newspapers

 Political Economy and Statistics

- Theory of Government
- Penal Laws
- Internal Improvements
- Domestic Manufactures
- Public Schools
- Relief of the Poor
- Slavery and the Slave Trade
- Statistics

 Local and Occasional Politics

Including tracts, essays, pamphlets, sermons &c.

Commerce and Manufactures
 Commerce
 Manufactures and Useful Arts

Navigation
 Military Act

Discipline and Tactics
 Fortification
 Navy

Geography and Ethnography
 General Geography
 Local Geography and Ethnology
 Voyages and Travels
 Maps and Charts

Philology
 Languages in General
 Particular Languages

Archæology and Bibliography
 Archæology
 Bibliography

Literature and Fine Arts
 Poetical and Prose Writings
 Literary Journals
 Fine Arts

Miscellanea
 Miscellaneous Dictionaries and Collections
 Miscellaneous Writings
 Almanacs &c.

APPENDIX G:

CLASSIFICATION SYSTEM OF THE CHARLESTON LIBRARY SOCIETY (1826)

A Catalogue of books belonging to the Charleston Library Society. Charleston: Published by order of the Society, Printed by A.E. Miller, 1826.

Metaphysics – Logic

Treatises on the Philosophy and Discipline of the Human Mind
Logic

Theology

On the Nature and Attributes of the Deity
On Revealed Religion
 Texts and Versions of the Bible
 Apocryphal Scripture
 Harmonies of the Bible
 Concordances and Abstracts of the Bible and Commentaries
 Paraphrases on the Bible
 Dictionaries of the Bible
 Critical Dissertations on the Bible
 Decrees of Councils
 Great Writers on Theology
 Polygraphic
 Systematic
 General
 On Particular Subjects
 Ascetic or Mystical Divinity
 Manuals of Devotion
 Parenetic Divines – Sermons
Liturgies of different Churches
 Of the Roman Catholic Church
 Of the Church of England
 Exposition of Catechisms, Creeds & Articles of Faith
Views of different Religious Sects
Controversial Divinity
 Vindication of Christianity
 Controversy between Trinitarians and Unitarians
 Controversy between Catholics and Protestants

- Controversy between Lutherans and Calvinists
- Controversy between Christians and Jews
- Controversy between Christians and Mahometans
- Treatises on the Mosaic Dispensation
- Divinity Heterodox
 - Religion and the Ancients
 - Religion of the Hindoos
- Ethics
 - General Treatises on Ethics
 - Ancient
 - Modern
 - Treatises on particular subjects
 - On Education
 - Moral and Philosophical History of the Human Race
- Government – Politics – Jurisprudence
 - Treatises on Government
 - General
 - On Particular Governments
 - Treatises on Political Economy
 - General
 - On Population
 - On Indigence and Pauperism
 - On Money and Circulation
 - On Banks in the United States
 - On Weights and Measures
 - On Commerce
 - History and General Treatises
 - On Commercial Restrictions
 - On the Commerce of Particular Countries
 - On the Commercial System of Europe in relation to the
 - East Indies
 - America
 - On the Commercial System of Europe in relation to
 - America
- On the Slave Trade and the re-colonization of Africa
- On Internal Navigation, Roads, Canals
- On Police
- On Statistics, general & particular
- Treatises on Local and Occasional Politics
 - On the Politics of Europe prior to 1763
 - On the Politics of Great Britain from 1760-70
 - British & American Politics from 1765-1784
 - American Politics
 - From 1780-1800
 - From 1800-1825
 - Miscellaneous
 - Local Politics of South Carolina

	Treatises connected with France and the French Revolution
	Prior to 1793
	From 1793 to the Peace of Amiens
	From 1803-1825
	On the Politics of Great Britain
	On Revenue
	Miscellaneous
	Transactions, Journals, Debates of National Councils
	Of Great Britain
	Of the United States
	Of France
	Treatises on Jurisprudence
	Of Civil Law
	General Dissertations on Law
	On the Roman Law
	Codes founded on the Roman Law and Decisions under
those codes	
	Laws of Great Britain and her colonies
	Dissertations on those Laws
	Practice of Courts & Cases decided under those
Laws	
	Laws of the United States and the several States
	Treatises on those Laws
	Reports on cases adjudged under those Laws
	Trials by Courts Martial
	Codes of Asiatic Nations
	Of Canonical Law
	Of International Law
	General Dissertations on National Rights and the Laws
	of Peace and War
	Maritime Law and Reports of Cases on Maritime Law
	On Diplomacy and the Rights and Duties of
	Embassadors
	Treatises of Peace, Alliance & Commerce between
	different Nations
On the pursuits, the improvements and discoveries of man in society	
	Literature
Literature	Treatises on the History, the influence and the importance of
	General views of Literature
	Philology
Language	Inquiries into the Origin, Structure and Peculiarities of
	Grammars of various Languages
	Dictionaries
	Prosody

- Treatises on Criticism
 - Ancient
 - Modern
 - On Particular Writers or Works
- Rhetoric and Oratory
 - Treatises on Rhetoric
 - Treatises on Elocution
 - Orations and Speeches
 - Eulogies
 - Occasional Orations
- Poetry
 - General Treatises on Poetry
 - Epic, Heroic, Romantic and Narrative Poetry
 - Ancient
 - Modern
 - Mythological Poetry
 - Tales and Fables
 - Didactic & Descriptive Poetry
 - Elegiac, Pastoral and Amatory Poetry
 - Lyric Poetry
 - Satiric and Epigrammatic Poetry
 - Humourous and Burlesque Poetry
 - Collections of Poetry and Extracts
 - Dramatic Poetry
 - Polygraphic Poets
- Romances and Novels
- Familiar Epistles (suppositious letters)
- Essays, Moral, Critical & Literary
 - Periodical
 - Miscellaneous
- Literary Controversies, Anecdotes, Apophthegms
- Facetiæ, Works of Wit & Humour
- Extracts and Collections of Fugitive Tracts
- Periodical Publications
 - Annual or Semi-Annual
 - Quarterly or Monthly
 - Reviews
 - Magazines
 - Weekly or Daily – Gazettes
- Polygraphic Writers
 - Ancient
 - Modern
 - English
 - Foreign works translated
 - French
- Arts and Sciences

Sciences

General Treatises on the Arts & Sciences, Encyclopædias, &c.
Transactions of Societies instituted to promote the Arts and

Natural History and its dependent branches

General Treatises on the Natural History

On the Natural history of Particular Countries

Treatises on the Mineral Kingdom

Geology

Mineralogy and Metallurgy

Treatises on the Vegetable Kingdom – Botany

On Agriculture

On Gardening (On Landscape and Picturesque Beauty, as
connected with Ornamental Gardening)

Treatises on the Animal Kingdom – Zoology

General Treatises

On the Mammalia

On Ornithology

On the Amphibiæ

On Invertebral Animals

Amusements connected with Zoology

The Chase and the Turf

Horsemanship

On the Management and Diseases of Quadrupeds

On Medicine

Treatises on Anatomy & Physiology

On Health and Longevity

General Treatises on Medicine

On Particular Diseases and Remedies

On the Diseases of Particular Climates and Professions

On the Materia Medica

Chemistry

General Treatises

Treatises on particular subjects

Electricity, Galvanism, Magnetism

Mathematics and their dependent branches

Mathematics, pure

Mathematics applied to Science and to Art

Trigonometry, Mensuration, Surveying

Mechanical Philosophy

General Treatises

Treatises on particular subjects

Mechanics, Hydraulics

Optics, Perspective

Astronomy

Navigation, Nautical Tables (Naval Architecture, Rigging,

Seamanship)

- Naval Tactics
- Military Tactics
 - General Treatises
 - On Particular Subjects
 - On Artillery
 - On Calvary
 - On Infantry
 - On Fortification
 - Miscellaneous
- On the Science of the Civil Engineer
- Treatises on the Fine Arts
 - General Treatises
 - On Architecture
 - On Sculpture
 - On Painting, Engraving, and Collections of Engravings
- Treatises on the Art of Writing and Printing
- Treatises on the Mechanic Arts
 - General
 - Particular
- Treatises on Games of Hazard or of Skill
- On the Occult Sciences – Divination, Physiognomy,

Craniology

The history of man in society

- General Treatises on the Use, Study and Composition of History
- Treatises on Chronology
- History, Civil and Military
 - General Treatises
 - On Ancient History
 - On Modern History
 - Histories of Particular Countries
 - Of the Jews
 - Of Persia
 - Of Egypt
 - Of Greece
 - Of Rome
 - Of Modern Italian States
 - Of Spain and Portugal
 - Of France
 - Of Great Britain
 - Of England
 - Of Scotland
 - Of Ireland
 - Of Countries or Cities in Great Britain
 - Of Holland and the Netherlands
 - Of Switzerland
 - Of Germany

