

I. Introduction

This is the final in a series of three reports for a collection analysis project funded by a Library Services and Technology Act (LSTA) grant through the Missouri State Library. The project was initiated by the MOBIUS Collection Management Advisory Committee (MCMAC) with the intent to provide an analysis of library collections in Missouri in an effort to better understand collection strengths, weaknesses, overlaps, and age in the aggregate. Because no such analysis existed prior to this series of reports, MCMAC determined that in order to better identify and define both large and small-scale collaborative collection management initiatives statewide, this project was a necessary undertaking.

Twenty-five libraries were chosen that MCMAC felt would best characterize the collections in the state. The number of libraries chosen was tied to the cost of the analysis tool as the pricing of the analysis tool was based on library holdings. The libraries included were chosen based on size, location, and population served. Five large public libraries and twenty varying sizes and types of academic libraries were chosen from across the state. This was an extremely large project and generated a great deal of supporting and supplementary data. All of which is available on the MOBIUS website <http://mco.mobius.missouri.edu/>.

MCMAC determined that non-MOBIUS affiliated public libraries would be included in the analysis. The decision by the Committee to include non-MOBIUS public libraries in the project was based on discussions throughout the Missouri library community about expanding the number of public libraries in the MOBIUS consortium. Thus, MCMAC felt it was important that public libraries be appropriately represented in the study. At the time the grant was written, there were two large public libraries in the Consortium: Missouri River Regional Public Library and Springfield-Greene public library. However, Missouri Regional River Library was not included in the analysis as it did not meet the criteria stated above. The large public libraries that MCMAC felt met the criteria for inclusion were: Springfield-Greene Public Library, Kansas City Public Library, Mid-Continent Public Library, St. Louis Public Library, and St. Louis County Public Library.

To perform the analysis, MCMAC chose the WorldCat Collection Analysis (WCA) service. The Committee felt the WCA service developed by OCLC would provide the most reliable information about Missouri library collections as all holdings of the libraries participating in the grant can be found in OCLC's database. In addition to the collection analysis project, an added benefit for using the WCA service was that all participating libraries in the grant received one year of access to WCA at no charge.

This final report includes a summary overview of the Committee's work in the first two reports, as well as MCMAC's findings and resulting recommendations based on data gathered in the previous year.

II. First Report Summary and Findings

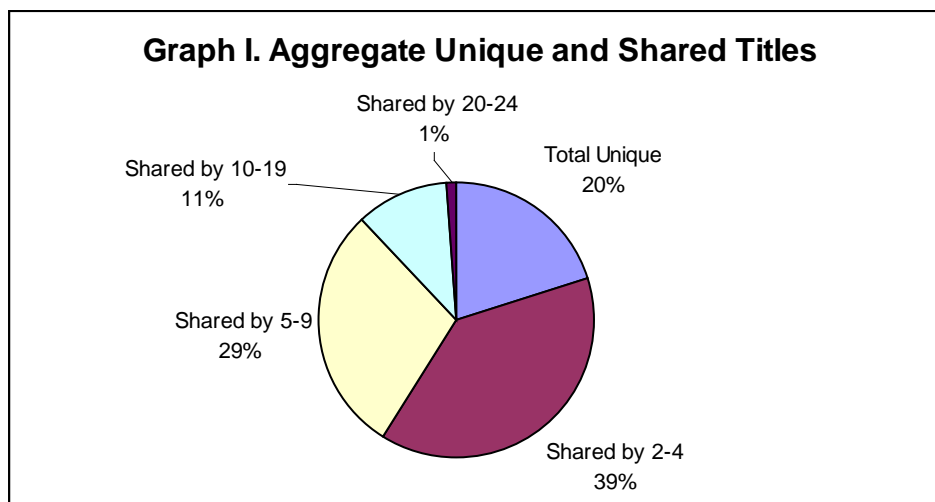
Summary

In preparing each of the three reports, MCMAC limited its analysis to non-juvenile English monographs. The *first report* consisted of a general overview of all library collections included in the grant to determine age, uniqueness, and duplication in all collections. The full report can be found on the MOBIUS website <http://mco.mobius.missouri.edu/>.

There were no great surprises in the *first report*. Data showed that, overall, libraries included in the grant were providing users with a collection whose uniqueness seemed to be at an acceptable level.

Uniqueness

The uniqueness reports in the *first report* compare all holdings of non-juvenile, English, monographs for all years for all libraries included in the grant. The data revealed that the percentage of unique titles among the 25 participating libraries seems to be satisfactory at 20% with an additional 39% of titles only shared 2-4 times throughout the group.



In addition to the graph above, the following supplementary data for non-juvenile English, monographs can be found in the *first report* which is posted on the MOBIUS website <http://mco.mobius.missouri.edu/>:

- Total unique and shared non-juvenile, English, monograph titles grouped by the 32 OCLC Conspectus divisions (Appendix II) with the Language and Literature division having the highest real number of unique titles. Not surprisingly, reports reflect results that one might expect, such as large collections in the humanities with higher levels of duplication. Conversely, there were smaller collections in the sciences with lower levels of duplication throughout the group.

- Total unique and shared, non-juvenile, English, monograph titles for the date range 1990 – 1999 grouped by the 32 OCLC conspectus divisions (Appendix II) compared with unique and shared non-juvenile, English, monograph titles for the date range 2000- 2007 also grouped by the 32 OCLC conspectus divisions (Appendix II) that showed an overall increase in the in the number of unique titles in the 2000-2007 group.

Overlap

Overlap reports for WCA measure overlap on a library to library basis. The goal for the *first report* was to establish a general sense of overlap among the collections for libraries participating in the grant. In order to make the data in the overlap reports manageable, libraries were grouped by type: Small and Medium Size Libraries; Research Libraries; and Public libraries. The Collection Overlap section of the *first report* includes the following reports (among others) and can be found on the MOBIUS website <http://mco.mobius.missouri.edu/>:

- Percentage of the non-juvenile, English, monograph collection overlap among Small and Medium Size Libraries for all dates was 20%.
- Percentage of the non-juvenile, English, monograph collection overlap among Research Libraries for all dates was 44%
- Percentage of the non-juvenile, English, monograph collection among Public Libraries for all dates was 41.3%.

Historical Analysis

The final section of the *first report* examines the age of the collection. MCMAC is particularly interested in potential weeding/digitizing/storage projects, which resulted in the historical analysis data. The Committee focused on non-juvenile, English, monographs published before 1925. The Collection Analysis pre-1925 section of the *first report* includes (among others) the following reports and is posted on the MOBIUS website <http://mco.mobius.missouri.edu> :

- There are a total of 664,949 non-juvenile, English, monograph titles in the collections published between 1500 and 1924. Of those titles 229,138 were published 1900 - 1924
- The number of unique non-juvenile, English, monograph titles published prior to 1925 grouped by the 32 OCLC conspectus divisions 21,357.

The *first report* provided a high level view of collections across the state and provided the foundation and direction to create more detailed and targeted reports to meet the ultimate goal of this grant, which is to promote collaborative collection management where it may not have existed in the past.

III. Second Report Summary and Findings

Summary

In the *second report*, MCMAC analyzed collections based on geographic region. It was the Committee's rationale that an analysis of collections with geographic proximity could provide direction for opportunities for collaboration projects based on location versus library type. MCMAC felt the regional analysis allowed for comparisons within groupings of different types of libraries, which may identify peculiarities among libraries that may not have been identified elsewhere. Additionally, the Committee believed it would be worthwhile to investigate collaboration among a group of libraries where there might be a greater likelihood that participants meet face to face.

Libraries were grouped into the following regions Central, East, and West. The Central region consisted of 9 libraries. The East region consisted of 11 libraries, and the West region consisted of 4 libraries. It must be noted that the libraries in the *second report* were only compared among the libraries in their respective regions, not against the whole group.

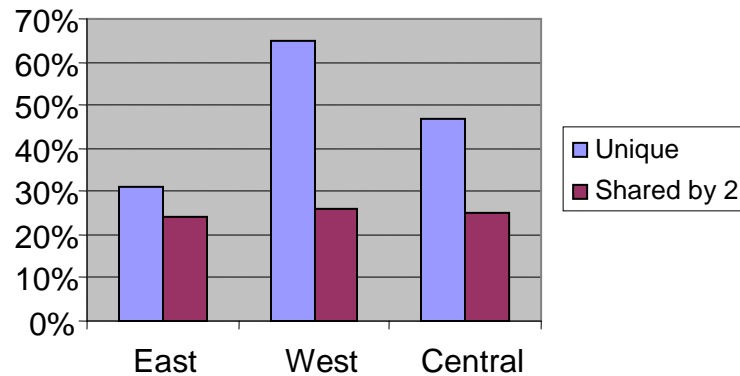
Uniqueness

The regional reports reflect higher levels of uniqueness than the *first report*. For example, the first report showed that overall uniqueness for all libraries included in the project was 20%. However, levels of uniqueness by region jumped to 31%, 65%, and 47% for the East, West, and Central regions respectively when libraries were compared with their regional counterparts versus the whole group of libraries in the study.

The variance in results can be explained by the change in the make-up of the group. For example, there are only four libraries in the Western group with two of those being public libraries, 1 being a smaller liberal arts library, and a larger research institution. The varied nature of institutions in that group would explain the high level of unique titles. It also supports the goal of greater access to a wider scope of materials for the user. It should also be noted that the uniqueness graph below includes an analysis of all titles in the group of four libraries.

- All unique and shared non-juvenile, English, monograph titles grouped by Central, East, and West regions.

Graph 2. Unique Titles by Region



In addition to the graph above, the following regional uniqueness and shared title data for non-juvenile, English, monographs was gathered and can be found in the *second report*, which is posted on the MOBIUS website <http://mco.mobius.missouri.edu/> :

- Reports reflect higher rates of uniqueness in selected divisions than in the overall analysis found in the *first report*. Divisions with the highest percentage of overall uniqueness regionally are as follows:

East

Engineering & Technology
Agriculture
Physical Education & Recreation

West

Computer Science
Engineering & Technology
Philosophy

Central

Agriculture
Engineering & Technology
Computer Science

Overlap

Not surprisingly, regional overlap reports suggest that the highest levels of overlap are between similar type libraries. However, MCMAC determined that this would be an area

that would need further investigation as more detailed analysis of overlap between and among institutions would be beneficial in determining where the strongest collections lie, as well as identification of potential areas for collaboration on approval plan profiles. In addition to the data below, overlap data for non-juvenile, English, monographs can be found in the *second report*, which is posted on the MOBIUS website

<http://mco.mobius.missouri.edu/> .

- The divisions with the highest percentage of duplication are as follows:

East – Art & Architecture

West – Language Linguistics & Literature

Central – Business & Economics

Historical Analysis

MCMAC sought to determine the number of titles no longer under copyright protection by East, West, and Central regions as identified above. For the Age of Collection section of the *second report*, the following reports were generated and may be found on the MOBIUS website <http://mco.mobius.missouri.edu/> :

- An analysis of non-juvenile, English, monograph titles, published before 1925, grouped by division, and region indicated a parallel to the *first report* that identified the divisions with the highest number of titles published prior to 1925 as History and Auxiliary Sciences and Language, Linguistics, and Literature in each respective region

IV. Final Report findings

Findings described below provide the Committee with further short and long term direction. The Committee took what was previously learned and used the information to generate detailed and targeted analysis to produce the recommendations found at the end of this report. This includes greater analysis of unique titles; greater analysis of collection overlaps; and further analysis of Public Library holdings as they relate to this project. The number of reports, as well as detailed title lists generated for this report is extremely large and only a percentage will be presented here. However, *all* reports and data generated are available via the MOBIUS website <http://mco.mobius.missouri.edu/>.

Uniqueness

The data in this section focuses on current English, non-juvenile, monograph publications published 2000 – 2007. Reports were run that identified uniqueness for all divisions and all institutions participating in the study. Additionally, a direct comparison of uniqueness between academic libraries and public libraries for the years 2000 – 2007 was made.

MCMAC also used the uniqueness reports to identify areas where only a small number of institutions held the majority of unique titles for a division, such was the case with Mathematics, Chemistry, and the Physical Sciences, as those divisions would traditionally be tied primarily to larger research institutions whose curriculum would support specialized material in those areas. Consequently, the majority of both unique and total titles in Mathematics, Chemistry, and the Physical Sciences were held by the three major research institutions in this study: University of Missouri Columbia, Washington University, and St. Louis University. However, an area in the sciences where this did not necessarily hold true was the Computer Science division, which had well distributed total and unique holdings across the study group.

A few divisions that indicate areas for further investigation for potential collaboration projects are Geography, Sociology, and Political Science. These divisions proved to be interesting because they are disciplines where liberal arts institutions would collect heavily and experience a higher level of unique titles. While, these divisions do, in fact include higher levels of total titles, they also experience a great deal of overlap. This will be illustrated further in the “Overlap” section of this report.

