# CITATION ANALYSIS: YOUR TOOL FOR COLLECTION DEVELOPMENT & ENHANCED LIAISON SERVICES

by
**Christine Brown** & **Denis Lacroix**
Head, Humanities and Social Sciences Library — Romance Languages Librarian

## Introduction

### FROM THE DESKS OF
*Christine Brown & Denis Lacroix*

Citation analysis helps academic librarians analyze, describe, and contextualize what researchers are publishing and citing to inform work in collection development and liaison with university administration to promote faculty research in the humanities and social sciences. A symbiotic relationship exists between librarian and faculty researchers where both need each other to survive. This study addresses the use of citation analysis as a tool for understanding the complex landscape of research publishing in the humanities and social sciences.

## Methodology

This study examined ten years of faculty publication behaviour in three academic disciplines at the University of Alberta (Romance Languages, Political Science, and Linguistics). Its objective is twofold: describe the publishing landscape and analyze a sample of works cited in the published works. All titles published between 1999 and 2009 by full-time faculty in the three disciplines were entered into RefWorks and coded in MS Excel for the following criteria. Coding data was analyzed in SPSS.

A sample of 500 cited works will be chosen randomly for a total of 1500 cited works to be coded using the same criteria.

- Types of sources used by researchers,
- Journal evaluation (peer-reviewed, popular, impact factors and other rankings...) and publishers
- Number of pages and citations
- Language and age of publications
- Library holdings of faculty published and cited works

## Past Studies

We are implementing Knievel and Kellsey's suggestion that "librarians [...] survey the specific research agendas of their local faculty"(166). Areas to examine:

- All forms of publication
- Language of publication

  Kyvik (40) found:
  Humanities publish 40% in English
  Social Sciences publish 51% in English

Huang (18201) and Kyvik (39) confirm that more books are published in Humanities and Social Sciences than other fields.

Comparing book and article publication to findings for Kyvik (39):

- In Humanities: 11.6% books, 78.6% articles, and 9% reports (39)
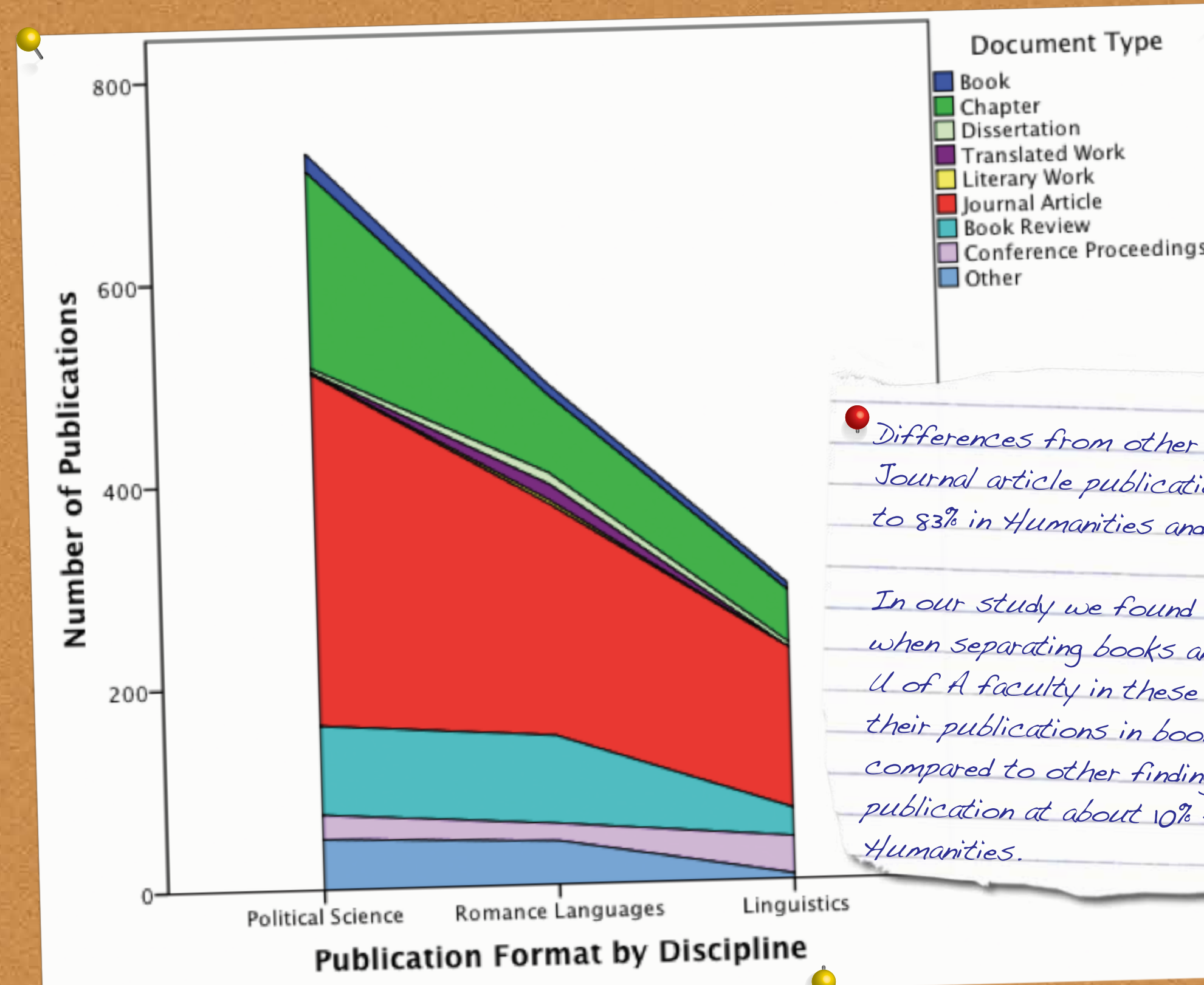- In Social Sciences: 9.6% are books, 69.3% are articles, and 20.3% are reports