- Of Denmark and Sweden
- Of Russia
- Of the Ottoman Empire
- Of Hindoostan
- Of China
- Of the Asiatic and African Islands
- Of Africa
- Of America
 - General Histories
 - Of Spanish & Portuguese America
 - Of the United States
 - Of the Aborigines
 - General Histories
 - Of the Several States
 - Of the American Revolution
 - Of the U. States since the Revolution
 - Of Canada
 - Of the West-Indies
 - Of Surinam
 - Of Orders of Knighthood and Secret Societies
- Miscellaneous
- History Ecclesiastical
 - Of the Israelites
 - Of the Christian Church
 - General Histories
 - Of Particular Countries
 - Of Particular Denominations
- History of Individuals – Biography
 - Biographical Collections
 - Historical Biography
 - Private Biography
- History of Literature, the Arts and Sciences
 - General
 - Of Literary Societies, Institutions, Libraries
 - Of Books, Bibliography (Catalogues of Libraries)
- Works to Illustrate History
 - State Papers
 - European
 - American
 - Official and Confidential Correspondence of Public Functionaries
 - Monuments of Past Ages
 - Antiquities
 - Medals, Coins
- History and Description of Natural and Artificial Divisions of the Globe – Geography & Topography

General Treatises
 Of Particular Countries or Districts
 In Europe
 In Asia
 In Africa
 In America
 Gazetteers
 Maps and Charts
 Description of Cities
 Treatises on the Manners, Customs, and Characters of
 Nations
 Voyages and Travels
 Collections of Voyages & Travels
 Particular Voyages
 Ancient
 Modern
 Travels in two or more quarters
 Travels in Europe
 Through more than one State of Kingdom
 In Limited Districts
 Greece and Turkey in Europe
 Italy
 Spain and Portugal
 France
 Switzerland and the Alps
 Germany, Holland, Hungary
 Great Britain and Ireland
 Denmark and Iceland
 Norway, Sweden, Lapland
 Russia
 In Asia
 Generally
 Russian Asia
 Asia Minor and Syria
 Arabia
 Central Asia
 Hindoostan and its Islands
 Asia and Cochin China
 China
 Indian & Australasian Islands
 In Africa
 Egypt and Abyssinia
 Morocco
 Central Africa
 Southern Africa
 In America

Canada
United States
West-Indies
Spanish America
Brazil
Suppositious Travels

APPENDIX H:

CLASSIFICATION SYSTEM OF THE LIBRARY COMPANY OF PHILADELPHIA

(1835)

Catalogue of the books belonging to the Library Company of Philadelphia; to which is prefixed, a short account of the institution with the charter, laws, and regulations.
Philadelphia: C. Sherman & Co., 1835.

Bibliography
Religion

Treatises on Toleration
Treatises on Natural Religion, and on the Existence of a God
The Holy Scriptures: texts and versions
Apocryphal Books
Scripture Histories, Dictionaries, Concordances and Harmonies
Criticism, Interpretation of and Commentaries on the Scriptures
Treatises on the Truth and Evidences of Revealed Religion
Creeds, Catechisms, Liturgies and Treatises thereon
Collections of Prayers
Metrical Versions of the Psalms: Hymns
Ancient and Modern Theologians
Doctrinal, Practical, Controversial, and Miscellaneous Divinity
Sermons, Pastoral Letters and Charges
Jewish Antiquities, History, Customs, &c.
Ecclesiastical History
History of the Inquisition
Lives of Saints, Martyrologies
Bible, Missionary, and Other Societies
Paganism, Mahomedanism, Mythology

Jurisprudence

General Treatises on Laws
Law of Nature, and of Nations
Treaties
Ancient, Civil, Feudal, and Ecclesiastical Law
Common Chancery, Commercial and Mercantile Law
Constitutional and Municipal Law and Commentaries

Constitutional and Municipal Law and Commentaries
The United States
Foreign: British
Continental Europe
Asia
Criminal and Penal Law, Police, Prisons, and Prison Discipline
Criminal and State Trials
Reports, Trials in Civil Cases
Individual and Particular Cases
Law relating to Women, Marriage and Divorce
Military Law, Treatises on Courts-Martial
Trials

Science and Arts

Philosophy
Encyclopædias, and Dictionaries of Arts and Sciences
Metaphysics
Physiognomy and Phrenology
Occult Philosophy, Alchemy, Astrology, Demonology, &c.
Logic
Ethics, or Moral Philosophy
Ethical Treatises on the Passions, Virtues, Vices, Happiness, &c.
Education, Elementary Works for Youth, &c.
Universities, Colleges, and Public Schools
General Treatises on Government and Politics
Political Economy, Population, Pauperism
Money, Finance, Banks, Paper, Credit, &c.
Trade, Commerce, Weights and Measure, Usury
Slavery and the Slave Trade
Internal Improvements, Roads, Canals, Bridges, Tunnels, Wheel
Carriages, &c.
Hospitals, Dispensaries and Poor Houses
Natural Philosophy, General Treatises, Systems &c.
Electricity, Galvanism, Magnetism, Meteorology, Pneumatics
Chemistry
Natural History, General Works
Natural History of different countries, &c.
Geology, Volcanoes, Earthquakes, Waters, &c.
Mineraology, Metals, Mines, Fossils
Botany, General Works
Zoology: Animals, Birds, Fishes, Insects, Shells, &c.
Medicine, General and Miscellaneous works
Treatises on Health, Diet, Regimen
Theory and Practice of Medicine
Diseases incident to various Places, Professions &c.
Treatises on particular Diseases
Anatomy and Physiology

Surgery and Obstetrics
Materia Medica: Pharmacopœias, Dispensatories
Mathematics, General and Miscellaneous works
Arithmetic, Algebra, Fluxions
Geometry, Surveying, Trigonometry
Logarithms, Mathematical Tables, and Instruments
Calculations of Probabilities, Life Annuities
Mechanics: Hydrostatics, Descriptions of Machines, Steam Engines
&c.

Astronomy, Astronomical Tables, Atlases, Instruments, &c.
Treatises on the Calendar
Almanacs, Ephemerides
Optics: Light, Vision &c.
The Fine Arts
Arts of Design, Perspective Painting, Engraving, Sculpture, &c.
Books of Prints, Catalogues and Descriptions of Pictures, &c.
Architecture
Views and descriptions of Edifices, Ruins, Arches, Columns, &c.
Vases, Gems, &c.
Music
Arts and Trades, General Works, Dictionaries
Art of Memory
Art of Writing and Printing
Stenography, or Short-Hand
Book Keeping
Arts and Manufactures in general
Particular Arts
Agriculture and Gardening
Treatises on Horses, Cattle, Sheep, &c. The Veterinary Art, Farriery
Treatises on Silk Worms and bees
Treatises on Cookery, &c.
Treatises on Warming, Lighting, and Ventilating Buildings &c.
Miscellaneous
Navigation, Naval Architecture, Naval Tactics
Military Art, Militia
Recreative Arts
Chess

Belles Lettres

Literary History
Grammar and Lexicography, General Works
Greek and Latin Languages
Oriental, European, and other Languages
Rhetoric, Criticism, Oratory
Orations, Speeches, Eulogiums, and Addresses
Treatises on Poetry
Greek and Latin Poetry, and Translations

Treatises on Stage
 Dramatic Works, Greek and Latin, and Translations
 English Dramatic Works
 French, Italian, German &c. and Translations
 History of Fiction
 Works of Fiction, Wit, and Humour, Imaginary Voyages and
 adventures, Fables in the English Language
 Greek, Latin, French and other Languages
 Anecdotes, Proverbs, Maxims, Dialogues, and Emblems
 Epistolary Writers
 Polygraphy, or the works of Authors who have written on various
 styles
 Literary Miscellanies, Essays
 Memoirs and Transactions of Scientific and Literary Institutions
 Periodical Literature, Scientific Journals
 Religious Journals
 Literary Journals, Magazines, and Reviews
 Registers
 Gazettes
 Directories

History

Treatises on History – Historic Atlases
 Geography
 Topography and Statistics
 British
 France, Italy, Spain &c.
 United States
 Voyages and Travels – treatises on Travelling
 Histories and Collections of Voyages
 Voyages and travels in various parts of the world
 Round the world – South Seas – N.W. Passage – Polynesia – Australia
 – N.W. Coast of America
 Shipwrecks and Disasters at Sea
 Travels in various parts of Europe – Germany, Holland and Belgium
 Travels in Italy, France, Spain and Portugal &c.
 Travels in Great Britain and Ireland
 Travels in Turkey, Greece, the Levant, Syria, Palestine and Arabia
 Travels in Persia, China, the East Indies, &c.
 Travels in Africa
 Travels in America
 General History – Chronology
 Antiquities
 Chivalry, Heraldry, Peerage, Genealogy
 Freemasonry and Secret Societies
 Gipsies
 Numismatics or Medals

History of Greece
History of Rome
Historical Extracts and Miscellanies
History of Europe
British History
British Politics, arranged chronologically
History of the Northern Nations
History of Germany, Hungary, and Prussia
History of Holland
History of Italy and Switzerland
History of France
History of Spain and Portugal
History of the Ottoman Empire
Asiatic and African History
History of America (except the United States)
History of the United States
 History of the Carolinas
History of Connecticut and Florida
History of Georgia, Kentucky and Louisiana
History of Maine, Maryland, Massachusetts
History of New England
History of New Hampshire and New Jersey
History of New York
History of Pennsylvania
History of Vermont and Virginia
Local and Occasional Politics of the United States, arranged
chronologically
Biography and Personal Narratives

APPENDIX I:
CLASSIFICATION SYSTEM OF THE MERCANTILE LIBRARY ASSOCIATION OF
NEW YORK (1837)

Systematic Catalog of the Books in the Collection of the Mercantile Library Association of the City of New York. New York, 1837.