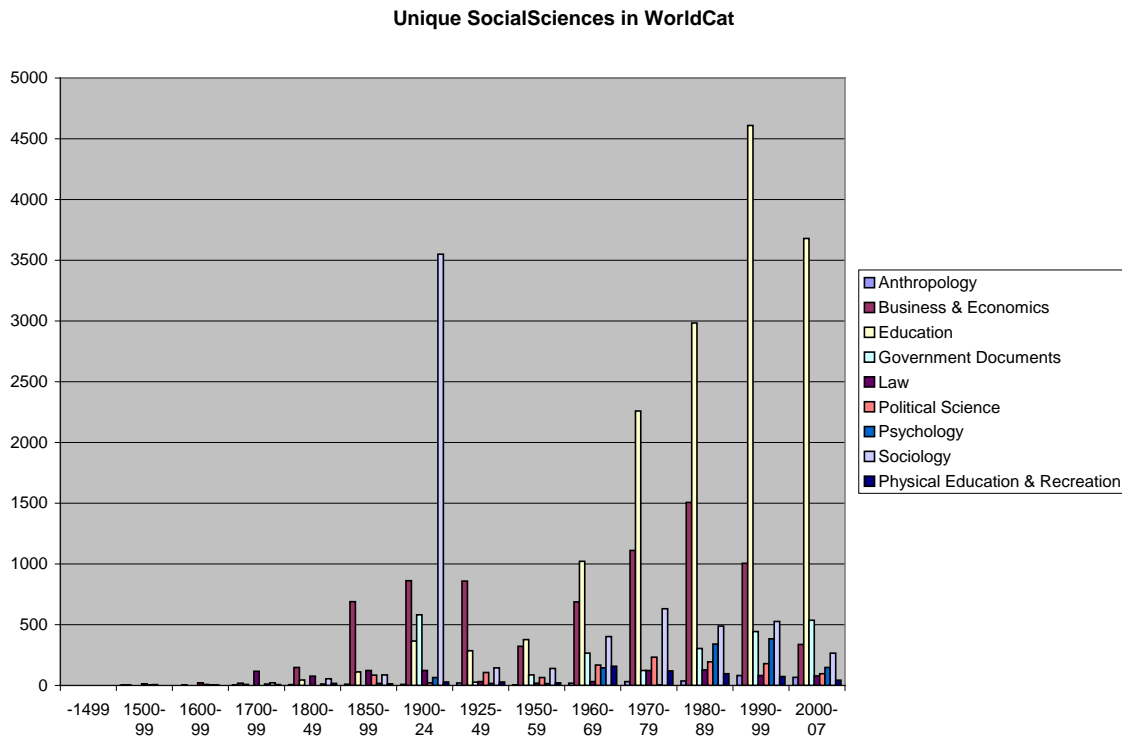
The final graph in this section is a comparison of level of uniqueness between public libraries and academic libraries among grant participants. As one might expect, the levels of uniqueness between the two groups are comparable. However, it is interesting to note that among the 5 public libraries, the total number of unique titles for the Language & Literature division and History & Auxiliary division is greater than the total number of unique titles for the 20 academic libraries included in the grant.

In addition to the information above, the remainder of this section contains a series of graphs and reports that further contribute to the recommendations at the end of this

report. Additional data relating to this topic has been posted to the MOBIUS website <http://mco.mobius.missouri.edu/>.

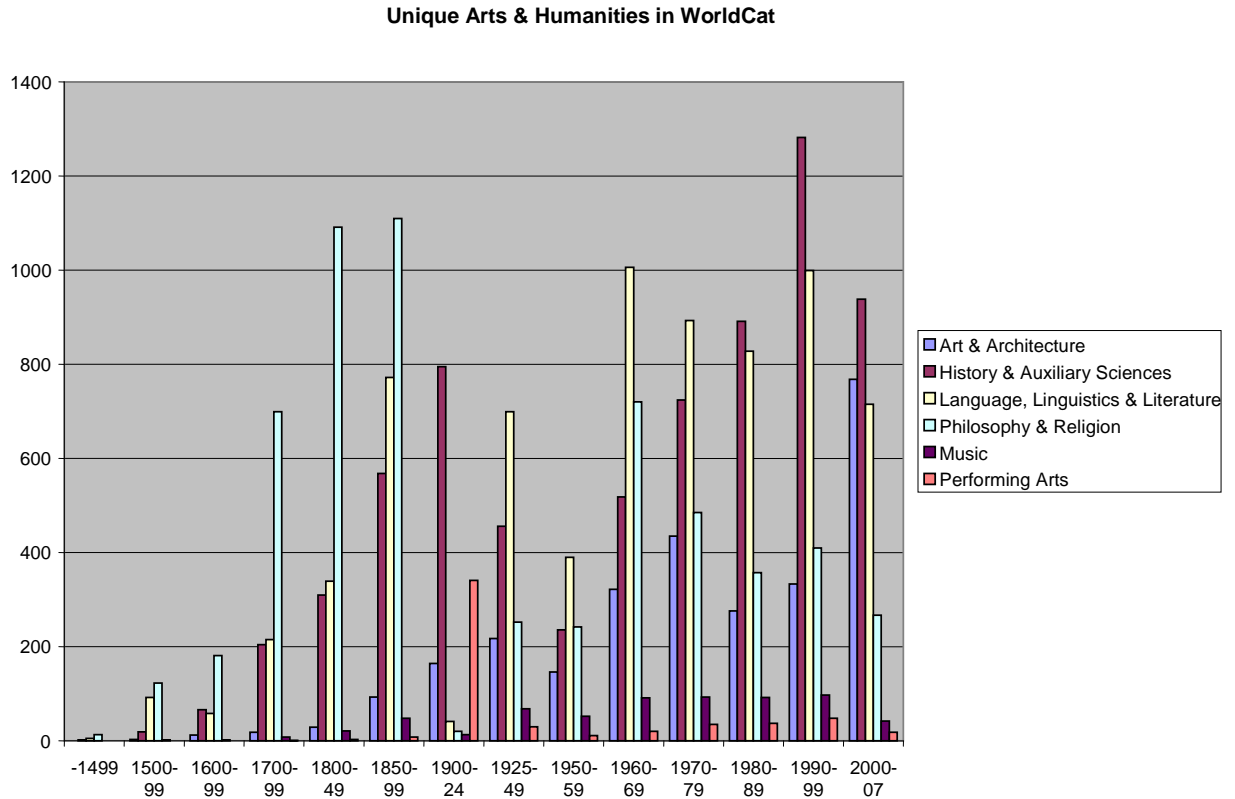
The graph below **Unique Social Sciences WorldCat**, compares grant participants' holdings with WorldCat holdings, the following divisions include the most unique titles overall when compared with the WorldCat database: Education, Business and Economics, and Sociology.

*Unique is defined as being held by less than 6 institutions throughout WorldCat.



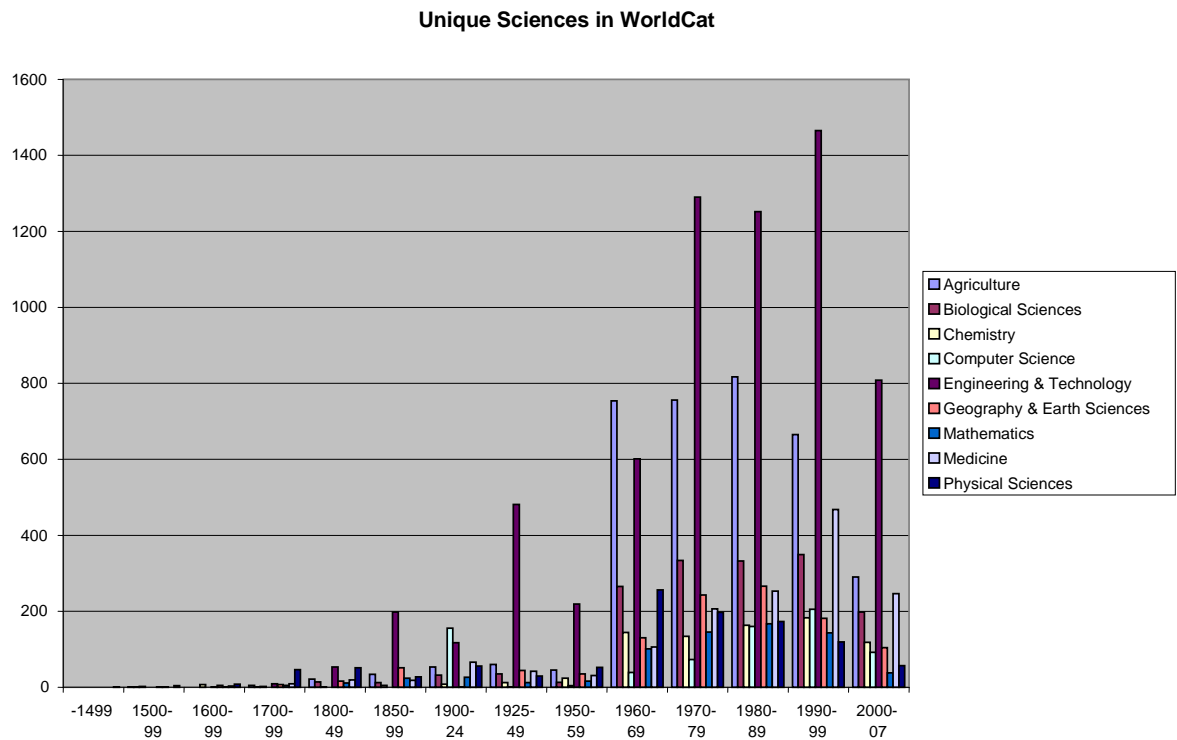
The graph below, **Unique Arts & Humanities WorldCat**, compares grant participants' holdings with WorldCat holdings, the following divisions include the most unique titles overall when compared with the WorldCat database: Language and Literature, History, and Philosophy and Religion

*Unique is defined as being held by less than 6 institutions throughout WorldCat.

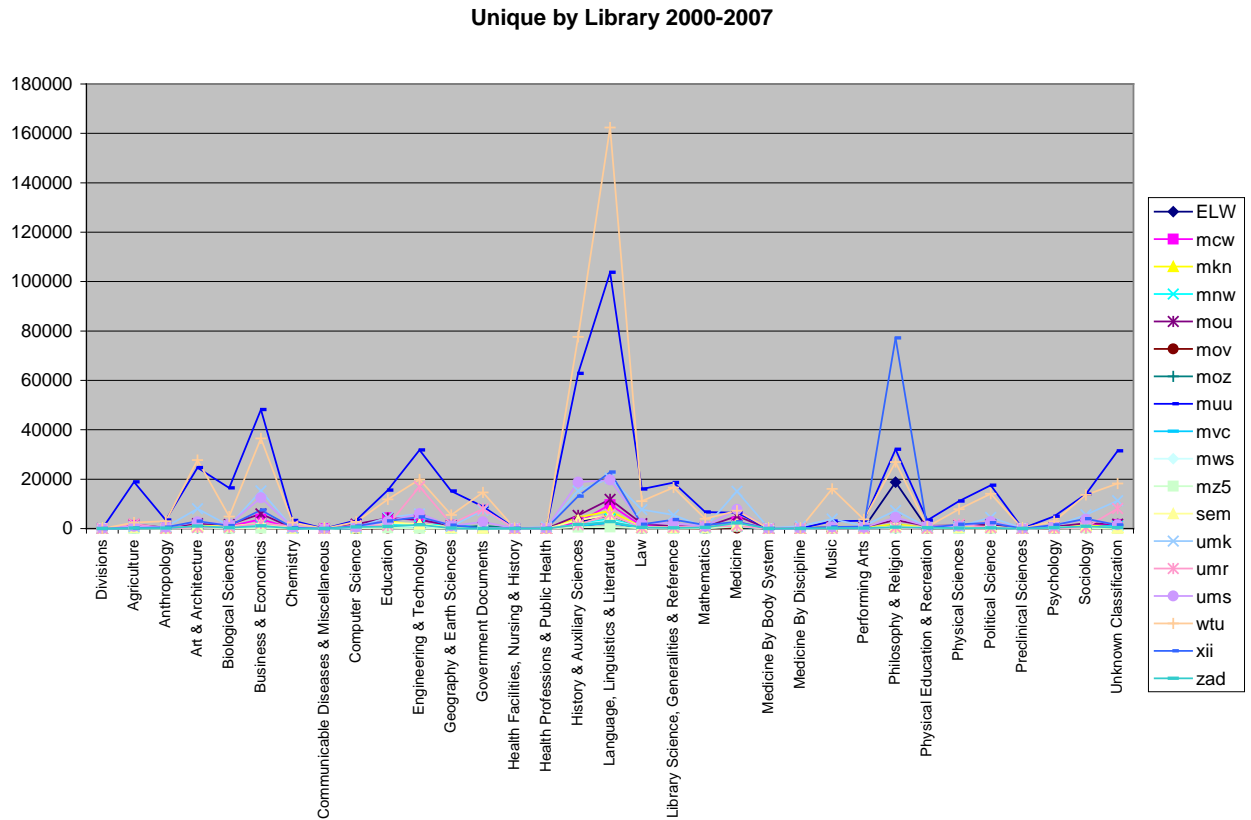


The graph below, **Unique Sciences in WorldCat**, compares grant participants' holdings with WorldCat holdings, the following divisions include the most unique titles overall when compared with the WorldCat database: Engineering & Technology, Agriculture, and Biological Sciences.

