Article Publication Patterns of Academic Librarians: An Illinois Case Study

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Charting the characteristics of librarian authors offers insight into the field by defining and describing the research patterns of the profession. This study looks at the journal articles published by academic librarians practicing in Illinois. It finds that women are publishing close to their numbers in the profession, that more articles are being written collaboratively than in the past, and that women are more likely to collaborate than men. It also shows that librarians publish primarily in library/information science journals and that librarians at large universities are more likely to publish than librarians at small colleges.



ecause the transfer of information is central to the mission of librarians, it is logical that librarians also are interested in

the methods of information transfer and scholarly communication within their own profession. Descriptions of the publication characteristics of scholars in library and information science (LIS) have formed a considerable body of literature in recent years. Mapping the characteristics of librarian authors helps to define the dynamics and vigor of the discipline, identify research-oriented individuals and institutions, and chart trends and techniques. These studies of authors and publication sources also serve as benchmarks of research productivity for the profession.

In his extensive review of the literature on authorship in LIS, Thomas E. Nisonger divides studies into two categories: journal-based analysis and individual-based analysis.¹ *Journal-based* studies focus on the characteristics of authors in one journal or in a group of related journals. In contrast, *individual-based* studies center on the publication habits of a defined population of librarians or information scientists.² Although library literature contains a significant number of journal-based studies, individual-based studies are rarer and often focus on narrow segments of the library population.

This project is an individual-based study investigating the journal article publication characteristics of academic librarians in the state of Illinois. Although academic librarians are repeatedly identified as the leading contributors to the scholarly literature, few previous studies have focused solely on their publications. As an additional refinement of the general descriptive studies of authorship, earlier studies have limited their scope by analyzing authors who either possess a certain terminal degree, work in a specific job category, or are members of a particular association. This study presents a unique view

Kathleen E. Joswick is a Reference Librarian in the University Library at Western Illinois University; email: kate_joswick@ccmail.wiu.edu. of authorship in the field by using a geographic limitation, an atypical methodology specifically designed to study librarian authors regardless of institution or position, publishing in both library and nonlibrary publications, in regional and national journals. Illinois provides a fertile base for such a study because it has a mix of institutions of higher education: publicly and privately funded, large and small populations, national and regional prestige. Moreover, the state is home to a significant contingent of academic librarians who have a reputation for being active researchers in library and information science. Even though this study is limited to authors in one state, it may serve as a profile against which the profession might be measured nationwide. The findings can be generalized to define the activity of librarians beyond Illinois boundaries.

Methodology

Most of the articles for the study were identified by searching the electronic citation indexes from the Institute for Scientific Information (Arts and Humanities Citation Index via OCLC's FirstSearch, and SciSearch and Social SciSearch via DIA-LOG) for full or truncated versions of "library" and "Illinois" in the corporate source or "Illinois" in the corporate source and "Information and Library Science" in the subject category. The researcher also scanned ERIC and Library Literature looking for a combination of keywords consisting of some form of "library," "Illinois," and/or "academic." Additional articles were identified in response to a request addressed to participants in a mailing list sponsored by the Illinois Association of College and Research Libraries (IACRL). An electronic message sent to the approximately fifty list participants who are almost exclusively college and university librarians requested citations to their own or colleagues' recent journal publications.3 Finally, a few articles were identified totally by serendipity. The names of individual librarians were never searched nor were individuals or institutions contacted for publication lists.

The study was limited to authors who could be identified as practicing librarians in Illinois colleges and universities between 1995 and January 1999. Library school faculty and consultants, except for those primarily employed as librarians, were eliminated, but academic library deans and directors were included. Job position and institutional affiliation were recorded directly from the article byline; no attempt was made to update that information. Gender was determined, as much as possible, by the author's name. Participants of the IACRL message board were queried about questionable names and, as a result of the responses received, gender was determined for all but one author.

Women in Illinois college and university libraries are making a significant contribution to scholarship.