There is a slightly higher tendency to publish non-scholarly materials in the Social Sciences (Huang 1821).

### Number of Publications per faculty member

Kyvik reports that tenured academic staff have three publications per person per year (37)
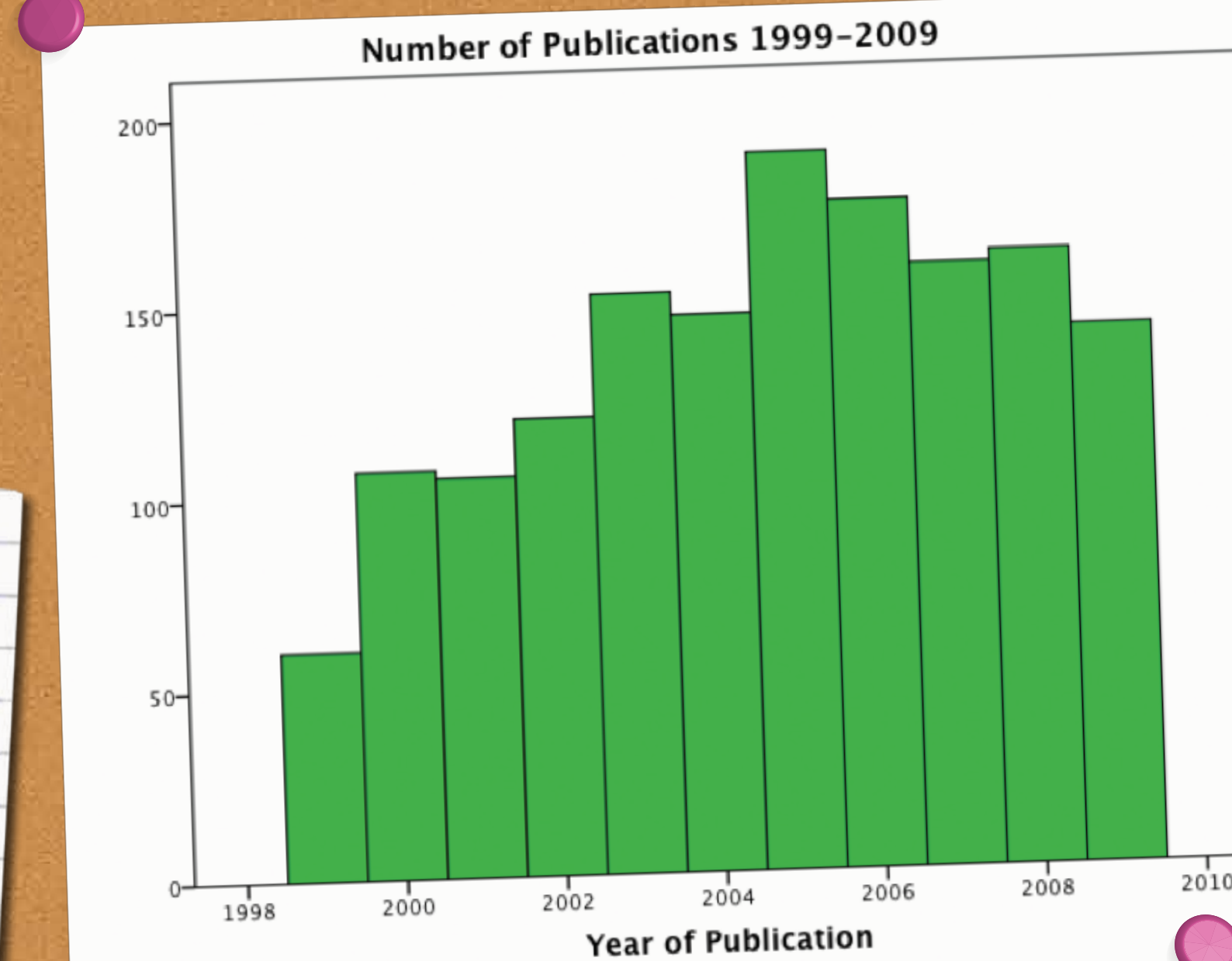
### Faculty Productivity Pattern