*Unique is defined as being held by less than 6 institutions throughout WorldCat.

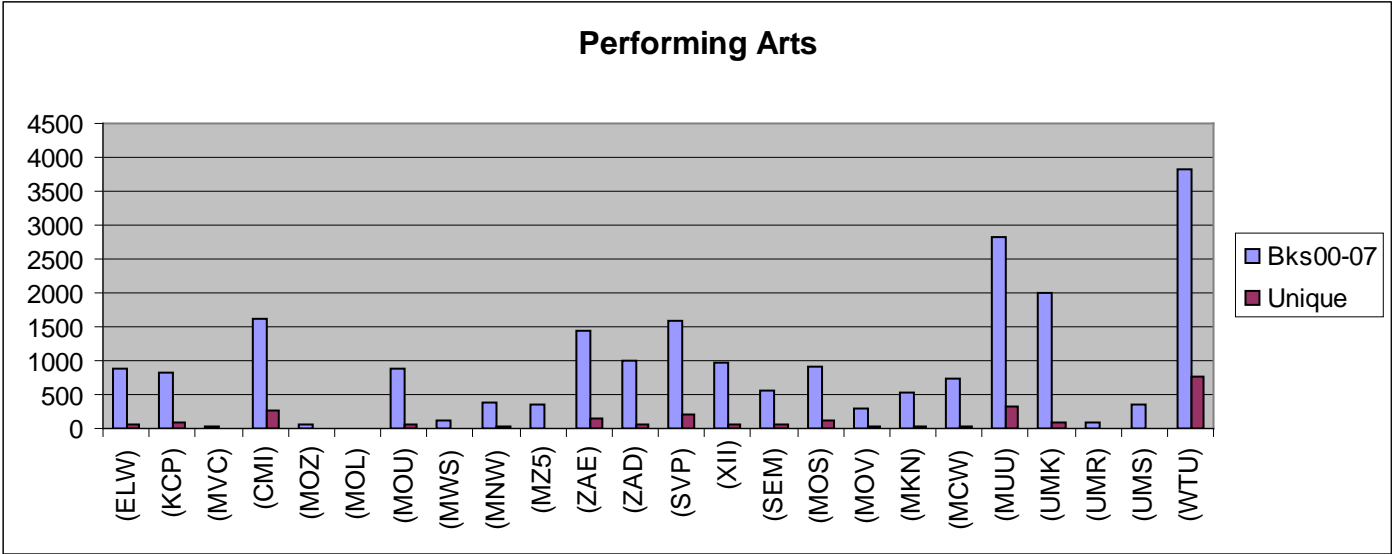
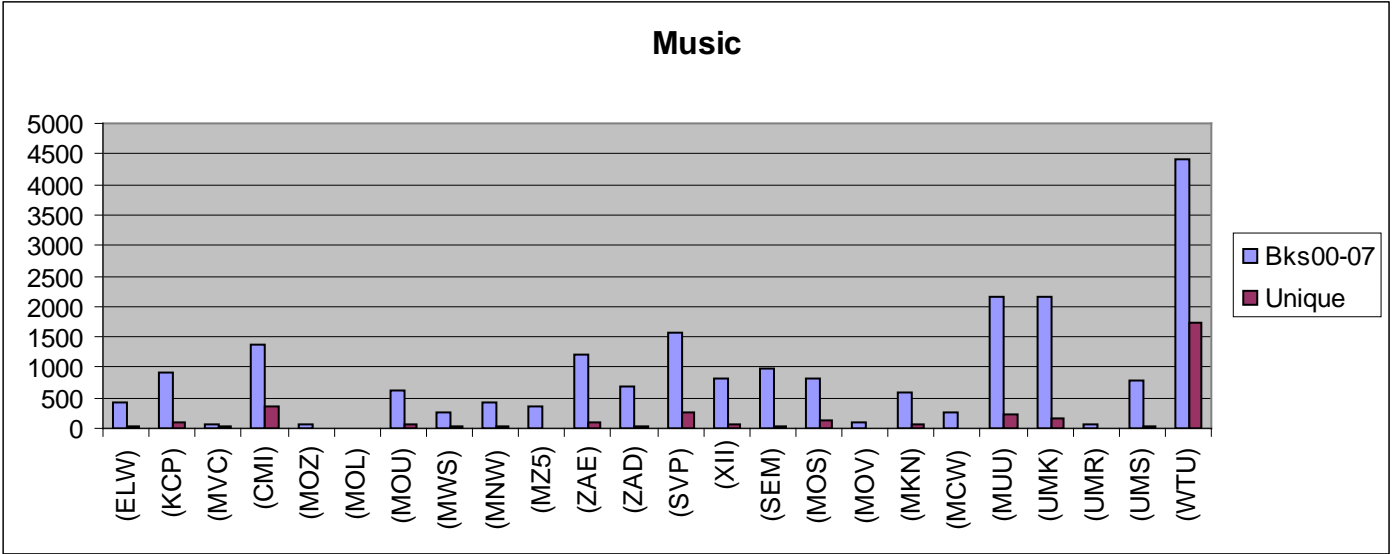
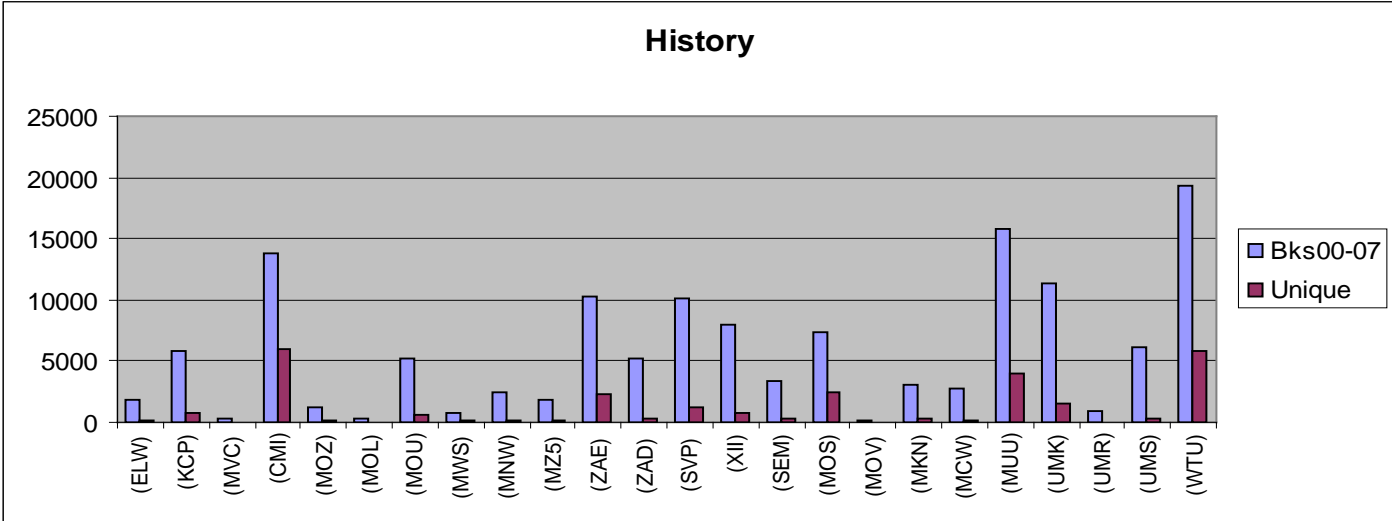


The graph below, **Unique by Library 2000-2007** is an overview of unique, non-juvenile, monograph titles, published from 2000 – 2007, grouped by division and institution. The graph describes widespread collection priorities such as Language & Literature, and History & Auxiliary Sciences, and Philosophy & Religion.

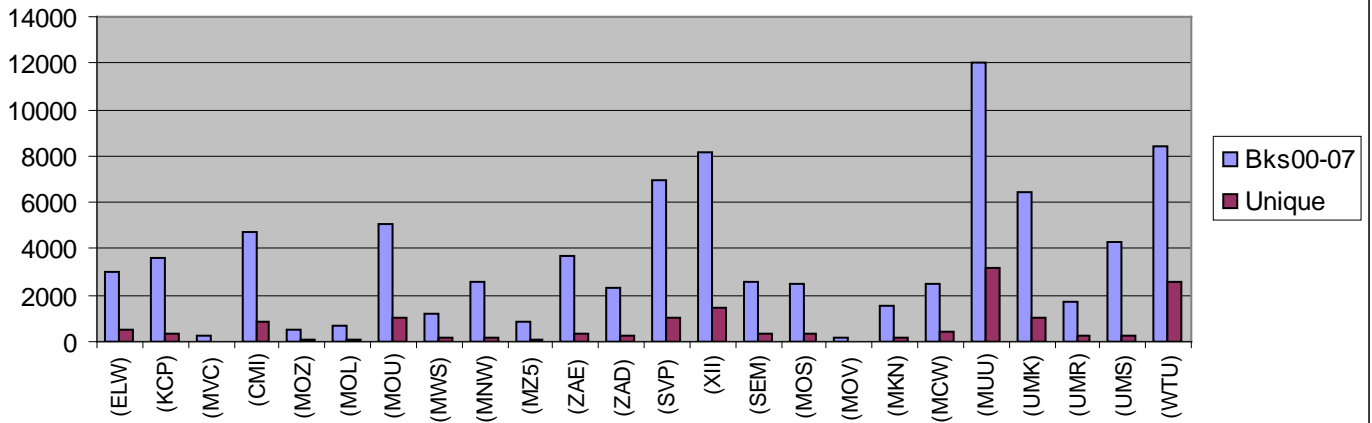


*note: See Appendix I for a key defining the OCLC symbols for institutions included in the study.

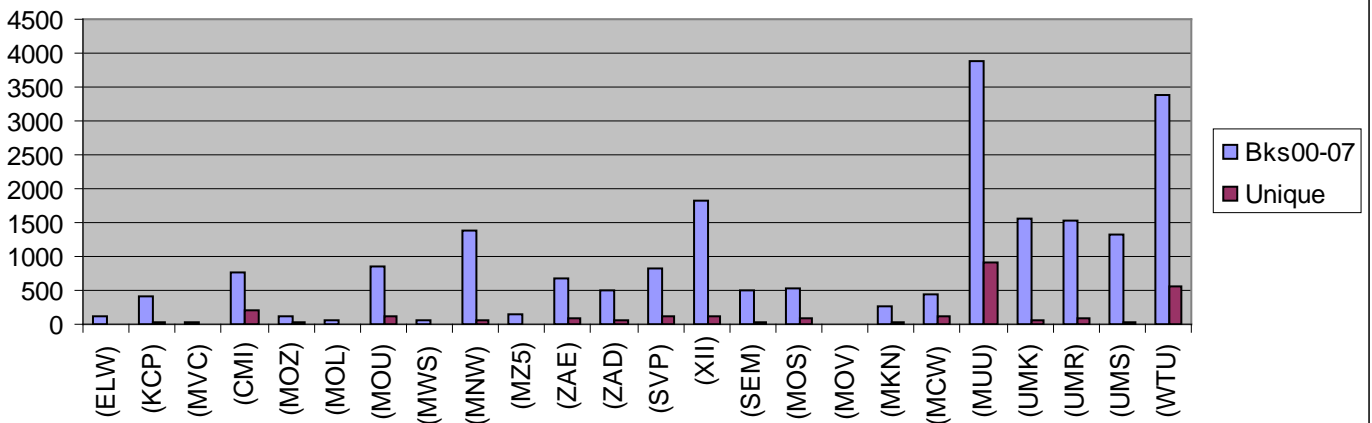
The following set of graphs provides a uniqueness analysis by institution for the following divisions: **History, Music, Performing Arts, Business, Geography, Political Science, Sociology, Education, Computer Science, Mathematics, Biology, Chemistry, Physical Sciences, and Engineering.** While all divisions are not represented here, the remainder are posted on the MCO website.