Only journal articles, especially as defined by the citation indexes, were accepted for this study. Book reviews, product reviews, letters, introductions, corrections, editorial materials, and dissertations were eliminated. Reports, including third-party summaries of conference programs, were included. Books, book chapters, and conference proceedings were not investigated, primarily because of the difficulty in gathering these data by the geographical location of the author.

After it was collected, the information was entered into a spreadsheet for analysis. Each Illinois academic librarian constituted an entry, a research methodology established by John N. and Jane Kinch Olsgaard in 1980 and frequently followed since.4 For collaborated articles, therefore, separate entries were made for each author working as an academic librarian in an Illinois institution. However, provisions were made to allow examination of data at either the article level or the author level, depending on the aspect of the topic being studied. Other data recorded for each data line included gender, position or job, institution, Carnegie Classification for the institution, number of au-

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thors per article and percentage of responsibility for each author, article and journal title, and journal type.

Limitations

Unfortunately, the journals indexed in the "Information Science and Library Science" category in Social Science Citation Index (SSCI) are not as comprehensive as those indexed by LISA and Library Litera*ture*. The fifty-eight journals in the category exclude many publications considered to offer major contributions to scholarly research in the field. Although additional articles by Illinois librarians were identified through keyword searching in other databases, or by self-reporting, the corporate source field in the citation databases was the most effective way of identifying Illinois authors. Journals not indexed by one of the citation databases are definitely underrepresented. In contrast, the journal Illinois Libraries may be overrepresented in this study. Because it is a logical place for Illinois librarians to publish, the researcher deliberately scanned each issue for academic authors. It is the only journal in the study that was routinely examined for that purpose.

Results

Author Characteristics

The study of 281 entries identified 210 articles written by 166 different Illinois academic librarians. Approximately 13 percent of the 1,294 librarians and professional staff in Illinois colleges and universities wrote at least one article during the period of the study—1995 through January 1999.⁵ The average number of articles published per author studied during the time frame was 1.27.

Sixty-six (39.75%) of the authors were male, and ninety-nine (59.64%) were female (gender could not be determined for one author). These figures are more meaningful when compared with the gender distribution of academic librarians nationwide: 32.01 percent male and 67.99 percent female.⁶ Although men are still publishing slightly more than their numbers in the profession would suggest, the gender gap in article publication among Illinois academic librarians is definitely closing. It is difficult to compare one study directly with another because of variations in methodology and types of publications counted, but it is interesting to note that in the 1970s, Dwight F. Burlingame and Joan Repp found that only 41.9 percent of the authors sampled were female.⁷ In approximately the same time period, Olsgaard and Olsgaard found that the percentage of female academic librarian authors varied from a high of 39.6 percent for one journal to a low of 24.7 percent for another.8 James L. Terry's more recent article on authorship characteristics in College & Research Libraries includes a useful chart that illustrates the rise in the percentage of female authorship in that journal from a low of 13 percent in the late 1950s to a high of 51.7 percent for the period between 1989 and 1994.9 Women in Illinois college and university libraries are making a significant contribution to scholarship. One must assume that this is a national trend and not simply a phenomenon in Illinois.

The vast majority of authors (107, or 64.46%) published only one article during the time frame of this study. The two most prolific authors published six articles apiece. The breakdown of numbers of contributions per author can be seen in table 1. Although comparing author productivity data to those found in other studies must be done with care, Thomas E. Nisonger's convenient summary of the percentages of authors publishing one article shows much higher percentages of single authorship.¹⁰ This is undoubtedly one significant difference between investigations based on one journal or group of journals and those attempting to encompass all the authors' journal publications.

When publication output was broken down by gender (table 1), female authors were shown to be more prolific. Of the fifty-nine authors who published more than one article, 33.9 percent were male and 66.1 percent were female. Only a small percentage of all the academic librarians in Illinois published during the

TABLE 1 Publication Output per Author					
Number of Publications per Author	Number of Authors	% of Authors in Study	% of Women Authors	% of Academic Librarians in Illinois	
1	107	64.46	56.39	8.27	
2	26	15.66	69.23	2.01	
3	19	11.45	57.89	1.47	
4	6	3.61	66.66	.46	
5	6	3.61	66.66	.46	
6	2	1.20	100.00	.15	
Total	166	99.99		12.82	

study, and the authors who published frequently are an elite few (table 1).