From 1980 to 200 Kyvik estimates that scholarly publishing increased by 30% (43). Kyvik also notes that 20% of faculty produced 50% of the total publications (43).


**Publication Format by Discipline** — Number of Publications by Document Type (Book, Chapter, Dissertation, Translated Work, Literary Work, Journal Article, Book Review, Conference Proceedings, Other)

Differences from other published studies:
Journal article publication ranges from 48% to 54% compared to 83% in Humanities and 73% Social Sciences (Kyvik 39)

In our study we found a difference in book publications when separating books and book chapters. We found that the U. of A. faculty in these disciplines publish about 2.5% of their publications in books and 12% to 27% in book chapter compared to other findings that simply estimate book publication at about 30% for Social Sciences and 12% for Humanities.


**Number of Publications 1999–2009** — Number of Publications by Year of Publication

| Discipline | # of Publications / faculty / year | % of faculty contributing 80% of publications |
|---|---|---|
| French | 2.5 | 50% |
| Italian | 3.6 | 100% |
| Spanish | 2.6 | 50% |
| Romance Languages | 2.9 | 67% |
| Linguistics | 2.9 | 29% |
| Political Science | 3.0 | 47% |

The faculty in the disciplines examined compare well with the finding of Kyvik that Humanities and Social Science faculty published three publications per year (37). It is interesting to note that significant proportions of the faculty contribute 80% of the overall number of publications.
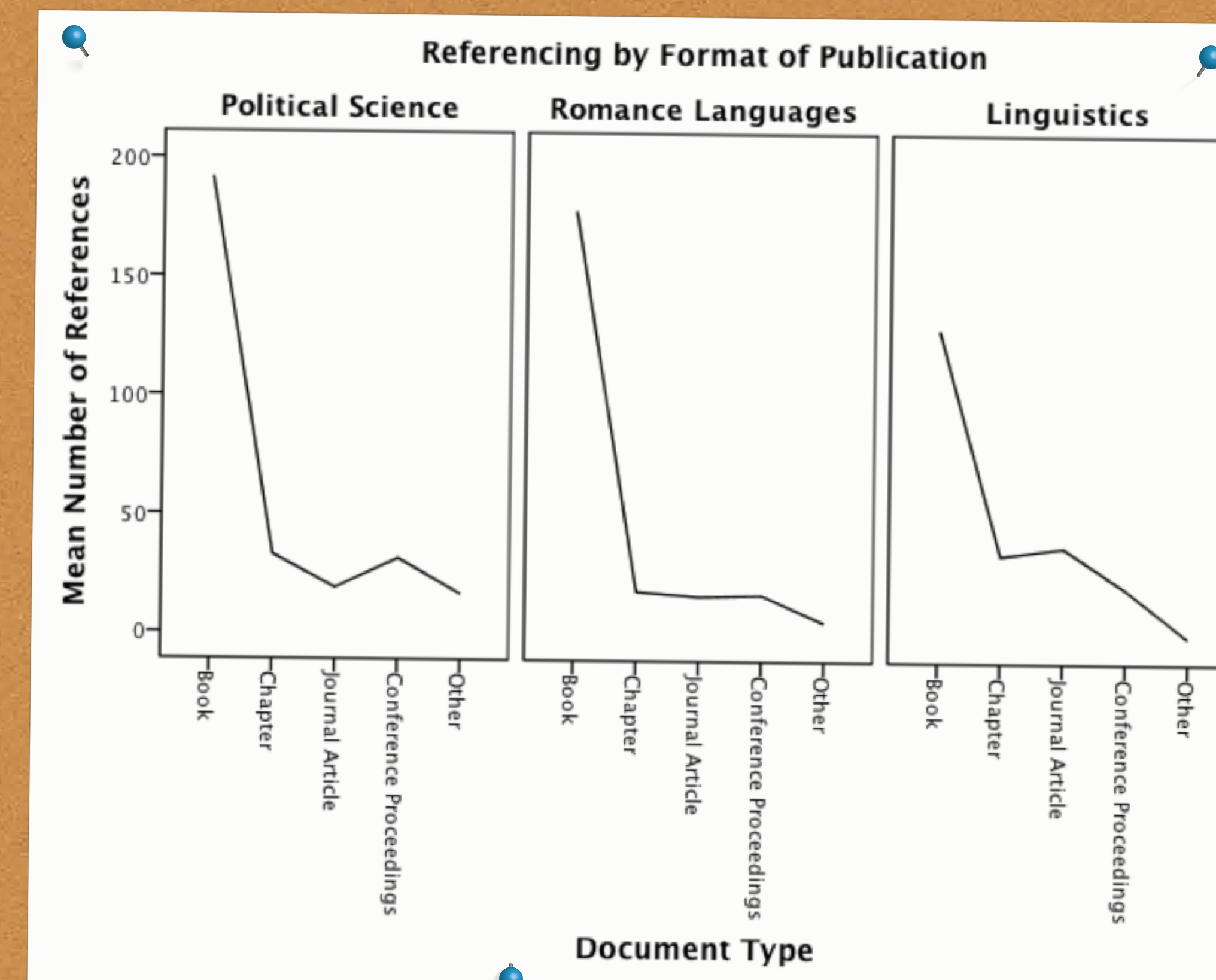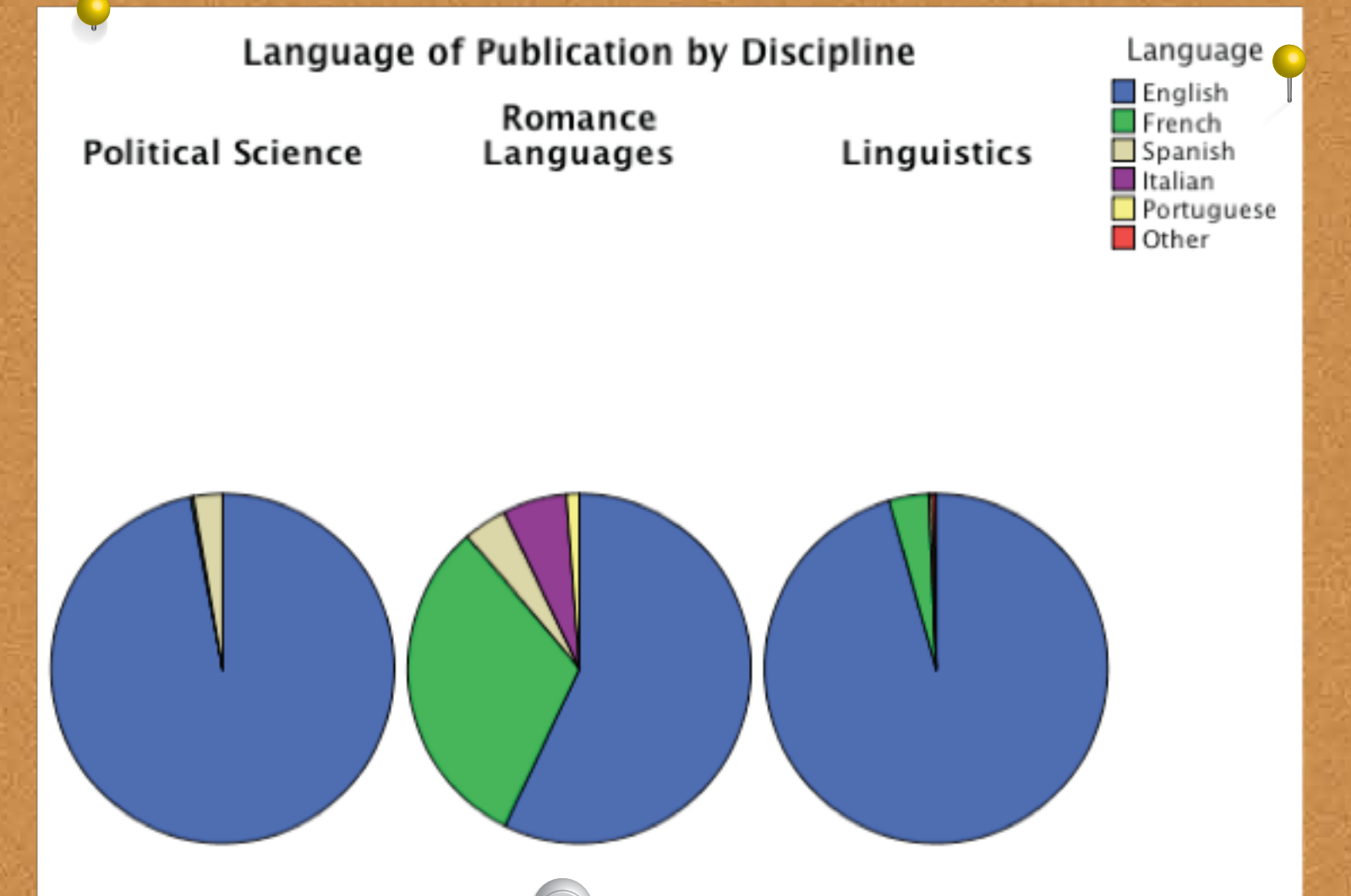
Overall publication rates increased from 2000 to 2005. This seems to follow the finding of Kyvik (43) who reported an increase of 30% in publications from 1980 to 2000. Since 2005 we see decreases in overall publications. We wonder if this is the result of budget cuts that began in about 2003.