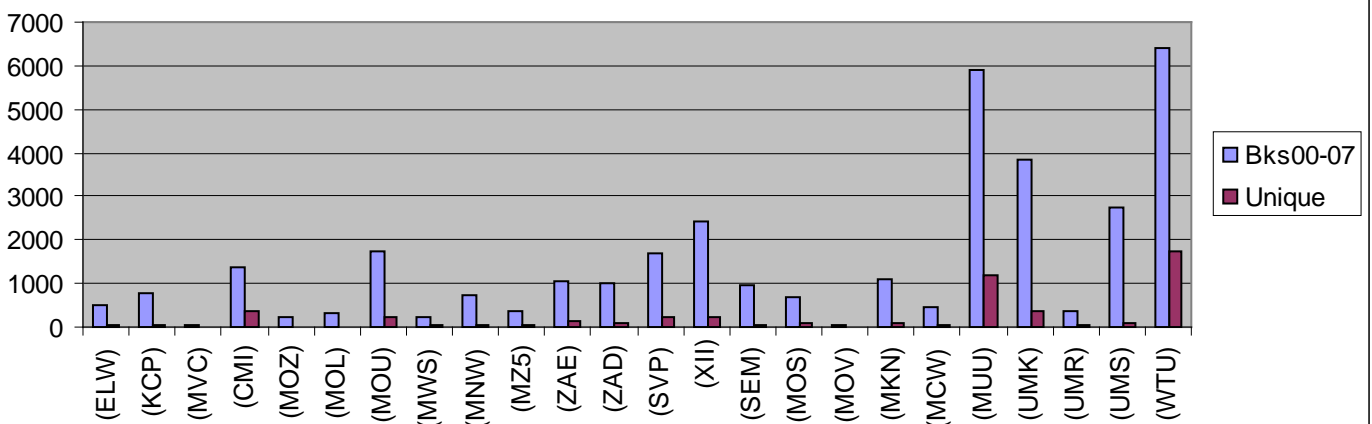
Business



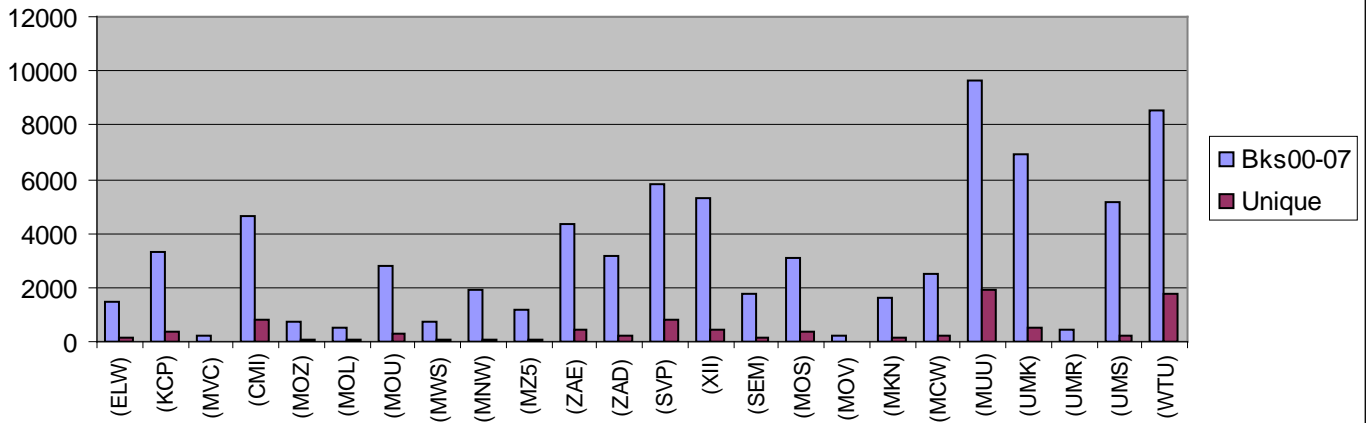
Geography



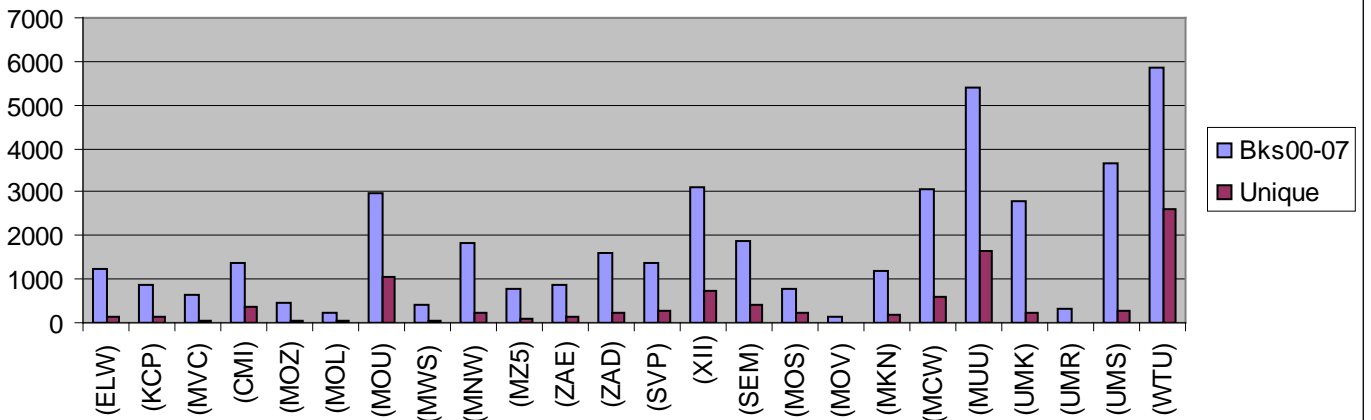
Political Science



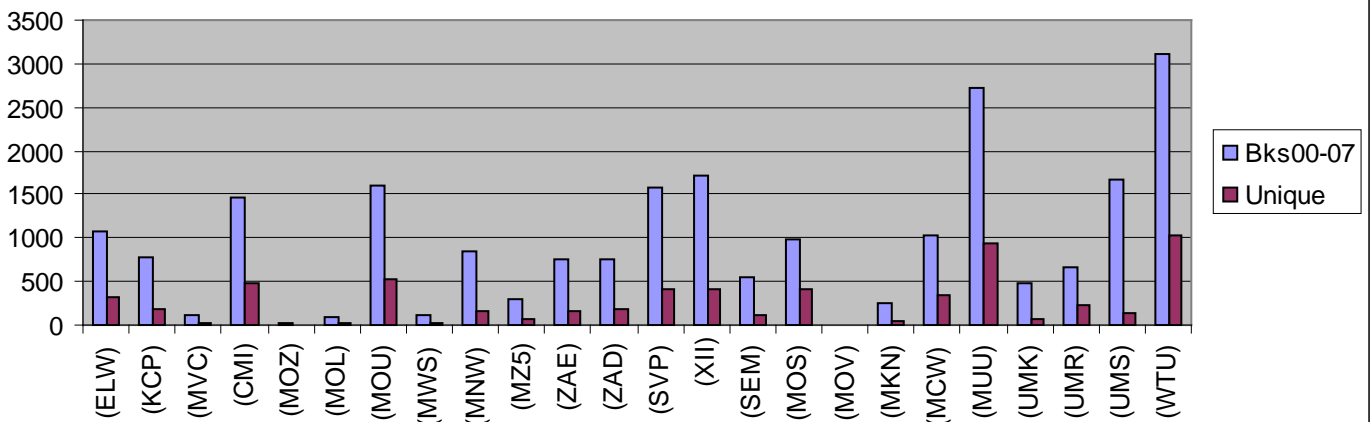
Sociology



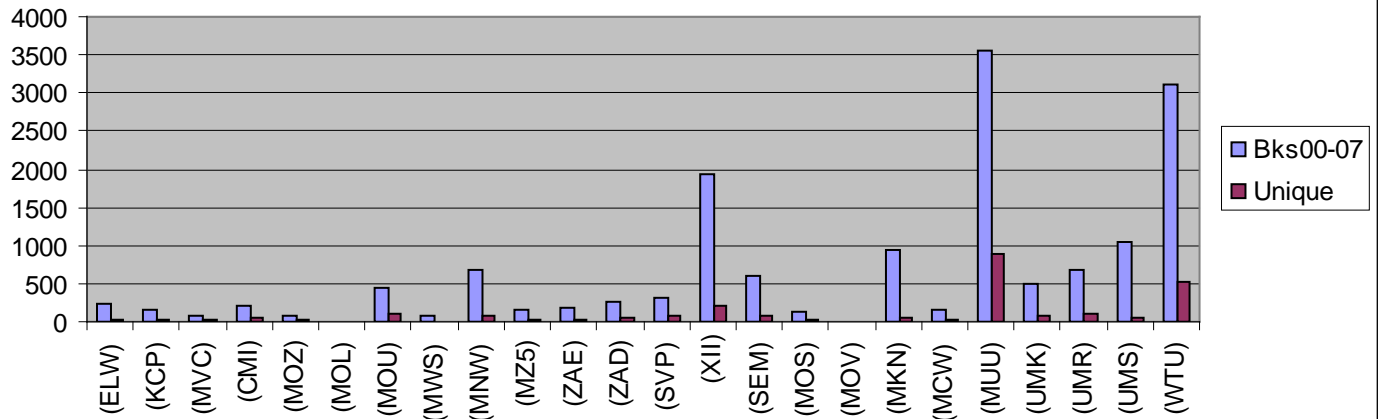
Education



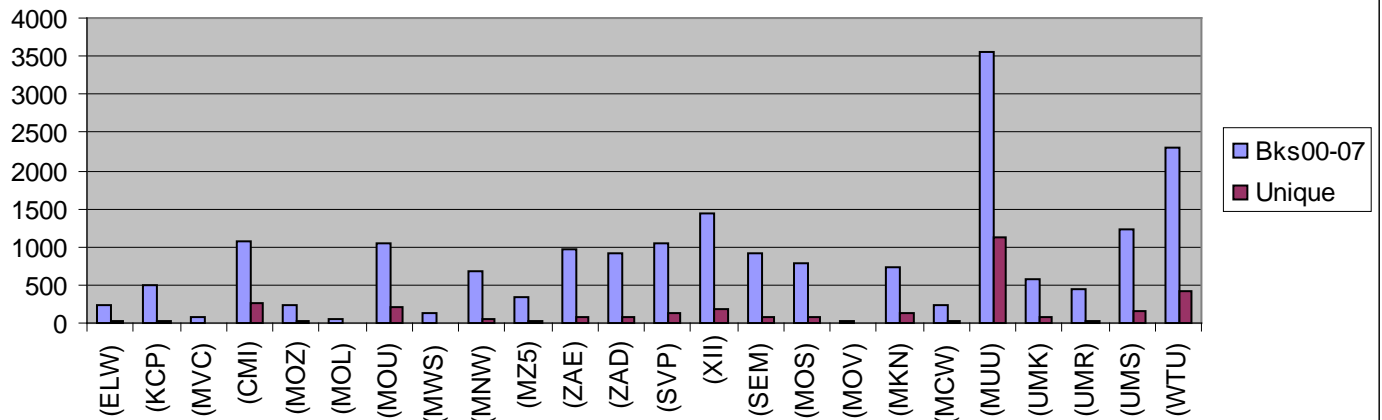
Computer Science



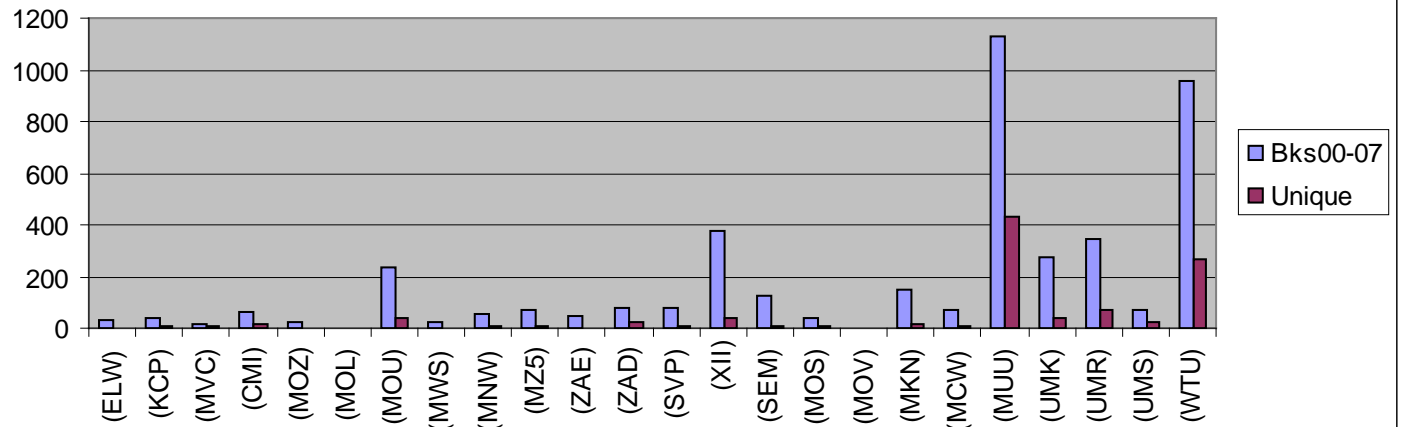
Mathematics



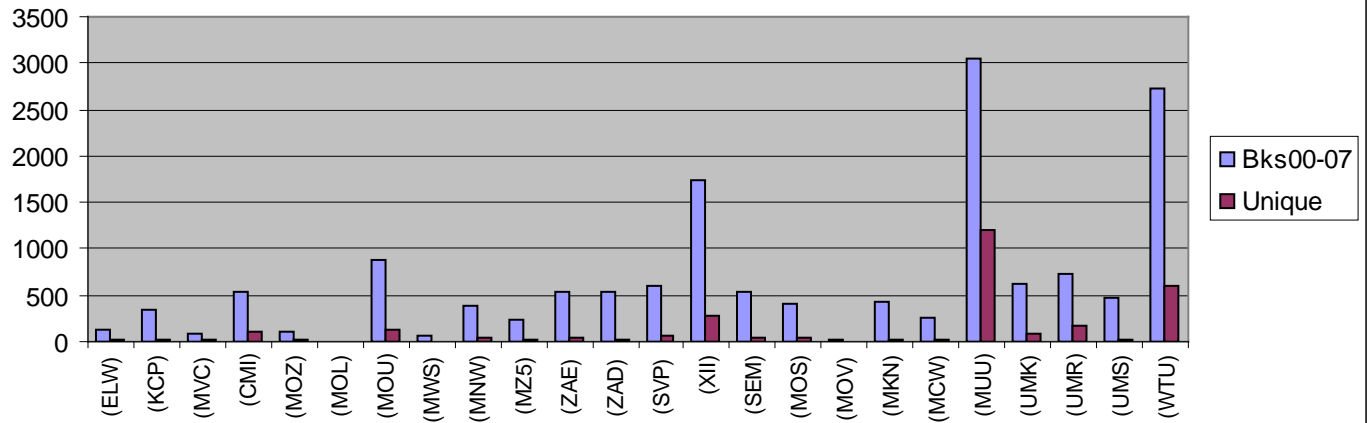
Biology



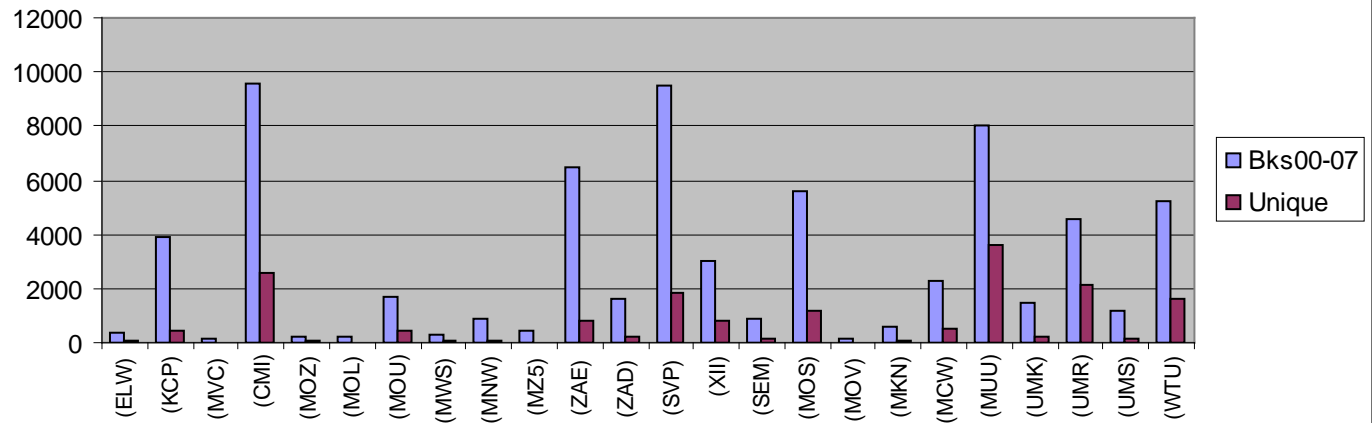
Chemistry



Physical Sciences

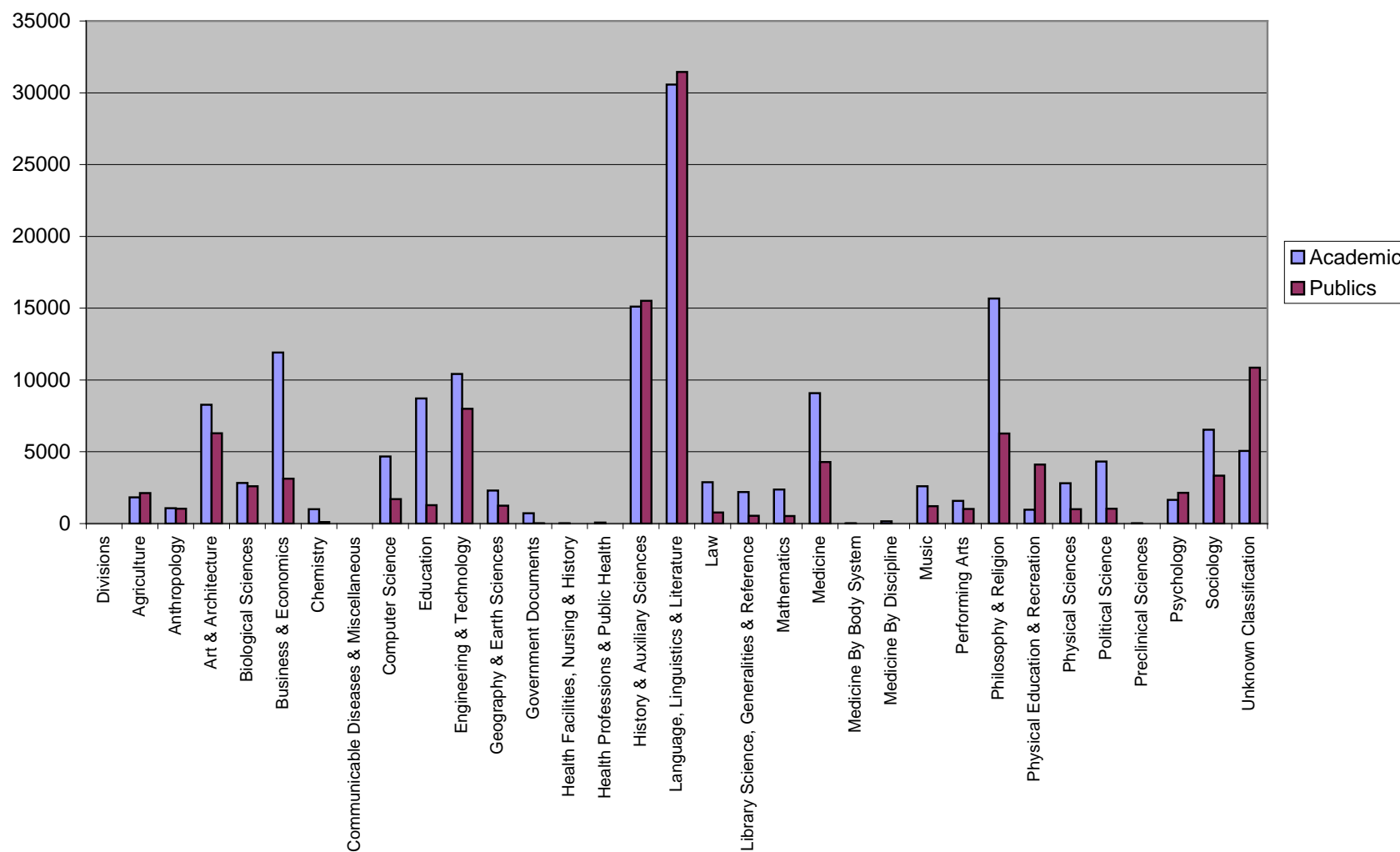


Engineering



The graph below compares non-juvenile, English, unique, monograph holdings between public and academic libraries for the years 2000 - 2007.

Academic and Public Unique 2000-07



Overlap

The series of tables below provide a detailed picture of duplication among the libraries included in the grant. The graphs below represent the percentage of overlap among institutions for non-juvenile, English, monographs published 2000-2007. Reports are broken by selected OCLC conspectus divisions (Appendix II) and reflect the percentage of overlap between and among institutions.

There are several tabular reports that are not present in this document, but are available via the MOBIUS website <http://mco.mobius.missouri.edu/>. However, an overview of the content in the omitted tables deserves mention. The first to note is a table that represents levels of overlap among *all* institutions for *all* divisions and reflects what the Committee has found in previous reports: while there is duplication among all libraries, the highest level of duplication rests with same type libraries. The table is extremely detailed and provides a very valuable overview.

An additional set of overlap data not presented here are divisional overlap reports that only include the 5 public libraries in the study. The data showed that among 24 divisions tabulated among 5 public libraries, 20 divisions had average duplication rates over 50%. The remaining four divisions, Art, Computer Science, Philosophy & Religion, and Education, had average duplication rates over 39%. The titles included in the reports above are non-juvenile, English, monographs published 2000 – 2007. While duplication rates are high (as one would expect) among the public libraries, the average duplication rates fall sharply when measured within the group. Also, data showed that public libraries in the group contribute a substantial number of unique titles to the group. The low level of overlap between public and academic libraries as well as the high level of unique titles contributed to the group bears out the value of public library participation in the MOBIUS consortium.