HISTORY

History. Introduction. The Art of Writing or Studying history
Geography; or Descriptive History
Collections of Voyages, Travels, and Descriptions
Circumnavigations
Travels in Several Quarters of the Earth
Travels in Europe and Asia
Travels in Asia and Africa
Travels in Asia and America
Travels in Africa and America
Travels in American and Europe
Travels in Several Parts of Europe
Travels in European Turkey
Travels in Italy and its Islands
Travels in Spain and Portugal
Travels in France
Travels in the British Isles
Travels in the Low Countries
Travels in the German States
Travels in Switzerland
Travels in the Scandinavian and Sclavonic States
Travels in Asia, several Parts
Travels in Asia Minor and the Levant
Asia. Travels in Arabia and Syria
Asia. Travels in Persia
Asia. Travels in Hither and Farther India
Asia. Travels in China and Japan
Asia. Travels in Tartary, Siberia, and Kamschatka
Australia and Polynesia
Africa. Travels in several Parts
Africa. Travels in Egypt, Nubia, and Abyssinia

Africa. Travels in Northern Africa
 Africa. Travels in Central and Southern
 America. Travels in Either America
 America. Travels in North
 America. Travels in the West Indies
 America. Travels in South
 Polar. Travels towards either Pole
 Civil history. Chronology
 University History, Ancient and Modern
 Ancient History. General
 History
 Ancient States. Greece
 Ancient States. Rome
 Ancient History. Barbarian States
 Byzantine History
 Modern History
 General
 Europe. General
 Italy
 Spain and Portugal
 France
 British Islands
 The Low Countries
 Switzerland
 German States
 Scandinavia and Russia
 Asia in General
 Asiatic in General
 Asiatic Turkey
 Arabia and Syria
 Persia
 Modern Geography. Mogul Empire
 Modern History
 China and Japan
 Tartar Regions
 Asiatic Islands
 Africa in General
 Egypt, Nubia, and Abyssinia
 Northern Africa
 America in General
 North America
 West Indies
 South America
 European Colonies
 History. Ecclesiastical
 History of Knighthood, and other Orders

History. Personal, or Biography
 History of Letters
 History of Books
 Miscellanies of History, Civil, Ecclesiastical, and Literary; as
 Magazines, Reviews, Newspapers, and Works omitted in preceding
 Sections.
 Natural History. Collections
 Mineral Kingdom.
 Geology
 Mineralogy
 Natural History.
 Vegetable Kingdom
 Animal Kingdom
 Ornithology
 Entomology
 Conchology
 Chymistry
 Anatomy, Physiology, Medicine, Surgery
 Phrenology
 Physiognomy
 Amusements and Exercises

PHILOSOPHY

Moral Sciences.
 Logic and Metaphysics
 Education
 Ethics
 Minor Morals
 Theology. Texts and Versions of the Scriptures
 Theology.
 Revealed. Histories of the Bible
 Interpreters and Commentators
 Biblical Criticism
 Biblical Antiquities
 Councils and Confessions of Faith
 Dogmatic, Moral, and Polemic
 Sermons
 Mystical
 Theology. Natural. Evidences of Christianity
 Superstitions.
 Christian
 Gentile
 Jurisprudence
 Natural and National
 Legislation. Theory and Codes
 Civil Law
 Common Law

Commercial
 Federal and Constitutional
 American Statute and Municipal Law
 Criminal
 Ecclesiastical Law
 Law. Martial
 Politics
 Ancient. Theoretic
 Modern. Theoretic
 Practical. America
 Practical. European
 Public Wealth and Population
 Political Economy. Commerce
 Political Economy. Statistics
 Appendix to Politics. State Papers, &c.
 Mathematical Sciences. Pure
 Pure Mathematics
 Arithmetic
 Algebra
 Geometry, Conic Sections, &c.
 Logarithms
 Mixed Mathematics
 Natural Philosophy
 Mechanics
 Statics and Dynamics
 Astronomy
 Optics
 Arts and Sciences. Encyclopedias, Transactions, &c.
 Grammar. Languages
 Rhetoric and Rhetorical Collections
 Orations
 Epistles
 Fables, Apothegms, Anecdotes, &c.

POETRY

 Introduction
 Poetry. Dramatic
 Index to Dramatic Works
 Prose Fictions
 Fine Arts
 Introduction
 Architecture
 Landscape Gardening
 Music
 Painting
 Sculpture

POLYGRAPHS

Or Writers on Mixed Subjects; with Essayist and Miscellany
Compositions, and a few omitted Books

APPENDIX J:

CLASSIFICATION SYSTEM OF THE PROVIDENCE ATHENAEUM (1837)

Catalogue of the Athenæum Library; with an appendix containing the library regulations and a list of the officers and proprietors. Providence: Knowles, Vose and Company, 1837.

Antiquities and the Fine Arts

Biography

Geography and Ethnology

 General Geography

 Local Geography and Ethnology

 Voyages and Travels

 Maps and Charts

History and Chronology

 General History

 Local and Particular History

 Works on American in General

 American States and Colonies

Jurisprudence

Classics and Translations

Rhetoric and Belles Lettres

Fiction

Poetry and the Drama

Mechanics and Useful Arts

Natural Philosophy and Mathematics

Natural History

Medicine and Surgery

Moral and Intellectual Philosophy

Religion

Philology

Political Economy and Statics

Periodical Publications

Miscellaneous Dictionaries

Collectanea

Miscellaneous

Bibliography

APPENDIX K:

CLASSIFICATION SYSTEM OF THE NEW YORK SOCIETY LIBRARY (1838)

Alphabetical and Analytical Catalogue of the New-York Society Library with a brief historical notice of the institution; the original articles of association, 1754 and the charter and by-laws of the Society. New York: Printed by James Van Norden, 1838.

Theology

Sacred writings, philology, and Criticism
Ecclesiastical History and Law
Natural Theology and the Evidences of Christianity
Miscellaneous

Law

Statute, Common, Mercantile and Military

Science

Universal
 Encyclopedias
Mental and Moral
 Metaphysics, Ethics, and Logic
 Education
Political
 Government and National Law and Politics
 Political Economy, Currency, Commerce, Statistics, and Public

Documents

Exact
 Arithmetic and Mathematics
 Astronomy
Natural
 Natural Philosophy
 Chemistry
 Natural History
 Anatomy, Medicine, and Surgery

Arts

Mathematical
 Engineering, Art of War and Navigation
Natural

	Agriculture, Gardening and Veterinary
Fine	Drawing, Painting, Engraving, and Music Architecture – Civil and Naval
Miscellaneous	Mechanical, Chemical, Domestic, &c.
Belles Lettres	Elementary and Theoretical Dictionaries and Grammars Rhetoric, Oratory, Poesy, Philology, and Criticism
	Proper Poetry and Drama – English and American Poetry and Drama – Foreign and translated Romance and Faetiæ – English and American Romance and Faetiæ – Foreign and translated Literary Essays, Letters and Orations – English and American Literary Essays, Letters and Orations – Foreign and translated Greek and Latin Classics and Translations
Geography, Topography, Voyages, and Travels	Universal (including Gazetteers and Collections) Europe (including Great Britain and Ireland) Asia and Africa America – North and South Australia and Polynesia
History	Introductions, Historical Dictionaries and University History Mythology, Chronology, Antiquities, and Heraldry Greece and Rome England, Scotland, and Ireland Europe Asia and Africa America – North and South
Biography	General dictionaries English (including Scottish and Irish) Foreign American
Transactions	Memoirs and Transactions of Literary and Scientific Institutions –
Foreign and American	
Periodical Works	Registers, Reviews, and Magazines – British and Foreign Registers, Reviews, and Magazines – American American and Foreign newspapers
Polygraphy	The collected works of miscellaneous writers – English and American

Bibliography	The collected works of miscellaneous writers – Foreign
Pamphlets	Catalogues of Books – Foreign and American
	Unclassified
	Classified
	Theological
	Political
	Statistical and Politico-Economical
	On Medicine and Natural History
	Addresses and Orations
	Poetical, Critical, and Philological
	On Education
	Historical and Biographical
	Moral
	On Law and Reports of Trials
	On Slavery and Indian Affairs
	On Prison Discipline
	On Arts and Internal Improvement
	Miscellaneous
Novels	

APPENDIX L:
CLASSIFICATION SYSTEM OF THE MERCANTILE LIBRARY COMPANY OF
PHILADELPHIA (1840)

A Catalogue of the books belonging to the Mercantile Library Company of Philadelphia with a General Index of Authors; and Containing the Constitution, Rules, and Regulations of the Association accompanied by a sketch of its history. Philadelphia: Printed for the Company, 1840.

Commerce

Banking, Currency, and Insurance
Book-Keeping

Law and Government

Commercial, Constitutional, and Civil
Law Library
Reports
Jurisprudence, Legislation, Law of Nations
Political Economy, Politics, Statistics, State Papers

Arts, Manual

Agriculture
Botany and Gardening
Architecture
Manufactures
Machinery
Engineering, and Navigation by Steam or otherwise
Fine Arts

Natural Sciences

Chemistry
Geology
Mineralogy
Medical Sciences
Anatomy
Physiology
Physiognomy and Phrenology
Practice of Medicine

Foreign Languages	French Italian German Greek Hebrew Spanish
Philosophy	Astronomy Optics Education Logic and Rhetoric Metaphysics Mathematics Natural Philosophy
Novels and Tales Belles Lettres	Essays Journals Letters Manners and Customs Lectures, Orations, Speeches Select Literature Poetry Drama
Geography	Travels Voyages
Miscellaneous	Harper's Family Library Lardner's Cabinet Cyclopaedia
Periodicals	Pamphlets Newspapers
Works of Reference	Dictionaries Works of Reference
History	America Asia and Africa Europe General or Universal Sacred, Oriental and Profane Chivalry Military Chronology

Natural History

Zoology
Ornithology
Ichthyology
Entomology
Conchology

Biography

Religion and Theology

APPENDIX M:

CLASSIFICATION SYSTEM OF THE SALEM ATHENAEUM (1842)

Catalogue of the Library of the Athenæum, in Salem Massachusetts, with the by-laws and regulations. Salem: Printed at the office of the Gazette, 1842.