One hundred and thirty-three (63%) articles were written by only one author. The average number of authors per article is 1.524. Figures on the degree of collaboration can be seen in table 2. It is important to note that collaborative authors who were not Illinois authors or not academic librarians were included in the total number of authors per article but were not counted in any of the tabulations on Illinois authors. Nisonger summarized the extent of collaboration in many of the earlier authorship studies in terms of the percentage of collaborative authors in the individual journals surveyed.¹¹ The present study identified a higher percentage of author collaboration than many of the earlier studies did. This documents a growing trend toward author collaboration in the professional LIS literature.

When the extent of collaboration is examined by gender, an intriguing pattern

TABLE 2 Extent of Collaboration				
Number of Authors	Number of Articles	% of Articles in Study		
1	133	63.33		
2	55	26.19		
3	15	7.14		
4	3	1.43		
5	4	1.90		
Total	210	99.99		

emerges. Seventy-five of the sole authors were women (56.39%), and 58 (43.6%) were men. Thirty-one of the seventy-seven collaborated articles included at least one author outside the scope of this study (outside Illinois or not academic librarians). Discounting those articles, forty-six collaborated articles remain. Of those, twenty-one (45.65%) were written by all women authors, twenty (43.48%) were written by a combination of male and female authors, and only five (10.87%) were written by men working together. One may conclude, then, that women are more likely than men to collaborate and more likely to collaborate with one another.

Inspecting authors by job position is fraught with difficulties. Determining job categories that are synonymous across many institutions is arduous at best, and using only author bylines to make the position determination increases the difficulty. Still, a study of academic librarian characteristics would be incomplete without some consideration by position. The job category of authors (table 3) revealed that the most frequent publishers were administrators, reference librarians, and branch or department librarians. Some explanation for the large percentage of authors in the branch/department category is required. Many of the largest academic libraries in Illinois are organized into divisions or departments within the same building or have branches separate from the main library. A librarian identified as a "psychology" librarian was

TABLE 3 Job Position of Authors				
	Number of	% of Authors		
Position	Authors	in Study		
Acquisitions	3	1.81		
Administration	23	13.86		
Archives/Preservation/Special Collections	5	3.01		
Bibliographic Instruction	5	3.01		
Branch/Department	42	25.30		
Cataloging	13	7.83		
Circulation/Access	9	5.42		
Collection Development/Bibliography	3	1.81		
Government Publications	7	4.22		
Reference/Public Services	34	20.48		
Serials	3	1.81		
Systems	9	5.42		
Technical Services/ Media/Internet	3	1.81		
Other	2	1.20		
Undetermined	5	3.01		
Total	166	100.00		

counted in the branch/department category when, given a different corporate structure, he or she may have been classified in the reference or bibliographic instruction category. In addition, the present study documents the exceptional research and publication activity of health science librarians in Illinois, all of whom were included in the branch/department category. Information on academic librarians by job category is not available for the state, so these data on authors cannot be compared with the number of librarians in each category statewide.

Journal Information

For the discussion of the journal characteristics, articles with multiple authors were counted as one journal entry rather than as multiple entries. For example, a publication in *College & Research Libraries* authored by three librarians was counted as only one entry for *College & Research Libraries*. The vast majority of articles in the study were published in national library journals (165, or 78.57%). Eighteen (8.57%) national, nonlibrary journals published articles by Illinois librarians. Twenty-six (12.38%) articles appeared in regional library journals; one article (0.48%) appeared in a regional, nonlibrary journal. To summarize, 183 (90.95%) articles were in library publications; nineteen (9.04%) were not. Paula De Simone Watson reported an impressive 26 percent of journal publications outside the library field in her 1977 study.12 In 1993, A. Neil Yerkey also identified a larger proportion of publication outside the profession, but again, comparisons among studies are questionable because of differences in scope and methodology.¹³ LIS journals remain the primary outlet for the communication of research findings among academic librarians in Illinois.