The last series of reports not included here are divisional overlap tables among academic libraries: Anthropology, Art, Biology, Business, Education, Math, Medicine, Philosophy & Religion, Physical Education, and Psychology. The reason for their exclusion here is that the Committee only included tables for divisions where the average percentage of overlap exceeded 25% and those divisions where the average percentage of overlap among libraries was below 20%. However, all tabular data is available via the MOBIUS website <http://mco.mobius.missouri.edu/>.

As indicated previously, initial overlap reports reflect low overlap percentages between public libraries and academic libraries. Consequently, separate reports were created for overlap among public libraries and overlap among academic libraries. The data included in the reports below are academic, library to library comparisons of non-juvenile, English monographs, published 2000 – 2007. By analyzing libraries by type, it became clear where collection strength lay and areas where collaboration might be appropriate.

The data below provides guidance in determining acceptable levels of duplication throughout the consortium. There are certainly other variables to be taken into consideration in determining what an acceptable level of duplication is. However, this data suggests the appropriate divisions to begin investigating.

Tabular data below comes from divisions with the highest average percentage of overlap (any division with over 25% average overlap). Divisions with average overlap over 25% are as follows: History, Library Science, Music, Performing Arts, Political Science, and Sociology. Two other areas for consideration (rates just below 25%) may be Language and Literature; and Geography. The divisions with the lowest average percentage of overlap (any division with lower than 25% average overlap) are also included below and are as follows: Agriculture, Chemistry, Computer Science, and Engineering.

*Note: It is important to make note for the tables below:

- When reading across each row, the numbers indicate the percentage of the holdings of the library in column A that are held in the collections of each of the other libraries. For example, 43.15% of Eden-Webster's History collection is held by MU, but only 5.63% of MU's History collection is held by Eden-Webster.
- Lavender shaded cells indicate an overlap of at least 25%.
- Many shaded cells in a *column* indicate a comprehensive collection with strong holdings, including large portions of other libraries' holdings.
- Many shaded cells in a *row* indicates a collection, large portions of which are held by many others, probably a more concentrated collection of core titles.
- Boldface indicates that each collection holds at least 25% of the other collection's holdings.
- Aqua shaded cells reflect an average overlap of over 25% across all libraries in the table.