Theology

Holy Scriptures
Natural Religion
Evidence of Revealed Religion
Scripture Histories, Biblical Dictionaries, Concordances, Harmonies
Critical Theology
Controversial and Practical
Parænetic Theology
Fathers of the Church
Ecclesiastical History
Jewish Antiquities, History, Literature
Miscellaneous Divinity
Various Religions and Superstitions

Jurisprudence, Government, and Politics

Law of Nature and Nations, Treaties, &c.
Civil Law
Canon and Ecclesiastical Law
Statute, Common and Chancery Law
General and Miscellaneous Law
Government and Politics
Political Economy, Finance, Money, Trade and Commerce

Science and Arts

Philosophy
Physics
Natural History
Medicine
Fine and Useful Arts
Encyclopædias, Journals, and Publications of Learned Societies

Belles Lettres

Bibliography
Literary History

Grammar and Lexicography
Rhetoric and Criticism
Ancient Latin and Greek Authors
Translations of Greek and Latin Authors
Poetry
Works of Fiction and Humor, Apophthegms, Proverbs, Dialogues
Orations, Addresses, Speeches
Periodical Works, Registers, Directories, Gazettes
Miscellaneous

History

Antiquity, Mythology, Numismatics, Heraldry, Genealogy
Voyages and Travels
Geography, Topography, Statistics
General History and Chronology
Ancient History
Modern History of Continental Europe
British History
Asiatic, African, and Other History
American History
Biography and Personal Narrative

Pamphlets

APPENDIX N:

CLASSIFICATION SYSTEM OF THE REDWOOD LIBRARY AND ATHENÆUM

(1843)

A Catalogue of the books belonging to the company of the Redwood Library and Athenæum, in Newport, R.I. to which is prefixed a short account of the institutions; with the charter, laws and regulations. Providence: Knowles and Vose, Printers, 1843.

Theology
History

History and Chronology
Biography
Voyages and Travels
Geography, Ethnology, and Statistics
Antiquities, Mythology, Numismatics, Heraldry, and Genealogy

Jurisprudence, Government and Politics

Law, Government, and Politics
Political Economy, Finance, Money Trade and Commerce

Belles Lettres

Rhetoric, Criticism and Literary History
Philology
Latin and Greek Classics and Translations
Poetry and the Drama
Works of Fiction, Humor, Proverbs, Dialogues &c.
Orations, Addresses, Speeches &c.
Periodical Works, Registers, Directors, and Gazetteers
Miscellaneous Authors
Bibliography

Science and Arts

General Works on Philosophy, Logic, Intellectual and Moral

Philosophy

Education and Elementary Works
Mathematics and Physics
Natural History
Medicine and Surgery

Mechanics and Useful Arts
Encyclopædias, Journals, and Publications of Learned Societies

APPENDIX O:
CLASSIFICATION SYSTEM OF THE LOUISVILLE MERCANTILE LIBRARY
ASSOCIATION (1843)

Catalogue of the Louisville Mercantile Library Company; and a list of the newspapers and periodicals in the news-room with an appendix, containing the library regulations and a list of the officers and life members. Louisville: Prentice and Weissinger, 1843.

Antiquities and the Fine Arts
Commerce and Commercial Law
General Geography
Biography
Geography and Ethnology
 Voyages and Travels – American
 Voyages and Travels
History and Chronology
 General History
 Local and Particular History
 American Biography
 Works on American in General
 American States and Colonies
Jurisprudence and Politics
Classics and Translations
Rhetoric and Belles Lettres
Fiction
Poetry and the Drama
Mechanics and Useful Arts
Natural Philosophy
Natural History
Medicine and Surgery
Moral and Intellectual Philosophy
Religion
Philology, Logic and Education
Political Economy and Statics
Periodical Publications

Miscellanea
Miscellaneous Dictionaries
Collectanea
Bibliography
Periodicals and Newspapers

APPENDIX P:
CLASSIFICATION SYSTEM OF THE MERCANTILE LIBRARY COMPANY OF
PHILADELPHIA (1850)

A Catalogue of the Mercantile Library Company of Philadelphia. Philadelphia: Printed for the Mercantile Library Company, 1850.

Commerce

Law

General Treatises on Government

Political Economy

Reports, Debates, Pamphlets &c. of Pennsylvania

Public Documents of the United States

Census of United States

Reports &c. of English and other Foreign Governments

Agriculture &c.

Fine Arts

Manufactures and Trades

Botany

Chemistry

Geology and Mineralogy

Medicine

Natural Philosophy

Astronomy

Educational Treatises

Mathematics

Metaphysics and Ethics

Books of Reference

Periodicals, Newspapers, &c., Pamphlets

Novels and Tales

Essays and Literary Criticism, History of Literature

Letters

Orations

Select Literature

Poetry
Drama
Geography
American History
American Travels
European History
European Travels
Asiatic and African History
Asiatic and African Travels
General and Ancient History
General Travels and Voyages
Biography
Natural History
Religion
Miscellany
Foreign Languages

APPENDIX Q:
CLASSIFICATION SYSTEM OF THE LIBRARY COMPANY OF PHILADELPHIA
(1856)

Catalogue of the books belonging to the Library Company of Philadelphia; containing the titles added from 1835 to 1856 together with an alphabetical index to the whole.
Philadelphia: Printed for the Company, 1856.

Bibliography
Religion

Treatises on Natural Religion, and on the Existence of a God
The Holy Scriptures: texts and versions
Apocryphal Books
Scripture Histories, Dictionaries, Concordances and Harmonies
Criticism, Interpretation of and Commentaries on the Scriptures
Treatises on the Truth and Evidences of Revealed Religion
Creeds, Catechisms, Liturgies and Treatises thereon
Collections of Prayers
Metrical Versions of the Psalms: Hymns
Ancient and Modern Theologians
Doctrinal, Practical, Controversial, and Miscellaneous Divinity
Sermons, Pastoral Letters and Charges
Jewish Antiquities, History, Customs, &c.
Ecclesiastical History
History of the Inquisition
Lives of Saints, Martyrologies
Bible, Missionary, and Other Societies
Paganism, Mahomedanism, Mythology

Jurisprudence

General Treatises on Laws: International Law
Ancient, Civil, Feudal, and Ecclesiastical Law
Common Chancery, Commercial and Mercantile Law
Constitutional and Municipal Law and Commentaries
Constitutional and Municipal Law and Commentaries
The United States

Foreign: British
 Continental Europe
 Asia
 Criminal and Penal Law, Police, Prisons, and Prison Discipline
 Criminal and State Trials
 Reports, Trials in Civil Cases
 Law relating to Women, Marriage and Divorce
 Military Law, Treatises on Courts-Martial
 Trials
 Medical Jurisprudence

Science and Arts

Philosophy
 Encyclopædias, and Dictionaries of Arts and Sciences
 Metaphysics
 Physiognomy and Phrenology
 Occult Philosophy, Alchemy, Astrology, Demonology, Mesmerism
 &c.

Logic
 Ethics, or Moral Philosophy, Duties and Wrongs of Women, Self-
 Culture &c. &c.
 Ethical Treatises on the Passions, Virtues, Vices, Happiness, &c.
 Education, Elementary Works for Youth, &c.
 Universities, Colleges, and Public Schools
 General Treatises on Government and Politics
 Political Economy, Population, Pauperism
 Money, Finance, Banks, Paper, Credit, &c.
 Trade, Commerce, Colonization, Weights and Measures, Usury
 Slavery and the Slave Trade – African colonization
 Internal Improvements, Railways, Roads, Canals, Bridges, Tunnels,
 Wheel Carriages, &c.
 Hospitals, Dispensaries and Poor Houses
 Natural Philosophy, General Treatises, Systems &c.
 Electricity, Galvanism, Magnetism, Meteorology, Pneumatics
 Chemistry
 Natural History, General Works
 Natural History of different countries, &c.
 Geology, Fossils, Volcanoes, Earthquakes, Waters, &c.
 Mineraology, Metals, Mines
 Botany
 Zoology: Animals, Birds, Fishes, Insects, Shells, &c.
 Ethnology, the Natural History of Man, and the Unity of the Human
 Race
 Medicine, General and Miscellaneous works
 Treatises on Health, Diet, Regimen
 Theory and Practice of Medicine
 Treatises on particular Diseases