Twenty-eight journals published one article by an Illinois librarian during the years of the study; one journal (*Illinois Libraries*) published twenty-six articles. The remaining figures for number of articles per journal can be seen in table 4. In table 5, the number of articles in the leading journals is figured both in raw numbers (that is, each article with at least one Illinois author is counted as one) and also in terms of the percentage of responsibility (coauthors are assigned a percentage of responsibility

TABLE 4 Article Distribution among Journals				
Number of				
Articles per	Number of	% of		
Publication	Journals	Journals		
1	28	13.33		
2	10	9.52		
3	5	7.14		
4	3	5.71		
5	7	16.66		
6	1	2.86		
7	2	6.66		
9	1	4.28		
10	1	4.76		
13	1	6.19		
22	1	10.48		
26	1	12.38		
Total	61	99.97		

and the percentages are tallied.) The results are very similar. The activity of Illinois' health science librarians is demonstrated again with the large number of publications in the *Bulletin of the Medical Library Association*.

Collaborated articles were more likely to appear in certain journals. Table 6 shows those journals publishing at least five of the studied articles, ranked by the percentage of collaborated articles to noncollaborated articles. Predictably, journals devoted more to news and information about professional activities, such as *American Libraries* and *College* & *Research Libraries News*, show fewer collaborative publications than the research-oriented journals do.

Institution

To compare the institutions of the librarian authors, the researcher used the categories described in *A Classification of Institutions of Higher Education* published by the Carnegie Foundation for the Advancement of Teaching.¹⁴ Table 7 clearly illustrates that librarians in the larger institutions are the most frequent publishers. Determining whether this is attributable to faculty status, workload, the research environment, or coincidence is important, but outside the scope of this

study. When the number of authors is divided by the total number of librarians and professional staff in those institutions, one must conclude that, even considered on a per capita basis, the more frequent contributors are from larger, research-oriented institutions.¹⁵ Recently, Mickey Zemon and Alice Harrison Bahr identified eight percent of the librarians publishing in *College and Research Libraries* or *Journal of Academic Librarianship* in the past ten years as college librarians.¹⁶ The present study detected 7.83 percent in the baccalaureate

TABLE 5 Leading Journals Publishing Articles by Illinois Authors				
Journal Title	Number of Articles (Raw Number)	Number of Articles (By % of Responsibility)		
Illinois Libraries	26	24.83		
Bulletin of the Medical Library Association	22	20.10		
College & Research Libraries	13	12.33		
College & Research Libraries News	10	10.00		
Behavioral & Social Science Librarian	9	7.83		
Journal of Academic Librarianship	7	7.00		
Library Resources & Technical Services	7	6.16		
Library Acquisitions: Practice and Theory	6	5.00		
Journal of Government Information	5	5.00		
Information Technology & Libraries	5	5.00		

TABLE 6				
Collaborated Articles by Journal				
Journal Title	Number of Collaborated Articles	Number of Noncollaborated Articles	% of Collaborated Articles versus Noncollaborated	
College & Research Libraries	9	4	72.99	
Library Resources & Technical Services	4	3	64.94	
Bulletin of the Medical Library Association	on 12	11	60.00	
Information Technology & Libraries	3	2	60.00	
Library Acquisitions: Practice and Theor	y 3	3	50.00	
Journal of Academic Librarianship	3	4	42.86	
Illinois Libraries	10	17	40.27	
Behavioral & Social Sciences Librarian	2	7	25.54	
College & Research Libraries News	2	9	20.00	
American Libraries	0	5	00.00	
Journal of Government Information	0	5	00.00	

and associate institutions, corroborating the earlier findings. Author gender by institution is also listed in table 7. In the categories with enough authors to be valid, it is only in the doctoral institutions that the number of male authors approximates the number of female authors.