HISTORY																				
Overlap	(ELW)	(MVC)	(MOZ)	(MOL)	(MOU)	(MWS)	(MNW)	(MZ5)	(ZAD)	(XII)	(SEM)	(MOV)	(MKN)	(MCW)	(MUU)	(UMK)	(UMR)	(UMS)	(WTU)	AVG.
(ELW)	100.00%	3.56%	8.13%	1.15%	28.81%	5.72%	19.19%	13.95%	34.92%	42.91%	20.49%	2.31%	17.85%	18.04%	43.15%	37.42%	5.72%	32.28%	48.92%	25.50%
(MVC)	20.00%	100.00%	13.24%	3.51%	34.05%	9.46%	30.54%	17.30%	45.41%	49.19%	26.49%	5.68%	28.38%	26.22%	45.41%	42.16%	14.86%	38.65%	50.81%	31.65%
(MOZ)	12.79%	3.71%	100.00%	3.71%	31.04%	7.42%	22.26%	15.90%	36.41%	41.94%	21.65%	2.73%	19.98%	20.14%	44.44%	46.18%	11.96%	34.07%	49.89%	27.70%
(MOL)	6.78%	3.67%	13.84%	100.00%	16.95%	6.21%	36.44%	9.04%	16.95%	29.10%	14.97%	1.13%	26.27%	7.63%	73.73%	41.81%	20.90%	35.59%	72.03%	28.05%
(MOU)	9.86%	2.07%	6.75%	0.99%	100.00%	3.79%	14.83%	9.55%	25.42%	33.91%	16.66%	1.53%	14.45%	14.88%	45.41%	42.05%	4.21%	28.48%	53.28%	22.53%
(MWS)	16.06%	4.72%	13.23%	2.97%	31.04%	100.00%	21.86%	14.03%	34.41%	43.99%	24.83%	3.37%	22.00%	22.94%	43.18%	42.51%	9.18%	33.74%	47.50%	27.98%
(MNW)	13.83%	3.92%	10.19%	4.47%	31.24%	5.62%	100.00%	16.33%	40.50%	48.82%	23.30%	2.98%	24.83%	22.36%	49.31%	44.14%	11.27%	36.48%	52.53%	28.53%
(MZ5)	15.70%	3.46%	11.37%	1.73%	31.40%	5.63%	25.50%	100.00%	53.33%	51.00%	23.55%	2.44%	19.44%	23.82%	49.97%	47.21%	9.26%	39.47%	56.96%	30.07%
(ZAD)	13.21%	3.06%	8.75%	1.09%	28.10%	4.64%	21.26%	17.93%	100.00%	45.96%	21.64%	2.22%	17.02%	21.35%	48.73%	45.38%	6.04%	34.47%	53.86%	26.04%
(XII)	10.97%	2.24%	6.81%	1.27%	25.33%	4.01%	17.31%	11.58%	31.05%	100.00%	19.41%	1.61%	19.09%	16.46%	53.89%	45.52%	6.50%	34.64%	57.29%	24.47%
(SEM)	11.83%	2.72%	7.94%	1.47%	28.11%	5.11%	18.67%	12.08%	33.03%	43.86%	100.00%	1.97%	20.39%	24.06%	52.61%	46.92%	7.61%	35.06%	54.00%	26.71%
(MOV)	22.86%	10.00%	17.14%	1.90%	44.29%	11.90%	40.95%	21.43%	58.10%	62.38%	33.81%	100.00%	30.00%	32.38%	56.67%	52.38%	14.76%	48.57%	59.05%	37.82%
(MKN)	11.92%	3.37%	8.48%	2.99%	28.20%	5.24%	23.00%	11.53%	30.04%	49.89%	23.58%	2.02%	100.00%	20.82%	56.18%	46.29%	10.28%	36.78%	61.97%	28.03%
(MCW)	11.32%	2.93%	8.03%	0.81%	27.28%	5.13%	19.46%	13.28%	35.40%	40.40%	26.13%	2.05%	19.55%	100.00%	46.77%	42.31%	5.94%	30.51%	50.75%	25.69%
(MUU)	5.63%	1.05%	3.68%	1.64%	17.31%	2.01%	8.92%	5.79%	16.80%	27.51%	11.89%	0.75%	10.98%	9.73%	100.00%	37.27%	3.60%	25.31%	51.68%	17.98%
(UMK)	6.84%	1.37%	5.36%	1.30%	22.46%	2.77%	11.20%	7.67%	21.92%	32.56%	14.85%	0.97%	12.67%	12.33%	52.22%	100.00%	5.17%	30.60%	63.27%	21.34%
(UMR)	13.05%	6.03%	17.32%	8.11%	28.07%	7.46%	35.64%	18.75%	36.40%	58.00%	30.04%	3.40%	35.09%	21.60%	62.83%	64.47%	100.00%	57.68%	62.94%	35.10%
(UMS)	10.85%	2.31%	7.27%	2.04%	27.97%	4.04%	17.01%	11.78%	30.62%	45.54%	20.40%	1.65%	18.51%	16.34%	65.20%	56.26%	8.50%	100.00%	72.55%	27.31%
(WTU)	5.24%	0.97%	3.39%	1.31%	16.67%	1.81%	7.80%	5.42%	15.24%	24.00%	10.01%	0.64%	9.94%	8.66%	42.41%	37.06%	2.96%	23.12%	100.00%	16.67%
AVG.	16.78%	8.48%	14.26%	7.50%	31.49%	10.42%	25.89%	17.54%	36.63%	45.84%	25.46%	7.34%	24.55%	23.15%	54.32%	48.28%	13.62%	38.71%	58.91%	26.80%

LIBRARY SCIENCE																				
Overlap	(ELW)	(MVC)	(MOZ)	(MOL)	(MOU)	(MWS)	(MNW)	(MZ5)	(ZAD)	(XII)	(SEM)	(MOV)	(MKN)	(MCW)	(MUU)	(UMK)	(UMR)	(UMS)	(WTU)	AVG.
(ELW)	100.00%	4.80%	6.89%	11.48%	33.61%	8.56%	25.47%	9.60%	38.62%	42.59%	24.84%	3.34%	27.97%	38.83%	53.86%	49.48%	10.23%	35.70%	33.19%	29.42%
(MVC)	38.33%	100.00%	13.33%	20.00%	36.67%	10.00%	38.33%	18.33%	58.33%	50.00%	18.33%	5.00%	25.00%	51.67%	46.67%	51.67%	18.33%	41.67%	30.00%	35.35%
(MOZ)	16.42%	3.98%	100.00%	14.93%	28.36%	9.95%	30.85%	4.48%	25.37%	50.25%	21.89%	1.49%	32.34%	33.33%	64.18%	46.27%	21.89%	43.28%	48.76%	31.47%
(MOL)	15.49%	3.38%	8.45%	100.00%	30.99%	3.94%	18.87%	1.41%	20.84%	25.63%	18.31%	0.84%	18.59%	31.27%	47.89%	37.46%	13.24%	36.06%	30.14%	24.36%
(MOU)	17.75%	2.43%	6.28%	12.13%	100.00%	6.73%	15.88%	3.42%	25.25%	29.00%	15.66%	2.20%	16.87%	45.87%	45.87%	42.78%	7.61%	32.97%	37.49%	24.54%
(MWS)	31.30%	4.58%	15.27%	10.69%	46.56%	100.00%	37.40%	6.11%	30.53%	41.98%	32.82%	7.63%	35.88%	40.46%	54.96%	56.49%	17.56%	29.77%	42.75%	33.83%
(MNW)	24.70%	4.66%	12.55%	13.56%	29.15%	9.92%	100.00%	10.32%	37.65%	47.37%	24.90%	4.86%	28.74%	31.58%	56.07%	50.40%	12.15%	33.60%	35.63%	29.88%
(MZ5)	35.94%	8.59%	7.03%	3.91%	24.22%	6.25%	39.84%	100.00%	60.94%	57.03%	22.66%	6.25%	25.00%	39.06%	55.47%	49.22%	8.59%	29.69%	35.94%	32.40%
(ZAD)	26.24%	4.96%	7.23%	10.50%	32.48%	5.67%	26.38%	11.06%	100.00%	44.54%	22.69%	4.54%	22.98%	37.45%	45.53%	43.40%	9.65%	32.48%	32.91%	27.40%
(XII)	16.40%	2.41%	8.12%	7.32%	21.14%	4.42%	18.81%	5.87%	25.24%	100.00%	15.11%	2.17%	16.72%	21.30%	48.95%	38.50%	10.13%	24.84%	34.57%	22.21%
(SEM)	31.23%	2.89%	11.55%	17.06%	37.27%	11.29%	32.28%	7.61%	41.99%	49.34%	100.00%	4.46%	35.43%	42.78%	59.58%	54.86%	15.49%	41.21%	36.48%	33.31%
(MOV)	34.04%	6.38%	6.38%	6.38%	42.55%	21.28%	51.06%	17.02%	68.09%	57.45%	36.17%	100.00%	29.79%	36.17%	63.83%	55.32%	10.64%	29.79%	44.68%	37.74%
(MKN)	31.75%	3.55%	15.40%	15.64%	36.26%	11.14%	33.65%	7.58%	38.39%	49.29%	31.99%	3.32%	100.00%	38.86%	65.17%	54.03%	17.30%	45.26%	40.28%	33.62%
(MCW)	18.45%	3.08%	6.65%	11.01%	41.27%	5.26%	15.48%	4.96%	26.19%	26.29%	16.17%	1.69%	16.27%	100.00%	41.07%	42.06%	8.63%	32.54%	30.65%	23.56%
(MUU)	11.69%	1.27%	5.84%	7.70%	18.85%	3.26%	12.55%	3.22%	14.54%	27.59%	10.29%	1.36%	12.46%	18.76%	100.00%	32.26%	5.94%	19.12%	30.49%	17.75%
(UMK)	18.02%	2.36%	7.07%	10.11%	29.51%	5.63%	18.94%	4.79%	23.27%	36.43%	15.89%	1.98%	17.34%	32.24%	54.14%	100.00%	12.17%	37.41%	42.13%	24.71%
(UMR)	19.84%	4.45%	17.81%	19.03%	27.94%	9.31%	24.29%	4.45%	27.53%	51.01%	23.89%	2.02%	29.55%	35.22%	53.04%	64.78%	100.00%	58.30%	48.18%	32.67%
(UMS)	21.35%	3.12%	10.86%	15.98%	37.33%	4.87%	20.72%	4.74%	28.59%	38.58%	19.60%	1.75%	23.85%	40.95%	52.68%	61.42%	17.98%	100.00%	46.57%	29.00%
(WTU)	8.75%	0.99%	5.39%	5.89%	18.70%	3.08%	9.68%	2.53%	12.76%	23.65%	7.65%	1.16%	9.35%	17.00%	37.02%	30.47%	6.55%	20.52%	100.00%	16.90%
AVG.	27.25%	8.84%	14.32%	16.49%	35.41%	12.66%	30.03%	11.97%	37.06%	44.63%	25.20%	8.21%	27.59%	38.57%	55.05%	50.57%	17.06%	38.12%	41.10%	28.43%

MUSIC																				
Overlap	(ELW)	(MVC)	(MOZ)	(MOL)	(MOU)	(MWS)	(MNW)	(MZ5)	(ZAD)	(XII)	(SEM)	(MOV)	(MKN)	(MCW)	(MUU)	(UMK)	(UMR)	(UMS)	(WTU)	AVG.
(ELW)	100.00%	1.47%	1.89%	0.21%	20.84%	14.53%	22.74%	16.00%	29.47%	35.58%	33.47%	7.37%	24.84%	14.11%	49.26%	48.84%	3.16%	25.89%	62.95%	26.98%
(MVC)	11.11%	100.00%	1.59%	0.00%	6.35%	6.35%	4.76%	4.76%	9.52%	14.29%	14.29%	1.59%	6.35%	6.35%	17.46%	28.57%	0.00%	12.70%	23.81%	14.20%
(MOZ)	14.75%	1.64%	100.00%	0.00%	11.48%	21.31%	21.31%	3.28%	8.20%	13.11%	31.15%	3.28%	11.48%	11.48%	27.87%	24.59%	0.00%	11.48%	42.62%	18.90%
(MOL)	16.67%	0.00%	0.00%	100.00%	0.00%	0.00%	16.67%	33.33%	33.33%	50.00%	16.67%	16.67%	33.33%	0.00%	33.33%	50.00%	33.33%	33.33%	66.67%	28.07%
(MOU)	15.30%	0.62%	1.08%	0.00%	100.00%	8.19%	18.86%	13.14%	18.86%	24.88%	30.76%	2.32%	19.78%	8.50%	54.40%	57.65%	3.25%	28.75%	70.79%	25.11%
(MWS)	25.65%	1.49%	4.83%	0.00%	19.70%	100.00%	16.73%	14.13%	23.05%	27.51%	41.26%	3.35%	21.93%	14.87%	52.04%	44.24%	2.60%	26.02%	68.03%	26.71%
(MNW)	24.22%	0.67%	2.91%	0.22%	27.35%	10.09%	100.00%	23.99%	28.92%	36.55%	46.41%	5.61%	32.06%	16.14%	60.54%	57.62%	2.69%	35.20%	66.59%	30.41%
(MZ5)	21.53%	0.85%	0.57%	0.57%	24.08%	10.76%	30.31%	100.00%	49.01%	45.61%	45.33%	5.95%	34.84%	14.16%	58.64%	59.49%	5.10%	36.54%	73.65%	32.47%
(ZAD)	19.55%	0.84%	0.70%	0.28%	17.04%	8.66%	18.02%	24.16%	100.00%	40.64%	36.31%	6.15%	26.40%	13.55%	49.30%	53.35%	4.05%	23.74%	61.59%	26.54%
(XII)	20.19%	1.08%	0.96%	0.36%	19.24%	8.84%	19.47%	19.24%	34.77%	100.00%	34.65%	4.78%	26.28%	9.32%	56.75%	56.75%	3.70%	28.91%	72.52%	27.25%
(SEM)	15.81%	0.89%	1.89%	0.10%	19.78%	11.03%	20.58%	15.90%	25.84%	28.83%	100.00%	3.98%	27.04%	12.72%	61.93%	60.24%	3.08%	30.62%	77.34%	27.24%
(MOV)	36.08%	1.03%	2.06%	1.03%	15.46%	9.28%	25.77%	21.65%	45.36%	41.24%	41.24%	100.00%	35.05%	13.40%	57.73%	59.79%	7.22%	36.08%	75.26%	32.88%
(MKN)	19.25%	0.65%	1.14%	0.33%	20.88%	9.62%	23.33%	20.07%	30.83%	35.89%	44.37%	5.55%	100.00%	12.56%	58.40%	58.24%	4.89%	30.83%	75.86%	29.09%
(MCW)	23.18%	1.38%	2.42%	0.00%	19.03%	13.84%	24.91%	17.30%	33.56%	26.99%	44.29%	4.50%	26.64%	100.00%	47.06%	46.37%	4.15%	25.95%	56.06%	27.24%
(MUU)	10.79%	0.51%	0.78%	0.09%	16.24%	6.46%	12.45%	9.55%	16.28%	21.91%	28.74%	2.58%	16.51%	6.27%	100.00%	52.35%	1.98%	23.94%	72.79%	21.06%
(UMK)	10.82%	0.84%	0.70%	0.14%	17.40%	5.55%	11.99%	9.79%	17.82%	22.15%	28.26%	2.71%	16.65%	6.25%	52.94%	100.00%	2.29%	25.47%	77.71%	21.55%
(UMR)	20.00%	0.00%	0.00%	2.67%	28.00%	9.33%	16.00%	24.00%	38.67%	41.33%	41.33%	9.33%	40.00%	16.00%	57.33%	65.33%	100.00%	30.67%	72.00%	32.21%
(UMS)	15.89%	1.03%	0.90%	0.26%	24.03%	9.04%	20.28%	16.67%	21.96%	31.27%	39.79%	4.52%	24.42%	9.69%	67.05%	70.54%	2.97%	100.00%	83.85%	28.64%
(WTU)	6.76%	0.34%	0.59%	0.09%	10.36%	4.14%	6.72%	5.88%	9.98%	13.73%	17.60%	1.65%	10.52%	3.67%	35.70%	37.69%	1.22%	14.68%	100.00%	14.81%
AVG.	22.50%	6.07%	6.58%	5.60%	21.96%	14.05%	22.68%	20.68%	30.29%	34.29%	37.68%	10.10%	28.11%	15.21%	52.51%	54.30%	9.77%	30.57%	68.43%	25.86%