Anatomy and Physiology
 Surgery and Obstetrics
 Materia Medica: Pharmacopœias, Dispensatories
 Mathematics, General and Miscellaneous works
 Arithmetic, Algebra, Fluxions
 Geometry, Surveying, Trigonometry
 Logarithms, Mathematical Tables, and Instruments
 Calculations of Probabilities, Life Annuities
 Mechanics: Hydrostatics, Descriptions of Machines, Steam Engines
 &c.
 Astronomy, Astronomical Tables, Atlases, Instruments, &c.
 Almanacs, Ephemerides, Registers
 Optics: Light, Vision &c.
 Acoustics – Sound
 The Fine Arts
 Arts of Design, Perspective Painting, Engraving, Sculpture
 Books of Prints, Catalogues and Descriptions of Pictures
 Architecture, Views and descriptions of Edifices, Ruins, Arches,
 Columns, &c., Vases, Gems, &c.
 Music
 Arts and Manufactures, General Works and Dictionaries
 Art of Writing, Printing, and Book-binding
 Stenography and Phonography
 Book Keeping
 Arts and Manufactures – Particular Arts
 Agriculture and Gardening
 Treatises on Horses, Cattle, Sheep, Poultry &c. The Veterinary Art,
 Farriery
 Treatises on Silk Worms and bees
 Treatises on Cookery – Gastronomy
 Treatises on Warming, Lighting, and Ventilating Buildings &c.
 Navigation, Naval Architecture, the Merchant Service
 The Naval Service, Naval Gunnery, Vessels of War
 Military Art – Treatises
 Military Art – Historical Works
 Recreative Arts
 Chess

Belles Lettres

Literary History
 Grammar and Lexicography, General Works – Philology
 Greek and Latin Languages
 Oriental, European, and other Languages
 Rhetoric, Criticism, Oratory
 Orations, Speeches, Addresses
 Treatises on Poetry
 Greek and Latin Poetry, and Translations

English Poetry
 Spanish, French, Italian and German Poetry and Translations
 Treatises on the Stage and Histories of the Drama
 Dramatic Works, Greek and Latin, and Translations
 English Dramatic Works
 French, Italian, German Drama
 Works of Fiction, Wit, and Humour, Imaginary Voyages and
 adventures, Fables in the English Language
 Greek, Latin, French and other Languages and translations
 Anecdotes, Proverbs, Maxims, Dialogues, and Emblems
 Epistolary Writers
 Polygraphy, or the works of Authors who have written on various
 styles
 Literary Miscellanies, Essays
 Memoirs and Transactions of Scientific and Literary Institutions
 Periodical Literature – Religious, Scientific, and Literary Journals and
 Reviews
 Gazettes, Newspapers, Prices Current
 Directories
 Recapitulation of Periodicals

History

Treatises on History – Historic Atlases
 Geography, Atlases, Gazetteers
 Maps, Plans, and Charts
 U.S. Coast Survey Charts
 Topography and Statistics
 Voyages and Travels – treatises on Travelling
 Collections of Voyages
 Voyages and travels in various parts of the world
 Round the world – South Seas – N.W. Passage – Polynesia – N.W.
 Coast of America
 Australia, New Zealand, and Van Dieman's Land
 Shipwrecks and Disasters at Sea
 Travels in various parts of Europe
 Travels in the North of Europe – Germany, Holland and Belgium
 Travels in Italy, France, Spain, Portugal, Switzerland &c.
 Travels in Great Britain and Ireland
 Travels in Turkey, Greece, the Levant, Syria, Palestine and Arabia
 Travels in Persia, China, Hindostan, the East Indies, &c.
 Travels in Africa
 Travels in America
 General History – Chronology
 Antiquities
 Chivalry, Heraldry, Peerage, Genealogy
 Masonry and Secret Societies
 Gipsies

Numismatics or Medals
History of Greece
History of Rome
Historical Extracts and Miscellanies
History of Europe
British History
British Politics, arranged chronologically
History of Russia and Poland
History of Denmark, Sweden, and Norway
History of Germany – Hungary, Prussia
History of Holland and Belgium
History of Italy and Switzerland
History of France
History of Spain and Portugal
History of the Ottoman Empire
Asiatic and African History
History of China and Japan
History of Hindostan and of the British Empire in the East Indies
History of Egypt
Oceanica, Polynesia, Australia
History of America (except the United States)
History of the United States
Public Documents, States Papers, &c. of the United States
Particular History, arranged chronologically
Local and Occasional Politics of the United States, arranged
chronologically
Biography, Personal Narratives, Eulogiums

APPENDIX R:

CLASSIFICATION SYSTEM OF THE MECHANICS' SOCIETY OF THE CITY AND
COUNTY OF LANCASTER (1858)

Constitution, by-laws, and rules and regulations for the government of the Mechanics' Society of the City and County of Lancaster. Lancaster: Printed for the Society, by John Baer & Sons, 1858.

Biography
History
German, French, and Spanish Works
Poetry
Miscellaneous
Religious Works
Scientific, Philosophical & Mechanical
Works of Fiction, &c.
Encyclopedies and Magazines
Voyages and Travels
Law and Congressional Documents
Juvenile Department
Papers
German

REFERENCES

Catalogs

A catalogue of books &c. belonging to the Library Company of Baltimore to which are prefixed, the act for the incorporation of the company, their constitution, their by-laws, and an alphabetical list of the members. Baltimore: Printed by Prentiss & Cole, 1802.

A catalogue of books &c. belonging to the Library Company of Baltimore to which are prefixed the incorporation of the company, their constitution, their by-laws, and an alphabetical list of the members. Baltimore: Printed by Eades and Leakin, 1809.

A catalogue of the books belonging to the Charleston Library Society. Charleston: Printed by A. E. Miller, 1826.

A catalogue of the books belonging to the company of the Redwood Library and Athenæum, in Newport, R.I. to which is prefixed a short account of the institution; with the charter, laws, and regulations. Providence: Knowles, Vose, printers, 1843.

A Catalogue of the books belonging to the Library Company of Philadelphia to which is prefixed, a short account of the institution with the charter, laws, and regulations. Philadelphia: Printed by Bartram & Reynolds, 1807.

A catalogue of the books belonging to the Mercantile Library Company of Philadelphia with a general index of authors; and containing the constitution, rules, and regulations of the Association accompanied by a sketch of its history. Philadelphia: Printed for the Company, 1840.

A catalogue of the Mercantile Library Company of Philadelphia. Philadelphia: Printed for the Mercantile Library Company, 1850.

Alphabetical and Analytical Catalogue of the New-York Society Library with a brief historical notice of the institutions; the original articles of association, in 1754 and the charter and by-laws of the society. New-York: Printed by James Van Norden, 1838.

Catalogue of books belonging to the Charleston Library Society. Charleston: News and Courier Book and Job Presses, 1876.

Catalogue of the Athenæum library; with an appendix containing the library regulations and a list of the officers and proprietors. Providence: Knowles, Vose, and Company, 1837.

Catalogue of the books belonging to the Library Company of Philadelphia; to which is prefixed, a short account of the institution with the charter, laws, and regulations. Philadelphia: C. Sherman & Co., Printers, 1835.

Catalogue of the books belonging to the Library Company of Philadelphia; containing the titles added from 1835 to 1856 together with an alphabetical index to the whole. Philadelphia: Printed for the Company, 1856.

Catalogue of the books belonging to the Mercantile Library Company of Philadelphia: with a general index of authors; and containing the Constitution, rules, and regulations of the association accompanied by a sketch of its history. Philadelphia: printed for the Company, 1840.

Catalogue of the library of the American Philosophical Society, held at Philadelphia for promoting useful knowledge. Philadelphia: printed by Joseph R.A. Skerrett, 1824.

Catalogue of the library of the Athenæum, in Salem Massachusetts, with the by-laws and regulations. Salem: Printed at the office of the Gazette, 1842.

Catalogue of the Louisville Mercantile Library; and a list of the newspapers and periodicals in the news-room with an appendix, containing the library regulations and a list of the officers and life members. Louisville: Prentice and Weissinger, 1843.

Catalogue of the New York Society Library. New York: Van Winkle, 1813.

Constitution, by-laws, and rules and regulations for the government of the Mechanics' Society of the city and county of Lancaster. Lancaster: Printed for the Society, by John Baer & Sons, 1858.

Systematic catalog of the books in the collection of the Mercantile Library Association of the City of New York. New York, 1837.

McCorison, Marcus A., ed. *The 1764 Catalogue of the Redwood Library Company at Newport, Rhode Island.* New Haven: Yale University Press, 1965.

Catalogue of books belonging to the Charleston Library Society (Charleston: News and Courier Book and Job Presses, 1876

Other Sources

“*At the Instance of Benjamin Franklin*”: a brief history of the Library Company of Philadelphia. Philadelphia: Printed for the Library Company of Philadelphia, 1995.

“The Library Company of Baltimore” in *Maryland Historical Magazine*, 12, 1917, 297-311.

Arenson, Adam. "Libraries in Public before the age of public libraries: interpreting the furnishings and design of athenaeums and other 'social libraries,' 1800-1860" in *The Library as Place*, John E. Buschman and Gloria J. Leckie, eds. Westport, Conn.: Libraries Unlimited, 2007, 41-60.

Ashton, Joseph N. *The Salem Athenæum, 1810-1910*. Salem, 1917.

Atherton, Lewis E. "Mercantile Education in the Ante-Bellum South" in *The Mississippi Valley Historical Review*, 39, 1953, 623-640.

Augenbraum, Harold. "New York's Oldest Public Libraries" in *RBM: A Journal of Rare Books, Manuscripts, and Cultural Heritage*, 1, 2000, 145-160.