Looking at the individual institutional affiliation of authors accents certain universities. Of the thirty-three educational institutions in the data set, fourteen had only one published author. The University of Illinois, both the Urbana/ Champaign and Chicago campuses, topped the list with thirty and twentyeight authors, respectively. However, one also must compare the authors to the total number of professional staff per institution. Libraries with fewer than ten professional staff members were eliminated

TABLE 7 Institutional Classification of Authors				
	Number of Authors in Study	Total Number of FTE Librarians	% of Authors Per Capita	% of Female Authors
Research I	70	231.29	30.27	61.43
Research II	16	42.00	38.10	56.25
Research Institutions	86	273.29	31.47	60.47
Doctoral I	30	81.00	37.04	50.00
Doctoral II	5	39.00	12.82	60.00
Doctoral Institutions	35	120.00	32.25	51.43
Master's I	28	195.35	14.33	57.14
Master's II	0	6.00	00.00	00.00
Master's Institutions	28	201.35	13.91	57.14
Baccalaureate I	7	45.30	15.45	57.14
Baccalaureate II	3	67.71	4.43	66.66
Baccalaureate Institution	s 10	113.01	8.85	60.00
Associate of Arts	3	194.77	1.54	100.00
Special	3	134.34	2.23	100.00

from this aspect of the study simply because the small numbers of staff could skew the data (one article published by a sole librarian in an institution would represent 100% author participation, for example). The per capita ranking of authors per librarians at each institution with more than ten librarians is in table 8.

The leading institution in this analysis is the University of Illinois, Urbana/Champaign with 43.45 articles.

The researcher recognizes that the high ranking of her home institution may be, at least in part, due to the more accurate recording of publications of her immediate colleagues. Nonetheless, the fact that almost 65 percent of the professional staff at the Western Illinois University (WIU) library published a journal article between 1995 and 1999 is impressive. If one agrees with Watson's statement that a "high rate of publication productivity provide[s] a stimulating work environment in which experimentation with new approaches and techniques is encouraged,"17 a high percentage of publishing librarians is a good index to an academic library's quality.

A ranking of the institutional homes of authors publishing three or more articles

during the period of the study puts the University of Illinois-Chicago at the top, with twelve authors. Other institutions with authors publishing multiple articles are: University of Illinois-Urbana/ Champaign (7), Southern Illinois University (4), Illinois State University (3), Western Illinois University (2), and Northern Illinois University, Loyola, and Parkland Community College each with one author.

If the institutional data are scrutinized at the article level, rather than at the author level, the results are different. Ranking the institutions not by number of authors publishing articles but, instead, by number of articles produced, considering the percentage of responsibility for the authors affiliated with that institution, changes the profile considerably. An article published by four University of Illinois authors would have been counted four times in table 8, but counted as four entries of 25 percent each in table 9. The leading institution in this analysis is the University of Illinois, Urbana/Champaign with 43.45 articles. The top institutions with the number and percentages of the articles in the study are listed in table 9.

Conclusions

Investigating a discipline's individualized characteristics of scholarly communication

TABLE 8 Authors by Institution, as Per Capita of Professional Staff				
Institution	Number of Authors	Number of Professional Staff	Per Capita Authors	
Western Illinois University	11	17	64.70	
Southern Illinois University-Carbondale	16	42	38.10	
Illinois State University	14	37	37.84	
University of Illinois-Chicago	28	79.29	35.31	
Eastern Illinois University	7	20.53	34.10	
Northern Illinois University	12	44	27.27	
University of Illinois-Urbana/Champaign	30	152	19.74	
Northwestern University	9	84	10.71	
Southern Illinois University-Edwardsville	2	20.30	9.85	
College of DuPage	1	10.50	9.52	
Wheaton College	1	15.5	6.45	
University of Chicago	3	75	4.00	