PERFORMING ARTS																				
Overlap	(ELW)	(MVC)	(MOZ)	(MOL)	(MOU)	(MWS)	(MNW)	(MZ5)	(ZAD)	(XII)	(SEM)	(MOV)	(MKN)	(MCW)	(MUU)	(UMK)	(UMR)	(UMS)	(WTU)	AVG.
(ELW)	100.00%	1.03%	1.49%	0.00%	23.54%	3.33%	12.86%	13.43%	30.77%	30.20%	15.50%	10.45%	17.45%	26.87%	54.42%	44.78%	4.13%	12.86%	69.35%	24.87%
(MVC)	33.33%	100.00%	0.00%	0.00%	18.52%	0.00%	14.81%	7.41%	33.33%	29.63%	11.11%	14.81%	14.81%	14.81%	25.93%	18.52%	7.41%	14.81%	40.74%	21.05%
(MOZ)	26.00%	0.00%	100.00%	0.00%	26.00%	6.00%	8.00%	12.00%	30.00%	22.00%	14.00%	4.00%	24.00%	20.00%	54.00%	36.00%	4.00%	8.00%	58.00%	23.79%
(MOL)	0.00%	0.00%	0.00%	100.00%	0.00%	0.00%	0.00%	0.00%	0.00%	66.67%	0.00%	0.00%	0.00%	0.00%	66.67%	66.67%	66.67%	66.67%	66.67%	26.32%
(MOU)	22.31%	0.54%	1.41%	0.00%	100.00%	1.63%	11.75%	9.58%	21.76%	25.24%	15.02%	8.92%	11.10%	20.78%	52.01%	48.97%	1.96%	12.19%	69.86%	22.90%
(MWS)	28.16%	0.00%	2.91%	0.00%	14.56%	100.00%	12.62%	17.48%	27.18%	27.18%	22.33%	5.83%	15.53%	26.21%	43.69%	46.60%	3.88%	20.39%	56.31%	24.78%
(MNW)	29.09%	1.04%	1.04%	0.00%	28.05%	3.38%	100.00%	25.19%	42.08%	41.30%	27.53%	12.99%	22.60%	37.92%	52.99%	47.79%	5.19%	14.81%	63.64%	29.30%
(MZ5)	31.88%	0.54%	1.63%	0.00%	23.98%	4.90%	26.43%	100.00%	54.22%	41.42%	20.44%	11.17%	29.70%	37.60%	55.86%	53.41%	5.45%	16.89%	68.39%	30.73%
(ZAD)	26.77%	0.90%	1.50%	0.00%	19.98%	2.80%	16.18%	19.88%	100.00%	33.37%	18.98%	9.49%	22.28%	30.57%	55.04%	48.35%	4.70%	13.39%	67.53%	25.88%
(XII)	26.59%	0.81%	1.11%	0.20%	23.46%	2.83%	16.08%	15.37%	33.77%	100.00%	17.29%	6.67%	21.74%	24.87%	60.26%	52.38%	3.94%	13.75%	71.18%	25.91%
(SEM)	23.81%	0.53%	1.23%	0.00%	24.34%	4.06%	18.69%	13.23%	33.51%	30.16%	100.00%	9.70%	19.05%	29.81%	53.97%	44.97%	2.82%	8.99%	65.08%	25.47%
(MOV)	31.60%	1.39%	0.69%	0.00%	28.47%	2.08%	17.36%	14.24%	32.99%	22.92%	19.10%	100.00%	13.54%	25.00%	46.18%	41.32%	3.47%	11.46%	64.93%	25.09%
(MKN)	28.41%	0.75%	2.24%	0.00%	19.07%	2.99%	16.26%	20.37%	41.68%	40.19%	20.19%	7.29%	100.00%	32.34%	61.68%	49.91%	5.98%	9.35%	77.94%	28.24%
(MCW)	30.31%	0.52%	1.30%	0.00%	24.74%	3.50%	18.91%	17.88%	39.64%	31.87%	21.89%	9.33%	22.41%	100.00%	57.25%	47.67%	3.89%	15.16%	66.71%	27.00%
(MUU)	16.75%	0.25%	0.95%	0.07%	16.90%	1.59%	7.21%	7.25%	19.48%	21.07%	10.82%	4.70%	11.66%	15.62%	100.00%	43.73%	1.80%	8.24%	71.12%	18.91%
(UMK)	19.59%	0.25%	0.90%	0.10%	22.60%	2.41%	9.24%	9.84%	24.31%	26.02%	12.81%	5.98%	13.41%	18.48%	62.13%	100.00%	2.61%	11.10%	80.81%	22.24%
(UMR)	35.29%	1.96%	1.96%	1.96%	17.65%	3.92%	19.61%	19.61%	46.08%	38.24%	15.69%	9.80%	31.37%	29.41%	50.00%	50.98%	100.00%	18.63%	73.53%	29.77%
(UMS)	31.37%	1.12%	1.12%	0.56%	31.37%	5.88%	15.97%	17.37%	37.53%	38.10%	14.29%	9.24%	14.01%	32.77%	65.27%	61.90%	5.32%	100.00%	76.75%	29.47%
(WTU)	15.78%	0.29%	0.76%	0.05%	16.77%	1.52%	6.40%	6.56%	17.66%	18.39%	9.64%	4.88%	10.89%	13.45%	52.56%	42.03%	1.96%	7.16%	100.00%	17.20%
AVG.	29.32%	5.89%	6.43%	5.42%	25.26%	8.04%	18.34%	18.25%	35.05%	36.00%	20.35%	12.91%	21.87%	28.24%	56.31%	49.79%	12.38%	20.20%	68.87%	25.21%

POLI.SCI.																				
Overlap	(ELW)	(MVC)	(MOZ)	(MOL)	(MOU)	(MWS)	(MNW)	(MZ5)	(ZAD)	(XII)	(SEM)	(MOV)	(MKN)	(MCW)	(MUU)	(UMK)	(UMR)	(UMS)	(WTU)	
(ELW)	100.00%	2.85%	6.64%	2.47%	22.96%	5.31%	14.61%	7.78%	19.35%	37.00%	16.70%	2.47%	30.74%	10.06%	50.28%	37.19%	3.79%	30.74%	45.16%	23.48%
(MVC)	23.08%	100.00%	10.77%	4.62%	18.46%	6.15%	29.23%	9.23%	38.46%	50.77%	32.31%	3.08%	30.77%	23.08%	46.15%	46.15%	4.62%	40.00%	50.77%	29.88%
(MOZ)	14.40%	2.88%	100.00%	6.17%	24.28%	7.82%	22.22%	11.93%	33.33%	39.92%	14.81%	2.47%	20.58%	20.99%	48.15%	47.33%	8.23%	33.33%	43.62%	26.45%
(MOL)	3.83%	0.88%	4.42%	100.00%	4.42%	1.77%	46.90%	2.95%	4.13%	31.86%	3.83%	0.59%	14.75%	3.24%	92.33%	55.16%	25.66%	43.07%	82.30%	27.48%
(MOU)	6.64%	0.66%	3.24%	0.82%	100.00%	3.46%	9.77%	5.21%	16.08%	31.83%	14.98%	1.10%	13.78%	7.08%	52.74%	41.22%	2.52%	28.76%	53.24%	20.69%
(MWS)	11.97%	1.71%	8.12%	2.56%	26.92%	100.00%	18.38%	12.39%	29.06%	37.18%	17.95%	1.71%	20.94%	14.10%	47.01%	48.72%	2.14%	35.04%	48.29%	25.48%
(MNW)	9.87%	2.44%	6.92%	20.38%	22.82%	5.51%	100.00%	11.79%	28.72%	46.67%	20.13%	2.44%	27.05%	12.82%	68.85%	56.28%	13.46%	41.28%	67.95%	29.76%
(MZ5)	11.55%	1.69%	8.17%	2.82%	26.76%	8.17%	25.92%	100.00%	47.89%	50.42%	25.07%	1.97%	24.51%	15.77%	54.65%	51.27%	5.35%	41.13%	51.27%	29.18%
(ZAD)	9.87%	2.42%	7.84%	1.36%	28.36%	6.58%	21.68%	16.46%	100.00%	49.66%	23.81%	2.03%	19.17%	15.88%	52.57%	52.08%	4.94%	36.11%	52.47%	26.49%
(XII)	7.98%	1.35%	3.97%	4.42%	23.72%	3.56%	14.89%	7.32%	20.98%	100.00%	19.51%	1.39%	18.73%	8.92%	62.13%	53.29%	10.39%	45.81%	60.78%	24.69%
(SEM)	8.84%	2.11%	3.62%	1.31%	27.44%	4.22%	15.78%	8.94%	24.72%	47.94%	100.00%	1.61%	22.41%	13.07%	63.12%	53.57%	5.63%	43.32%	62.31%	26.84%
(MOV)	21.67%	3.33%	10.00%	3.33%	33.33%	6.67%	31.67%	11.67%	35.00%	56.67%	26.67%	100.00%	18.33%	11.67%	60.00%	51.67%	5.00%	40.00%	51.67%	30.44%
(MKN)	14.77%	1.82%	4.56%	4.56%	22.88%	4.47%	19.23%	7.93%	18.05%	41.75%	20.33%	1.00%	100.00%	11.67%	57.79%	45.94%	7.02%	35.10%	60.62%	25.24%
(MCW)	10.17%	2.88%	9.79%	2.11%	24.76%	6.33%	19.19%	10.75%	31.48%	41.84%	24.95%	1.34%	24.57%	100.00%	43.95%	43.57%	3.84%	27.06%	45.87%	24.97%
(MUU)	4.50%	0.51%	1.99%	5.32%	16.32%	1.87%	9.12%	3.29%	9.22%	25.80%	10.67%	0.61%	10.77%	3.89%	100.00%	40.12%	5.10%	35.78%	57.08%	18.00%
(UMK)	5.09%	0.78%	2.99%	4.86%	19.51%	2.96%	11.40%	4.73%	13.97%	33.84%	13.84%	0.81%	13.09%	5.90%	61.35%	100.00%	6.60%	41.17%	68.13%	21.63%
(UMR)	5.19%	0.78%	5.19%	22.60%	11.95%	1.30%	27.27%	4.93%	13.25%	65.97%	14.55%	0.78%	20.00%	5.19%	77.92%	65.97%	100.00%	73.51%	76.10%	31.18%
(UMS)	5.94%	0.95%	2.97%	5.36%	19.23%	3.01%	11.82%	5.36%	13.69%	41.10%	15.82%	0.88%	14.13%	5.17%	77.32%	58.17%	10.39%	100.00%	75.16%	24.55%
(WTU)	3.70%	0.51%	1.65%	4.34%	15.09%	1.76%	8.24%	2.83%	8.43%	23.11%	9.64%	0.48%	10.34%	3.72%	52.27%	40.79%	4.56%	31.85%	100.00%	17.02%
AVG.	14.69%	6.87%	10.68%	10.50%	25.75%	9.52%	24.07%	12.92%	26.62%	44.91%	22.40%	6.67%	23.93%	15.38%	61.50%	52.03%	12.07%	42.27%	60.67%	25.44%