Augst, Thomas. *The Clerk's Tale: young men and moral life in nineteenth-century America*. Chicago: The University of Chicago Press, 2003.

Augst, Thomas. "Introduction: American Libraries and Agencies of Culture," *American Studies*, 42, 2001, 5-22.

Augst, Thomas. "The Business of reading in nineteenth-century America: The New York Mercantile Library," *American Quarterly*, 50, 1998, 267-305.

Baatz, Simon. "'Squinting at Silliman': scientific periodicals in the early American Republic, 1810-1833," *Isis*, 82, 1991, 223-244.

Barr, Larry J., Haynes McMullen, and Steven G. Leach, compilers. *Libraries in American Periodicals before 1876*. Haynes McMullen, ed. Jefferson, NC: McFarland & Company, Inc., 1983.

Bartlett, Mark and Sara Elliott Holliday. "The New York Society Library," *America's Membership Libraries*, Richard Wendorf, ed. New Castle, Del.: Oak Knoll Press, 2007, 65-84.

Bartram, Archibald to Parke, Thomas. May 17, 1806 Letter. Library Company of Philadelphia, 7444.F.13. Library Company of Philadelphia, Philadelphia, Pennsylvania.

Battles, Matthew. *Library: an unquiet history*. New York: W.W. Norton & Co., 2003.

Beghtol, Clare. "General classification systems: Structural principles for multidisciplinary specification" in *Structures and Relations in Knowledge Organization, Advances in Knowledge Organization*, 6, 1998, 89-96.

Beghtol, Clare. "Relationships in classificatory structure and meaning" *Relationships in the organization of knowledge*. Carol A. Bean and Rebecca Green, eds. Dordrecht: Kluwer Academic Publishers, 2001, 99-113.

- Beghtol, Clare. "Semantic Validity: Concepts of warrant in bibliographic classification systems" *Library Resources & Technical Services*, 1986, 109-125.
- Belanger, Terry. *Lunacy and the arrangement of books*. New Castle, Del.: Oak Knoll Press, 2003.
- Bernens, John C. and P.J. Gartin. "The Charleston Library Society" in *America's Membership Libraries*, Richard Wendorf, ed. New Castle, Del.: Oak Knoll Press, 2007, 49-64.
- Blair, Carole. "The statement: foundation of Foucault's historical criticism" *Western Journal of Speech Communications*, 51, 1987, 364-383.
- Bliss, Henry Evelyn. *The organization of knowledge and the subject-approach to books*. New York: H. Holt and Company, 1939.
- Bolton, Charles Knowles. *Proprietary and subscription libraries*. Chicago: American Library Association Publishing Board, 1917.
- Bowker, Geoffrey C. "The kindness of strangers: kinds and politics in classification" *Library Trends*, 47, 1998, 255-292.
- Bowker, Geoffrey C. and Susan Leigh Star. *Sorting things out: classification and its consequences*. Cambridge, Mass.: The MIT Press, 1999.
- Boyd, William Douglas, Jr. "Books for Young Businessmen: Mercantile Libraries in the United States, 1820-1865", PhD diss., Indiana University, 1975.
- Broadfield, A. *The Philosophy of Classification*. London: Grafton & Co., 1946.
- Brown, James Duff. *Manual of Library Classification and Shelf Arrangement*. London: Library Supply Company, 1898.
- Brown, Richard D. *Knowledge is power: The diffusion of information in early America, 1700-1865*. New York: Oxford University Press, 1989.
- Budd, John M. and Douglas Raber. "Discourse analysis: method and application in the study of information" *Information Processing & Management*, 32, 1996, 217-226.
- Budd, John M. "An epistemological foundation for library and information science" *Library Quarterly*, 65, 1995, 295-318.
- Bushman, Richard L. *The refinement of America: persons, houses, cities*. New York: Alfred A. Knopf, 1992.

Cannon, Susan Faye. *Science in culture: the early Victorian period*. New York: Dawson and Science History Publications, 1978.

Carrier, Esther Jane. *Fiction in public libraries, 1876-1900*. New York: The Scarecrow Press, Inc., 1965.

Charaf, Inaam. "Conceptualisation and organization of knowledge between the 10th and 14th centuries in Arabic culture" *Knowledge Organization*, 31, 2004, 213-221.

Coleman, Anita S. "A Code for Classifiers: whatever happened to Merrill's Code?" *Knowledge Organization*, 31, 2004, 161-176.

Cutter, Charles Ammi "Proprietary libraries and their relations to public libraries" in *The Library and its organization: reprints of articles and addresses*. Selected and annotated by Gertrude Gilbert Drury. New York: The H.W. Wilson Company, 1924, 17-19.

Daniels, George H. "The Process of professionalization in American Science: The emergent period, 1820-1860" in *Isis*, v. 58(2), 1967, 150-166.

Daniels, George H. *Science in American Society*. New York: Alfred A. Knopf, 1971.

Daniels, George H. *American Science in the Age of Jackson*. New York: Columbia University Press, 1968.

Denning, Michael. *Mechanic Accents: Dime novels and working-class culture in America*. London: Verso, 1987.

Dewey, Melvil. *A classification and subject index for cataloguing and arranging the books and pamphlets of a library*. Amherst, 1876.

Ditzion, Sidney. "Mechanics' and Mercantile Libraries" in *Library Quarterly*, 10, 1940, 192-219.

Durkheim, Émile and Marcel Mauss. *Primitive classification*. Chicago: University of Chicago Press, 1963.

Essay on the history and growth of the Mercantile Library Co. of Philadelphia, and on its capabilities for future usefulness. Philadelphia: Published by order of the Board of Managers, Jas. B. Rodgers, printer, 1867.

Farnam, Anne "A society of societies: associations and voluntarism in early nineteenth-century Salem" in *Essex Institute Historical Collections*, 113, 1977, 181-190.

Findlen, Paula. "Building the house of knowledge: the structures of thought in late Renaissance Europe" *The structure of knowledge: classifications of science and learning*

since the Renaissance. Tore Frangsmry, ed. Berkeley: Office for History of Science and Technology, University of California, 2001.

Fisher, Saul. "Bacon, Francis (1561-1626)" *Encyclopedia of the Scientific Revolution from Copernicus to Newton*. Wilbur Applebaum, ed. New York: Garland Publishing, Inc., 2000, 65-71.

Fletcher, William Isaac. "The Proprietary library in relation to the public library movement" in *The Library and its organization: reprints of articles and addresses*. Selected and annotated by Gertrude Gilbert Drury. New York: The H.W. Wilson Company, 1924, 250-31.

Foucault, Michel. *The order of things: an archaeology of the human sciences*. New York: Vintage Books, 1994.

Foucault, Michel. *The archaeology of knowledge & the discourse on language*. New York: Pantheon Books, 1972.

Franklin, Benjamin. *The autobiography of Benjamin Franklin*. New York: Washington Square Press, Inc., 1960.

Frohmann, Bernd. "The social construction of knowledge organization: the case of Melvil Dewey" in *Advances in Knowledge organization*, 4, 1994, pp. 109-117.

Frohmann, Bernd. "'Best Books' and excited readers: discursive tensions in the writings of Melvil Dewey" *Libraries & Culture*, 32, 1997, 349-371.

Frohmann, Bernd. "Discourse and documentation: some implications for pedagogy and research" *JELIS*, 42, 2000, 12-26.

Frohmann, Bernd. "Discourse analysis as a research method in library and information science" *Library and Information Science Research*. 16, 1994, 119-138.

Garrett, Jeffrey. "The legacy of the baroque in virtual representations of library space" *Library Quarterly*, 74, 2004, 42-62.

Garrett, Jeffrey. "Redefining order in the German library, 1775-1825" *Eighteenth-century studies*, 33, 1999, 103-123.

Glynn, Tom. "The New York Society Library: Books, Authority, and Publics in Colonial and Early Republican New York" in *Libraries & Culture*, 40(4), 2005, 493-529.

Gray, Austin K. *Benjamin Franklin's Library: a short account of the Library Company of Philadelphia, 1731-1931*. New York: The MacMillan Company, 1937.

Green, James. "Subscription libraries and commercial circulating libraries in colonial Philadelphia and New York" *Institutions of Reading: The social life of libraries in the United*

States, Thomas Augst and Kenneth Carpenter, eds. Amherst: University of Massachusetts Press, 2007, 53-71.

Green, Rebecca. "Relationships in the organization of knowledge: an overview" *Relationships in the organization of knowledge*, Carol A. Bean and Rebecca Green, eds. Dordrecht: Kluwer Academic Publishers, 2001, 3-18.

Greene, John C. "Science, learning, and utility: patterns of organization in the early American Republic" *The Pursuit of knowledge in the early American Republic*, Alexandra Oleson and Sanborn C. Brown, eds. Baltimore: The Johns Hopkins University Press, 1976, ???

Hall, Peter Dobkin. *The organization of American culture, 1700-1900: Private institutions, elites, and the origins of American nationality*. New York: New York University Press, 1982.

Hall, Peter Dobkin. "'To make us bold and learn to read – to be friends to each other, and friends to the world': Libraries and the origins of Civil Society in the United States" in *Libraries & Culture*, 31, 1996, 14-35.

Hamlin, Arthur T. *The University Library in the United States*. Philadelphia: University of Pennsylvania Press, 1981.