TABLE 9				
Total Article Output per Institution				
Number of % of Total				
Institution	Articles Produced	Articles in Study		
University of Illinois-Urbana/Champaign	43.45	20.69		
University of Illinois-Chicago	42.86	20.41		
Southern Illinois University	21.50	10.24		
Northern Illinois University	14.83	7.06		
Illinois State University	13.66	6.50		
Western Illinois University	13.40	6.38		
Northwestern University	5.83	2.78		
Loyola University	5.0	2.38		

through bibliometric measures is a recognized method of defining and charting the vigor of a profession. Through research, scholars expand and inform the base of knowledge in their field; through publication, they communicate their findings to others. Ideally, that knowledge is finally translated into practice to improve the discipline's theory and service. Because the discipline of library and information science is, as Keith Swigger points out, "essentially a practical one-an applied rather than a theoretical science-it makes sense to expect the practitioners to produce research."18 It is reassuring to note that the practitioners in the academic libraries in Illinois are also active researchers and publishers. Studying the work of the practicing academic librarians in the state offers a unique view of authorship, freed from the restraints of many of the earlier methods. Nonetheless, investigating the publication habits of a sample of the population invites conclusions about the profession as a whole. Women academic librarians are publishing in numbers that are approaching their representation in the profession. Collaborative authorship continues to grow, especially among women authors. Librarians are publishing in a diverse range of journals, but publication outside the library field is apparently less than reported earlier. Large institutions continue to produce more librarian authors than smaller institutions do, but a significant percentage of the professional staff of some colleges/universities are actively engaged in research. Article analysis, and in particular analysis of authorship patterns, can be as pivotal as citation analysis in defining the group characteristics of scholars in library and information science.

Notes

1. Thomas E. Nisonger, "Authorship in *Library Acquisitions: Practice & Theory," Library Acquisitions: Practice & Theory* 20 (winter 1996): 395–419.

2. Ibid., 397.

3. Although one may expect that this method of self-reporting would have been highly effective in surveying librarians for publication activity, in reality, less than ten percent of the articles studied were identified in this manner.

4. John N. Olsgaard and Jane Kinch Olsgaard, "Authorship in Five Library Periodicals," College & Research Libraries 41 (Jan. 1980): 49–53.

5. National Center for Education Statistics, *Academic Libraries: 1994* (Washington, D.C.: U.S. Department of Education, Office of Educational Research and Improvement, Mar. 1998), 17.

6. Mary Jo Lynch, "Librarians' Salaries: Small Increases This Year," American Libraries 29, no. 10 (Nov. 1998): 68.

7. Dwight F. Burlingame and Joan Repp, "Factors Associated with Academic Librarians' Publishing in the 70s: Prologue for the 80s," in *Options for the 80s: Proceedings of the Second National Conference of the ACRL* (Greenwich, Conn.: JAI Pr., 1982): 395–404.

8. Olsgaard and Olsgaard, "Authorship in Five Library Periodicals," 51.

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9. James L. Terry, "Authorship in College & Research Libraries Revisited: Gender, Institutional Affiliation, Collaboration," College & Research Libraries 57 (July 1996): 379.

10. Nisonger, "Authorship in *Library Acquisitions: Practice & Theory*," 403.

11. Ibid. 400-3.

12. Paula De Simone Watson, "Publication Activity among Academic Librarians," College & Research Libraries 38 (Sept. 1977): 379–80.
13. A. Neil Yerkey, "Publishing in Library and Information Science: Audience, Subjects, Affili-

ation, Source, and Format," Library & Information Science Research 15 (spring 1993): 165-83.

14. A Classification of Institutions of Higher Education (Princeton, N.J.: Carnegie Foundation for the Advancement of Teaching, 1994).

15. Integrated Postsecondary Education Data System (IPEDS), available online at: http:// www.nsf.gov/sbe/srs/sipeds/start.htm (Jan. 1999).

16. Mickey Zemon and Alice Harrison Bahr, "An Analysis of Articles by College Librarians," College & Research Libraries 59 (Sept. 1998): 422-32.

17. Paula D. Watson, "Production of Scholarly Articles by Academic Librarians and Library School Faculty," College & Research Libraries 46 (July 1985): 334.

18. Keith Swigger, "Institutional Affiliations of Authors of Research Articles," Journal of Education for Library and Information Science, 26 (fall 1985): 108.