



Evidence Summary

Scholars in International Relations Cite Books More Frequently than Journals: More Research is Needed to Better Understand Research Behaviour and Use

A Review of:

Zhang, Li. "Citation Analysis for Collection Development: A Study of International Relations Journal Literature." *Library Collections, Acquisitions, and Technical Services* 31.3-4 (2007): 195-207.

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Abstract

Objective – To determine primary type, format, language and subject category of research materials used by U.S. scholars of international relations. Also, to investigate whether research method, qualitative or quantitative, can be correlated with the type and age of sources that scholars use.

Design – Citation analysis.

Setting – Research articles published in three journals on international relations with high impact factors: *International Organization*, *International Studies Quarterly*, and *World Politics*.

Subjects – A random sample of cited references taken from the 410 full-length research articles published in these journals from 2000 to 2005. Cited references of articles

written by authors of foreign institutions (i.e., non-American institutions), as well as cited references of editorial and research notes, comments, responses, and review essays were excluded.

Methods – Cited references were exported from ISI's Social Science Citation Index (SSCI) to MS Excel spreadsheets for analysis. Data was verified against original reference lists. Citations were numbered and identified by source format, place of publication (foreign or domestic), age, and language used, if other than English. The author used a random number generator to select a random sample of 651 from a total of 29,862 citations. Citations were randomly drawn from each journal according to the proportion of the journals' citations to the total. These citations were analyzed by material type and language.

The author also used the Library of Congress Classification Outline to identify the subject category of each book and journal citation in the sample.

A separate sampling method was used to investigate if there is a relationship between research methodology and citation behaviour. Each of the original 410 articles was categorized according to research method: quantitative, qualitative or a combination of the two. Two articles representing qualitative research and two representing quantitative research were randomly selected from each of the three journals for each of the six years. Subsequently, five citations from each of the resulting pool of 72 articles were randomly selected to create a sample of 360 citations. These citations were analyzed by material type and age of source.

Main Results – Analysis of the citation data showed that books (including monographs, edited books, book chapters and dictionaries) made up 48.2% of the total citations; journals (including scholarly and non-scholarly titles) made up 38.4% of the citations; and government publications made up 4.5% of the citations. Electronic resources, which primarily refer to Web sites and digital collections in this study, represented 1.7% of the citations. Other sources of citations included magazines (1.1%), newspapers (1.1%), working papers (1.1%), theses (0.9%), conference papers not yet published as articles (0.6%), and a miscellaneous category, which included items such as committee minutes, radio broadcasts, unpublished materials and personal communications (2.5%).

The average age of book citations was 14.3 years and the median age was 8 years. Foreign language citations represented 3.7% of the 651 total citations. The top ranked foreign languages were German (7), French (5), Russian (4), Spanish (3), Korean (2) and Swedish (number not given).

Subject analysis of the citations revealed that 38% of all citations were from international relations and two related disciplines, political

science, political theory, and public administration. Subject areas outside international relations included social sciences (23.4% - including economics, commerce, industries and finance), history (16.3%), sociology (6.2%), and law (5.9%). Citations from philosophy, psychology, military science and general works together made up 7.3% of the total citations. Citations from science, linguistics, literature, geography and medicine made up less than 2% of the total.

Authors of qualitative research articles were more likely to cite books (56.7%) than journals (29.4%) while authors of quantitative research articles were more likely to cite journals (58.3%) than books (28.9%). Authors of qualitative research articles were also more likely to cite government publications and electronic resources than those of quantitative articles. However, authors of quantitative research articles were more likely to cite other materials, such as dissertations, conference papers, working papers and unpublished materials.

The age of cited materials for both qualitative and quantitative research articles is similar. Citations to recent materials up to 5 years old were most frequent, followed by materials 6 to 10 years old, materials 11 to 15 years old, and those 26 or more years old. The least frequently cited materials were 16 to 20 and 21 to 25 years old.

Conclusion – Scholars in international relations primarily cite books, followed by journals and government publications. Citations to electronic resources such as Web sites and digital collections, and to other materials are far less common. Scholars primarily cite English-language materials on international relations and related subjects. Authors of qualitative research articles are more likely to cite books than journals, while authors of quantitative research articles are more likely to cite journals than books. Recent materials are more frequently cited than older materials, though materials that are more than 26 years old are still being cited regularly.

Commentary

This study offers librarians with collection development responsibilities in international relations materials some insight into the citation behaviour of scholars in the field. However, the study uses standard bibliometric techniques and is subject to many of the limitations common to the practice.

First, the study relies on data extracted from Social Science Citation Index (SSCI). Zhang acknowledges that "analyzing journals and excluding books may not completely reveal the citation patterns of intellectual communication in the field of international relations," especially given the high reliance on monographs that this study itself demonstrates (206). If monographs are important and frequently used sources in international relations, then a citation study that looks only at journal references is only going to tell part of the story.

Another problem is the discrepancy between SSCI and each journal's methodology for categorizing journal content. For example, what one journal may consider an article, SSCI may designate a review article. The author deals with discrepancies by stating the study's inclusion and exclusion criteria explicitly, but does not explore them further.

A third problem is the issue of self-citations. Since the article does not address these, one can presume that they were not treated differently from other citations.

With regard to scholars' use of electronic resources, the limitations of using SSCI data raise questions about the finding that scholars in international relations only cite electronic sources 1.7% of the time and Zhang's conclusion that "electronic resources have relatively low impact on formal scholarly communication" (200). If an author cites a journal or book that is accessible in print and in digital format, ISI will strip out any data that would indicate that the source was electronic, such as access date and URL (Warwick). Additionally, while most style

manuals require authors to note the method of access to digital content in their citations, many may not regularly follow this practice, preferring to note down the citation as if it were from a print journal or book. It is therefore at best an overstatement to imply that scholars are not using electronic resources and books and to suggest that scholars may "not prefer to adopt electronic resources" (200).

Another weakness in the study stems from the author's decision to exclude articles by scholars at foreign institutions. Given the global nature of international relations as a discipline and of academia in general, this surprising decision most likely led to an inaccurate and too low percentage of foreign language materials cited. While this finding could be applicable to collection development librarians at U.S. institutions, it does not accurately describe the international relations literature as a whole and does not take into account the fluidity of scholars' academic institutional affiliations

Other findings support more reasonable conclusions that can assist librarians seeking to make data-informed collection decisions. For example, Zhang notes that information about the age of cited materials could help librarians decide whether or not to store older or less-used materials (205). Another useful recommendation is that librarians should explore the types of research done at their institutions so that they can use the study's conclusions to collect more heavily in the appropriate source material - books for qualitative research and journals for quantitative research (206). This recommendation would be easier to implement if the author had clearly stated how qualitative, quantitative and qualitative-quantitative methodologies were defined in the context of this study.

More research is needed to understand scholarly activity in international relations. In addition to investigating citation practices in monographs, it would be of interest to investigate them in dissertations and theses.

These student publications could shed light on new developments in the field, especially as universities initiate new interdisciplinary programs in global health, environmental studies, and other areas related to international relations.

In order to understand fully what kinds of sources scholars are using, it is essential to complement a citation study with an observational or behavioural survey. The 2007 study of student research behaviours at the University of Rochester has demonstrated the relevance and applicability of various ethnographic research methods to library research (Foster and Gibbons). Future explorations of scholarly research behaviours

should incorporate these more robust inquiries to create a better understanding of how scholars in international relations approach research.

Works Cited

Foster, Nancy Fried, and Susan Gibbons.
Studying Students: The Undergraduate Research Project at the University of Rochester. Chicago: Association of College and Research Libraries, 2007.

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