Harris, Michael H. "The dialectic of defeat: antimonies in research in library and information science" *Library Trends*, 34, 1986, 515-531.

Harrison, Joseph Leroy. "The Providence Athenaeum II" in *New England Magazine*, 1911, 188-199.

Haverstick, David. "History of the Mechanics' Library" *Historical Papers and addresses of the Lancaster County Historical Society*, 9, 1905, 334-351.

Helms, Cheryl. "The Redwood Library and Athenæum" in *America's Membership Libraries*, Richard Wendorf, ed. New Castle, Del.: Oak Knoll Press, 2007, pp. 23-48.

Hesse, Mary. "Bacon, Francis" *Dictionary of Scientific Biography*. Charles Coulston Gillispie, ed. New York: Charles Scribner's Sons, 1970, 1, 372-377.

Jiang, Shuyong, "Into the source and history of Chinese culture: knowledge classification in ancient China" in *Libraries & the Cultural Record*, 42(1), 2007, pp. 1-20.

Hughes, Lisa. "Revealing classification" *Colorado Libraries*, 32, 2006, 67-69.

Hulme, E. Wyndham. "On a co-operative basis for the classification of literature in the subject catalogue" *Library Association Record*, 4, 1902, 317-326.

Hulme, E. Wyndham. "On the construction of the subject catalogue in scientific and technical libraries" *Library Association Record*, 3, 1901, 507-513.

Hulme, E. Wyndham. "The principles of cataloguing" *Library Association Record*, 8, 1906, 31-45.

Jacob, Elin. "Classification and categorization: a different that makes a difference" *Library Trends*, 52, 2004, 515-540.

Jevons, Stanley W. *The principles of science: a treatise on logic and scientific method*. London: Macmillan, 1887.

Jiang, Shuyong. "Into the source and history of Chinese culture: knowledge classification in ancient China" *Libraries & the Cultural Record*. 42, 2007, 1-20.

Joeckel, Carleton Bruns. *The Government of the American Public Library*. Chicago: The University of Chicago Press, 1935.

Kane, W. *Jean Garnier, Librarian*. Chicago, Ill.: Elizabeth M. Cudahy Memorial Library, Loyola University, 1940.

Kaser, David. *A book for sixpence: The circulating library in America*. Pittsburgh: Beta Phi Mu, 1980.

Keep, Austin Baxter. *History of the New York Society Library, with an introductory chapter on Libraries in Colonial New York, 1698-1776*. Boston: Gregg Press, 1972.

Kelly, Thomas. "The Origin of Mechanics' Institutes" *British Journal of Educational Studies*. 1, 1952, 17-27.

Kent, James. *A course of reading drawn up by the Hon. James Kent for the use of the members of the Mercantile Library Association*. New York: Wiley and Putnam, 1840.

Keys, Thomas E. "The colonial library and the development of sectional differences in the American colonies" *Library Quarterly*, 8, 1938, 373-390.

Kieffer, Elizabeth Clarke. "Libraries in Lancaster" in *Historical papers and addresses of the Lancaster County historical Society*. 48, 1944, pp. 71-80.

King, David. *An historical sketch of the Redwood Library and Athenæum in Newport, Rhode Island*. Boston: Printed by John Wilson and Son, 1860.

Kohlstedt, Sally Gregory. "Curiosities and cabinets: natural history museums and education on the Antebellum campus" in *Isis*, 79(3), 1988, pp. 405-426.

Korty, Margaret. "Franklin and the Library Company of Philadelphia" *Reader in American Library History*. Michael H. Harris, ed. Washington: Microcard editions, 1971, pp. 33-41

Kruzas, Anthony Thomas. *Business and Industrial Libraries in the United States, 1820-1940*. New York: Special Libraries Association, 1965.

Kuhn, Thomas S. *The Essential Tension: selected studies in scientific tradition and change*. Chicago: The University of Chicago Press, 1977.

Lakoff, George. *Women, fire and dangerous things: what categories reveal about the mind*. Chicago: The University of Chicago Press, 1987.

Lancaster, Jane. *Inquire within: a social history of the Providence Athenæum since 1753*. Providence: The Providence Athenæum, 2003.

Langridge, Derek. *Approach to classification: for students of librarianship*. Hamden, Conn.: Linnet Books, 1973.

Laugher, Charles. T. *Thomas Bray's Grand Design: libraries of the Church of England in America, 1695-1785*. Chicago: American Library Association, 1973.

Leonard, Grace F. and W. Chesley Worthington, *The Providence Athenæum: a brief history, 1753-1939*. Providence; Privately printed, 1939.

Libraries and Lotteries; a history of the Louisville free public library. Cynthiana, Ky.: The Hobson Press, 1944.

Lieber, Francis. *A lecture on the History and Uses of Athenaeums delivered at the request of the Columbia Athenæum on the seventeenth of March, 1856*. Columbia, S.C.: Steam Power-press of R.W. Gibbes, 1856.

Lingelbach, William E. "The Library of the American Philosophical Society" in *The William and Mary Quarterly*, 3rd ser. 3, 1946, 48-69.

Machlup, Fritz. *The production and distribution of knowledge in the United States*. Princeton: Princeton University Press, 1962.

McLachlan, James. "The Choice of Hercules: American Student Societies in the Early 19th Century," *The University in Society*, Vol. 2, Lawrence Stone, ed. Princeton: Princeton University Press, 1974, 449-494.

Magrath, Sister Gabriella. "Library conventions of 1853, 1876, and 1877" *Journal of Library History, Philosophy, and Comparative Librarianship*, 8, 1973, 52-69.

Mai, Jens-Erik. "Classification in Context: relatively, reality, and representation" in *Knowledge Organization*, 31, 2004, 39-48.

Marcella, Rita and Robert Newton. *A new manual of classification*. Hampshire, England: Gower, 1994.

Marco, Francisco Javier Garcia and Miguel Angel Esteban Navarro. "On Some contributions of the cognitive sciences and epistemology to a theory of classification" in *Knowledge Organization*, 20, 1993, 126-132.

Mason, George Champlin. *Annals of the Redwood Library and Athenæum, Newport, R.I.* Newport, R.I.: Redwood Library, 1891.

Matthews, Jean V. *Toward a new society: American thought and culture, 1800-1830.* Boston: Twayne Publishers, 1991.

Maxell, Alison Davis. "The Providence Athenæum" in *America's Membership Libraries*, Richard Wendorf, ed. New Castle, Del.: Oak Knoll Press, 2007, pp. 229-244.

McHoul, Alec and Wendy Grace. *A Foucault Primer: discourse, power, and the subject.* New York: New York University Press, 1993.

McKechnie, Lynne E.F. and Karen E. Pettigrew. "Surveying the use of theory in library and information science research: a disciplinary perspective" *Library Trends*, 50, 2002, 406-417.

McLaren, Angus. "Phrenology: Medium and Message" in *The Journal of Modern History*, 46(1), 1974, pp. 86-97.

McMullen, Haynes. "The very slow decline of the American social library" in *Library Quarterly*, 55, 1985, 207-225.

McMullen, Haynes. *American Libraries before 1876.* Westport, Conn.: Greenwood Press, 2000.

McMullen, John. "A lecture on the past, the present and future of the New York Society Library delivered before the shareholders February 15, 1856" Courtesy of Making of America, University of Michigan, <http://www.nysoclib.org/testimonials2.html> [viewed February 5, 2008].

McNabb, Richard. "Making all the right moves: Foucault, journals, and the authorization of discourse" *Journals of Scholarly Publishing*, 1999, 23-41.

Miksa, Francis L. "The concepts of the universe of knowledge and the purpose of LIS classification" *Classification Research for Knowledge Representation and Organization*, N.J. Williamson and M. Hudon, eds. Amsterdam: Elsevier, 1992, 101-126.

Minutes, Library Company of Pennsylvania Records, 1794-1832, Library Company of Philadelphia, Philadelphia, Pennsylvania.

Mitchell, Joan S. "Relationships in the Dewey Decimal Classification System" *Relationships in the organization of knowledge*. Carol A. Bean and Rebecca Green, eds. Dordrecht: Kluwer Academic Publishers, 2001.

Morse, Sidney. *A Map of the World of Knowledge*. Baltimore: The Arnold Company, 1925.

Ndakotsu, Tsuzom M. "Classifying Africa" *African Research & Documentation*, no. 101, 2006, 39-42.

Nelson, Robert S. "The map of art history" *Art Bulletin*, 79, 1997, 28-40.

Newhall, Charles L. "The Salem Athenæum" in *America's Membership Libraries*, Richard Wendorf, ed. New Castle, Del.: Oak Knoll Press, 2007, pp. 111-130.

Norris, Dorothy May. *A history of cataloguing and cataloguing methods, 1100-1850: with an introductory survey of ancient times*. London: Grafton & Co., 1939.

Olivieri, Grazia Tonelli. "Galen and Francis Bacon: faculties of the soul and the classification of knowledge" *The shapes of knowledge from the Renaissance to the Enlightenment*. Donald R. Kelley and Richard H. Popking, eds. Dordrecht: Kluwer Academic Publishers, 1991, 61-81.

Olson, Hope A. "Sameness and difference: a cultural foundations of classification" *Library Resources and Technical Services*, 45, 2001, 115-122.

Olson, Hope A. "Universal models: a history of the organization of knowledge" *Advances in Knowledge Organization*, 4, 1994, 72-80.