### Publications Available in NEOS Catalog

| Disciplines | | | Available in NEOS Catalog | | |
|---|---|---|---|---|---|
| | | | Yes | No | Total |
| Disciplines | Political Science | Count | 617 | 110 | 727 |
| | | % within Discipline | 84.9% | 15.1% | 100.0% |
| | Romance Languages | Count | 361 | 133 | 494 |
| | | % within Discipline | 73.1% | 26.9% | 100.0% |
| | Linguistics | Count | 224 | 68 | 292 |
| | | % within Discipline | 76.7% | 23.3% | 100.0% |
| Total | | Count | 1202 | 311 | 1513 |
| | | % within Discipline | 79.4% | 20.6% | 100.0% |

The Library Catalog provided access to 79% of the publications of the departments being investigated. Our collection provides the best access to political science materials with only 15% not being locally available. A total of 73% of the materials published by faculty working in the romance languages were locally available as were 77% of the materials published by linguistics faculty. The weakest area for our collection was in conference proceedings in linguistics.


**Referencing by Format of Publication** — Mean Number of References by Document Type (Book, Chapter, Journal Article, Conference Proceedings, Other) for Political Science, Romance Languages, Linguistics

When looking at the publications we found that typical patterns in referencing where more references were made in book publications (mean of 175 references per book) while journal articles (mean of 22) and conference proceedings (mean of 23) had fewer. The patterns for the number of references were similar for Political Science and Romance Languages except that the mean number of references in conference proceeding in Political Science was higher than in Romance Languages. Linguistics saw fewer references in books but more in journal and conference proceedings.