Olson, Hope A. "Bacon, Warrant, and Classification" Mikel, Breitenstein, eds. *Proceedings 15th Workshop of the American Society for Information Science and Technology Special Interest Group in Classification*, Providence, R.I., 2004.

Peltonen, Markku. "Introduction" *The Cambridge Companion to Bacon*. Markku Peltonen, ed. Cambridge: Cambridge University Press, 1996, 1-24.

Perkins, F.B. "Young Men's Mercantile Library" *Public Libraries in the United States of America, their history, condition, and management. Special Report*. Washington: Government Printing Office, 1876.

Perry, Lewis. *Intellectual life in America: a history*. New York: Franklin Watts, 1984.

Phillips, W. Howard. *A Primer of Book Classification*. London: Association of Assistant Librarians, 1955.

Quinton, Anthony. *Francis Bacon*. Oxford: Oxford University Press, 1980.

Radford, Gary P. "Foucault inserted: philosophy, struggle, and transgression" *Transgressing discourse: communication and the voice of the Other*. Michael Huspeck and Gary P. Radford eds. New York: State University of New York Press, 1987, 117-144.

Radford, Gary P. "Trapped in our own discursive formations: towards an archaeology of library and information science" *Library Quarterly*, 73, 2003, 1-18.

Radford, Gary P. "Flaubert, Foucault and the bibliotheque Fantastique: toward a postmodern epistemology for library science" *Library Trends*, 46, 1988, 616-634.

Radford, Gary P. "Positivism, Foucault, and the Fantasia of the Library: conceptions of knowledge and the modern library experience" *Library Quarterly*, 62, 1992, 408-424.

Radford, Gary P. and Marie L. Radford. "Structuralism, post-structuralism, and the library: de Saussure and Foucault" *Journal of Documentation*, 61, 2005, 60-78.

Radford, Gary P. and Marie L. Radford. "Libraries, librarians and the discourse of fear" *Library Quarterly*, 71, 2001, 299-329.

Radford, Marie L. and Gary P. Radford. "Librarians and party girls: cultural studies and the meaning of the librarian" *Library Quarterly*, 73, 2003, 54-69.

Rafferty, Pauline. "The representation of knowledge in library classification systems" in *Knowledge Organization*, 28:4 (2001), pp. 180-191.

Ranz, Jim. *The Printed book catalogue in American Libraries: 1723-1900*. Chicago: American Library Association, 1964.

Raven, James. "Social libraries and library societies in Eighteenth-century North America" in *Institutions of Reading: The social life of libraries in the United States*, Thomas Augst and Kenneth Carpenter, eds. Amherst: University of Massachusetts Press, 2007, pp. 24-52.

Raven, James. *London booksellers and American customers: transatlantic literary community and the Charleston Library Society, 1748-1811*. Columbia: University of South Carolina Press, 2002.

Ray, Angela G. *The Lyceum and Public culture in the nineteenth-century United States*. East Lansing: Michigan State University Press, 2005.

Reinhold, Meyer. "The quest for "Useful knowledge" in eighteenth-century America" in *Proceedings of the American Philosophical Society*, v. 119(2), 1975, pp. 108-132.

Rugheimer, Virginia and Guy A. Cardwell, Jr. "The Charleston Library Society" in *South Atlantic Bulletin*, 8:2 (Oct. 1942), 4-5.

Reinhold, Meyer. "Opponents of classical learning in American during the Revolutionary period" *Proceedings of the American Philosophical Society*, 112 1968, ???.

Rhees, William J. *Manual of Public Libraries, Institutions, and Societies in the United States and British Provinces of North America*. Philadelphia: J.B. Lippincott & Co., 1859.

Riegel, Robert E. "The Introduction of Phrenology to the United States" in *The American Historical Review*, 39(1), 1933, 73-78.

Rodriguez, Robert D. "Hulme's concept of literary warrant" *Cataloging & Classification Quarterly*, 5, 1974, 17-26.

Rosch, Eleanor. "Principles of categorization" in *Concepts: Core readings*. Cambridge: MIT Press, 1999, 189-206.

Rubanowice, Robert J. "Intellectual history and the organization of knowledge" *Journal of Library History, Philosophy, and Comparative Librarianship*, 10, 1975, 264-271.

Rugheimer, Virginia and Guy A. Cardwell, Jr. "Charleston Library Society" in *South Atlantic Bulletin*, 8(2), 1942, 4-5.

Sayers, W.C. Berwick. *A Manual of Classification for Librarians*. London: Andre Deutsch, 1967.

Scott, Donald M. "The popular lecture and the creation of a public in Mid-Nineteenth-century America" in *The Journal of American History*, 66, 1980, 791-809.

Scrivner, Buford. "Carolingian Monastic Library Catalogs and Medieval Classification of Knowledge" *Journal of Library History*, 15, 1980, 427-444.

Shaw, Ralph R. "Classification systems" *Landmarks of library literature, 1876-1976*. Dianne J. Ellsworth and Norman D. Stevens, eds. Metuchen, NJ: The Scarecrow Press, Inc., 1976.

Shera, Jesse H. *Libraries and the Organization of Knowledge*. Hamden, Conn.: Archon Books, 1965.

Shera, Jesse. *Foundations of the Public Library*. Chicago: University of Chicago Press, 1949.

Sherman, Stuart C. "The Library Company of Baltimore 1795-1854" in *Maryland Historical Magazine*, 39, 1940, pp. 6-24.

Singerman, Robert. *American library book catalogues, 1801-1875: a national bibliography*. Champaign, Ill.: Graduate School of Library and Information Science, University of Illinois at Urbana-Champaign, 1996.

Smallwood, William Martin. *Natural history and the American mind*. New York: Columbia University Press, 1941.

Smith, Lloyd P. "The classification of books" in *Library Journal*, 7, 1882, 172-174.

Smith, Murphy D. *Oak from an acorn: a history of the American Philosophical Society Library, 1770-1803*. Wilmington, Del.: Scholarly Resources Inc., 1976.

Smith, Murphy D. *Oak from an Acorn: a history of the American Philosophical Society Library 1770-1803*. Wilmington, Del.: Scholarly Resources, Inc., DATE.

Stockwell, Foster. *A history of information storage and retrieval*. Jefferson, NC: McFarland & Company, Inc., 2001.

Strout, Ruth French. "The development of the catalog and cataloging codes" *The Catalog and cataloging*. Arthur Ray Rowland, ed. Hamden, Conn.: The Shoe String Press, Inc., 1969, 3-32.

Studwell, William E, Hong Wu and Rui Wang. "Ideological influences on book classification schemes in the People's Republic of China" in *Cataloging & Classification Quarterly*, 19, 1994, 61-74.

Sukiasyan, Eduard. "Classification systems in their historical development: problems of typology and terminology" in *Structures and Relations in Knowledge Organization: Proceedings of the Fifth International ISKO Conference*, Widad Mustafa el Hadi, Jacques Maniez, and Steven A. Pollitt, eds. *Advances in Knowledge Organization*, 6, 1998, 72-79.

Taylor, Arlene. *The organization of information*. Englewood, Col.: Libraries Unlimited, 1999.

"The Library Company of Baltimore" *Maryland Historical Magazine*, 12, 1917, ???

Thomas, Alan R. "Bibliographic classification: the ideas and achievements of Henry E. Bliss" *Cataloging & Classification Quarterly*, 25, 1997, 51-97.

Thomas, Nancy Pickering. *Reading libraries: an interpretive study of discursive practices in library architecture and the interactional construction of personal identity*. Ph.D. dissertation, Rutgers, the State University of New Jersey, School of Communication, Information and Library Studies, 1996.

Thomas, Nancy Pickering. "Unpacking library posters: a theoretical approach" *Journal of Education for Library and Information Science*, 42, 2001, 42-56.

Thompson, Charles Seymour. "For a Broader Culture: Athenaeums" in *Reader in American Library History*. Michael H. Harris, ed. CITATION, 1971, 54-82.

Thomas, C. Seymour. *Evolution of the American Public Library, 1653-1876*. Washington, D.C.: The Scarecrow Press, 1952.

Trosow, Samuel E. "Standpoint epistemology as an alternative method for library and information science" *Library Quarterly*, 71, 2001, 360-382.

Urbach, Peter. *Francis Bacon's Philosophy of Science: an account and reappraisal*. La Salle, Ill.: Open Court, 1987.

Vaughn, John. *An account of the American Philosophical Society*. 1841. Philadelphia: published for the Friends of the Library, American Philosophical Society, 1972.

Vickery, B.C. *Classification and indexing in science*. London: Buttersworth, 1975.

Watkinson, James D. "Useful knowledge? Concepts, values, and access in American education, 1776-1840" *History of Education Quarterly*, 30, 1990, 351-370.

Winans, Robert B. *A descriptive checklist of book catalogues separately printed in American 1693-1800*. CITATION SILS Z1029.W56.

Wolf, Edwin. *The Library of Benjamin Franklin*. Philadelphia: American Philosophical Society, Library Company of Philadelphia, 2006.

Worner, William Frederic. "Mechanics' Society of the City and County of Lancaster" in *Historical Papers and Addresses of the Lancaster County Historical Society*, 34, 1930, pp. 226-237.

Zimmerman, Walter Evan. "The earliest book catalogues of the New York Society Library and the Redwood Library – a comparison" Thesis, University of Western Ontario, 1971.