**Language of Publication by Discipline** — Political Science, Romance Languages, Linguistics (Language: English, French, Spanish, Italian, Portuguese, Other)

Overall, language of publication follows the standard pattern of the majority of publication being in English. Although faculty who work in the Romance Languages teach in different languages, they tend to publish in English more often.

### Impact of Journal Publications

| Discipline | | ISI Impact Factor | Scopus SJR # | Scopus SNIP # |
|---|---|---|---|---|
| Political Science | Median | .32200 | .03700 | .46000 |
| | N | 62 | 120 | 119 |
| | Std. Deviation | .311851 | .007044 | .390772 |
| Romance Languages | Median | .69000 | .03500 | .32700 |
| | N | 16 | 76 | 58 |
| | Std. Deviation | .456587 | .009680 | .360249 |
| Linguistics | Median | 1.59000 | .07800 | 1.36100 |
| | N | 69 | 119 | 107 |
| | Std. Deviation | 2.323697 | .359300 | .779933 |
| Total | Median | .72700 | .03700 | .57400 |
| | N | 147 | 315 | 284 |
| | Std. Deviation | 1.777526 | .228696 | .692155 |

When journals were evaluated by ISI or Scopus, faculty publications tend to fit within the normal patterns of impact. Median Impact Factors for journal publication in Linguistics are above the median impact factor for that subject discipline but are close to the median impact factor for Experimental Psychology (the specific area in which many of the Linguistics faculty publish). Both Political Science and Romance Languages compare fairly well when compared to their broad ISI subject areas.

When comparing the median SJR rankings for these disciplines we see that U of A faculty publications meet or place close to the median SJR rankings for their broad discipline categories.

| Discipline | Median Impact Factor 1999-2000 | Median SJR 1999-2000 |
|---|---|---|
| Political Science | .435 | .37 |
| Linguistics | .72 | NA |
| Language & Linguistics | .72 | .036 |
| Communication | .704 | NA |
| Experimental Psychology | 1.453 | 0.975 |

### Number of OCLC Libraries Owning Faculty Publications

| Document Type | Mean | Minimum | Maximum | N | Std. Deviation |
|---|---|---|---|---|---|
| Book | 150.78 | 1 | 557 | 36 | 132.054 |
| Chapter | 150.15 | 1 | 1459 | 323 | 182.559 |
| Dissertation | 69.93 | 0 | 509 | 15 | 178.063 |
| Translated Work | 211.21 | 1 | 527 | 14 | 149.903 |
| Literary Work | 117.25 | 2 | 462 | 4 | 229.834 |
| Conference Proceedings | 28.86 | 0 | 318 | 63 | 58.979 |
| Other | 199.89 | 0 | 1119 | 90 | 255.318 |
| Total | 143.51 | 0 | 1459 | 545 | 189.486 |

While standard evaluation tools are helpful in assessing impact of journal publications, we recorded the number of OCLC Libraries owning other formats of publications and found that this could be a tool to assess the impact of these formats of publication. Book publications or the books in which faculty published chapters were held by a mean of 150 OCLC Libraries in 2012.

### MLA Journal Evaluation

| | Disciplines | | | Total |
|---|---|---|---|---|
| | Political Science | Romance Languages | Linguistics | |
| Peer Reviewed | 21 | 86 | 134 | 241 |
| Not Peer Reviewed | 0 | 20 | 0 | 20 |
| Total | 21 | 106 | 134 | 261 |

### Ulrich's Journal Evaluation

| | Disciplines | | | Total |
|---|---|---|---|---|
| | Political Science | Romance Languages | Linguistics | |
| Scholarly/Academic | 216 | 207 | 181 | 604 |
| Popular/Consumer | 126 | 46 | 0 | 172 |
| Total | 342 | 253 | 181 | 776 |

Ulrich's provided more evaluation than MLA. It does verify that the scholars in Political Science and Romance Languages do publish in the popular literature.

### Summary

Preliminary results show that our collection reflects the areas in which faculty in Political Science, Romance Languages, and Linguistics published. The impact of the faculty publications falls close to or above median impact factors for their broad subject disciplines. Language and rate of publication also follow trends within Humanities and Social Science publication patterns.

Coding will continue on a sample of citations from the publications to see if citation practices follow similar patterns found by other researchers. We will also be tracking the proportion of publications/citations that are available freely on the Internet.

## UNIVERSITY OF ALBERTA LIBRARIES