SOCIOLOGY																				
Overlap	(ELW)	(MVC)	(MOZ)	(MOL)	(MOU)	(MWS)	(MNW)	(MZ5)	(ZAD)	(XII)	(SEM)	(MOV)	(MKN)	(MCW)	(MUU)	(UMK)	(UMR)	(UMS)	(WTU)	AVG.
(ELW)	100.00%	3.54%	5.70%	1.57%	22.35%	6.23%	18.68%	14.88%	30.01%	43.91%	18.35%	3.15%	16.84%	22.67%	51.44%	37.94%	2.88%	34.08%	40.50%	24.99%
(MVC)	21.43%	100.00%	16.67%	3.97%	24.60%	12.70%	31.75%	21.43%	48.41%	48.81%	26.19%	3.17%	26.19%	28.97%	46.43%	41.27%	5.16%	37.30%	40.87%	30.81%
(MOZ)	12.00%	5.79%	100.00%	4.00%	20.55%	8.55%	23.59%	14.34%	35.17%	41.24%	19.17%	1.66%	22.07%	29.24%	35.86%	39.72%	4.97%	31.72%	30.90%	25.29%
(MOL)	4.40%	1.83%	5.32%	100.00%	5.69%	2.75%	42.57%	4.04%	10.46%	42.39%	10.28%	0.73%	19.45%	7.16%	78.53%	48.44%	15.96%	49.17%	60.18%	26.81%
(MOU)	11.66%	2.12%	5.09%	1.06%	100.00%	5.68%	13.44%	10.39%	24.21%	38.43%	14.94%	2.09%	11.69%	18.39%	51.18%	44.65%	2.63%	35.93%	45.71%	23.12%
(MWS)	13.00%	4.38%	8.48%	2.05%	22.71%	100.00%	17.24%	15.32%	29.96%	46.79%	22.98%	2.60%	14.09%	21.89%	45.83%	42.27%	3.69%	37.76%	41.04%	25.90%
(MNW)	14.23%	3.99%	8.54%	11.58%	19.62%	6.29%	100.00%	18.07%	38.49%	53.12%	18.97%	3.15%	24.46%	22.17%	61.76%	51.32%	7.99%	47.33%	49.78%	29.52%
(MZ5)	18.32%	4.36%	8.39%	1.78%	24.54%	9.04%	29.22%	100.00%	57.06%	54.00%	22.28%	4.04%	18.81%	28.73%	51.74%	53.27%	4.04%	46.81%	47.54%	30.74%
(ZAD)	14.14%	3.77%	7.88%	1.76%	21.87%	6.76%	23.81%	21.83%	100.00%	45.00%	20.07%	2.96%	15.97%	27.18%	46.51%	45.18%	2.87%	35.76%	40.58%	25.47%
(XII)	12.51%	2.30%	5.58%	4.31%	20.99%	6.39%	19.87%	12.49%	27.20%	100.00%	16.26%	2.48%	15.35%	18.63%	59.65%	48.39%	4.69%	44.31%	48.92%	24.75%
(SEM)	15.33%	3.61%	7.61%	3.07%	23.92%	9.20%	20.80%	15.11%	35.58%	47.67%	100.00%	3.12%	18.99%	26.93%	52.55%	49.92%	4.38%	38.42%	46.96%	27.54%
(MOV)	23.08%	3.85%	5.77%	1.92%	29.33%	9.13%	30.29%	24.04%	46.15%	63.94%	27.40%	100.00%	25.48%	28.37%	69.71%	52.40%	3.85%	51.44%	59.62%	34.51%
(MKN)	15.43%	3.96%	9.60%	6.36%	20.53%	6.18%	29.41%	13.99%	31.03%	49.34%	20.83%	3.18%	100.00%	24.73%	57.44%	48.14%	7.02%	42.26%	48.86%	28.33%
(MCW)	13.22%	2.79%	8.10%	1.49%	20.56%	6.11%	16.97%	13.60%	33.63%	38.14%	18.80%	2.25%	15.74%	100.00%	46.04%	47.69%	3.02%	33.40%	40.01%	24.29%
(MUU)	8.12%	1.21%	2.69%	4.43%	15.48%	3.46%	12.79%	6.63%	15.57%	33.04%	9.93%	1.50%	9.90%	12.46%	100.00%	41.77%	3.08%	36.48%	45.68%	19.17%
(UMK)	8.34%	1.50%	4.15%	3.80%	18.81%	4.45%	14.81%	9.51%	21.07%	37.34%	13.14%	1.57%	11.55%	17.98%	58.20%	100.00%	3.66%	46.66%	56.86%	22.81%
(UMR)	10.63%	3.14%	8.70%	21.01%	18.60%	6.52%	38.65%	12.08%	22.46%	60.63%	19.32%	1.93%	28.26%	19.08%	71.98%	61.35%	100.00%	62.80%	59.66%	32.99%
(UMS)	10.01%	1.81%	4.43%	5.16%	20.23%	5.31%	18.24%	11.16%	22.29%	45.67%	13.51%	2.06%	13.55%	16.82%	67.90%	62.34%	5.00%	100.00%	59.37%	25.52%
(WTU)	7.25%	1.21%	2.63%	3.85%	15.68%	3.52%	11.69%	6.91%	15.41%	30.73%	10.06%	1.45%	9.55%	12.28%	51.82%	46.29%	2.90%	36.18%	100.00%	19.44%
AVG.	17.53%	8.17%	11.86%	9.64%	24.53%	11.49%	27.04%	18.20%	33.90%	48.43%	22.24%	7.53%	22.00%	25.46%	58.14%	50.65%	9.88%	44.62%	50.69%	26.42%

LANGUAGE AND LIT																				
Overlap	(ELW)	(MVC)	(MOZ)	(MOL)	(MOU)	(MWS)	(MNW)	(MZ5)	(ZAD)	(XII)	(SEM)	(MOV)	(MKN)	(MCW)	(MUU)	(UMK)	(UMR)	(UMS)	(WTU)	AVG.
(ELW)	100.00%	4.24%	2.77%	0.15%	24.97%	4.09%	23.95%	8.01%	25.24%	34.95%	19.06%	6.54%	21.90%	28.93%	35.84%	16.84%	4.09%	23.20%	32.73%	21.97%
(MVC)	24.01%	100.00%	7.91%	0.56%	33.47%	7.77%	43.50%	14.27%	32.63%	44.92%	25.71%	11.72%	30.93%	33.33%	34.18%	14.97%	7.49%	30.08%	31.92%	27.86%
(MOZ)	17.00%	8.58%	100.00%	0.31%	41.81%	12.10%	28.33%	8.88%	22.21%	32.47%	23.43%	5.97%	28.18%	32.16%	30.02%	17.46%	5.67%	21.44%	29.40%	24.50%
(MOL)	5.61%	3.74%	1.87%	100.00%	13.08%	4.67%	11.21%	7.48%	21.50%	26.17%	10.28%	3.74%	10.28%	14.02%	33.64%	15.89%	11.21%	22.43%	25.23%	18.00%
(MOU)	10.52%	2.49%	2.87%	0.15%	100.00%	2.54%	17.19%	4.66%	14.32%	29.93%	14.86%	3.25%	16.32%	20.85%	35.73%	19.98%	2.90%	21.19%	40.71%	18.97%
(MWS)	22.13%	7.42%	10.66%	0.67%	32.66%	100.00%	34.01%	11.20%	26.72%	47.37%	33.06%	10.53%	34.14%	32.12%	41.16%	29.69%	6.34%	29.42%	41.84%	29.01%
(MNW)	15.09%	4.84%	2.91%	0.19%	25.72%	3.96%	100.00%	7.75%	26.56%	32.17%	21.76%	4.42%	24.48%	32.22%	28.85%	15.38%	3.79%	20.28%	29.62%	21.05%
(MZ5)	20.82%	6.55%	3.76%	0.52%	28.73%	5.38%	31.97%	100.00%	42.15%	55.51%	21.47%	8.56%	38.78%	28.02%	51.75%	33.14%	8.17%	45.78%	47.73%	30.46%
(ZAD)	16.28%	3.72%	2.33%	0.37%	21.92%	3.18%	27.17%	10.46%	100.00%	37.96%	27.76%	4.12%	29.05%	32.56%	40.36%	16.99%	4.33%	24.63%	37.57%	23.20%
(XII)	10.57%	2.40%	1.60%	0.21%	21.48%	2.65%	15.43%	6.46%	17.80%	100.00%	13.87%	3.02%	19.38%	15.12%	47.50%	23.90%	3.43%	28.56%	51.55%	20.26%
(SEM)	14.90%	3.55%	2.98%	0.21%	27.58%	4.78%	26.99%	6.46%	33.66%	35.87%	100.00%	4.74%	32.24%	39.05%	47.24%	23.33%	5.03%	26.92%	41.54%	25.11%
(MOV)	29.21%	9.25%	4.35%	0.45%	34.45%	8.70%	31.33%	14.72%	28.54%	44.59%	27.09%	100.00%	28.54%	30.32%	45.15%	21.63%	5.57%	40.69%	38.13%	28.56%
(MKN)	15.77%	3.93%	3.30%	0.20%	27.89%	4.54%	27.96%	10.74%	32.44%	46.16%	29.69%	4.60%	100.00%	33.49%	49.17%	27.53%	6.00%	34.07%	48.92%	26.65%
(MCW)	13.23%	2.69%	2.39%	0.17%	22.62%	2.71%	23.36%	4.93%	23.08%	22.86%	22.83%	3.10%	21.27%	100.00%	27.65%	11.43%	2.15%	15.79%	23.52%	18.20%
(MUU)	6.25%	1.05%	0.85%	0.16%	14.79%	1.33%	7.98%	3.47%	10.91%	27.39%	10.53%	1.76%	11.91%	10.55%	100.00%	22.43%	1.90%	22.55%	52.16%	16.21%
(UMK)	7.35%	1.15%	1.24%	0.18%	20.69%	2.39%	10.65%	5.56%	11.49%	34.49%	13.02%	2.11%	16.69%	10.91%	56.12%	100.00%	3.30%	39.86%	70.61%	21.46%
(UMR)	19.00%	6.14%	4.29%	1.39%	31.98%	5.45%	27.93%	14.60%	31.17%	52.72%	29.90%	5.79%	38.70%	21.90%	50.52%	35.11%	100.00%	44.50%	47.39%	29.92%
(UMS)	11.95%	2.74%	1.80%	0.31%	25.91%	2.80%	16.58%	9.07%	19.68%	48.68%	17.74%	4.69%	24.38%	17.80%	66.65%	47.07%	4.94%	100.00%	67.54%	25.81%
(WTU)	3.41%	0.59%	0.50%	0.07%	10.08%	0.81%	4.90%	1.92%	6.08%	17.79%	5.54%	0.89%	7.09%	5.37%	31.20%	16.88%	1.06%	13.67%	100.00%	11.99%
AVG.	19.11%	9.21%	8.34%	5.59%	29.46%	9.47%	26.87%	13.19%	27.69%	40.63%	24.61%	9.98%	28.12%	28.35%	44.88%	26.82%	9.86%	31.85%	45.16%	23.12%

GEOGRAPHY																				
Overlap	(ELW)	(MVC)	(MOZ)	(MOL)	(MOU)	(MWS)	(MNW)	(MZ5)	(ZAD)	(XII)	(SEM)	(MOV)	(MKN)	(MCW)	(MUU)	(UMK)	(UMR)	(UMS)	(WTU)	AVG.
(ELW)	100.00%	1.47%	7.35%	0.00%	19.85%	3.68%	25.00%	5.88%	30.88%	35.29%	22.06%	3.68%	18.38%	15.44%	38.24%	22.06%	7.35%	19.12%	34.56%	21.59%
(MVC)	9.52%	100.00%	9.52%	0.00%	33.33%	9.52%	38.10%	14.29%	33.33%	38.10%	28.57%	9.52%	23.81%	9.52%	19.05%	38.10%	14.29%	19.05%	38.10%	25.56%
(MOZ)	7.63%	1.53%	100.00%	2.29%	25.19%	2.29%	22.14%	6.11%	26.72%	31.30%	19.08%	1.53%	16.03%	12.98%	42.75%	29.01%	12.98%	19.85%	41.98%	22.18%
(MOL)	0.00%	0.00%	6.00%	100.00%	14.00%	4.00%	48.00%	4.00%	12.00%	38.00%	8.00%	0.00%	26.00%	10.00%	86.00%	42.00%	32.00%	50.00%	72.00%	29.05%
(MOU)	2.68%	0.70%	3.28%	0.70%	100.00%	1.59%	14.31%	3.48%	11.53%	31.51%	19.98%	0.70%	8.15%	16.00%	45.33%	13.82%	17.89%	8.05%	43.74%	18.08%
(MWS)	8.20%	3.28%	4.92%	3.28%	26.23%	100.00%	32.79%	9.84%	24.59%	31.15%	19.67%	1.64%	19.67%	18.03%	42.62%	27.87%	16.39%	14.75%	44.26%	23.64%
(MNW)	2.21%	0.52%	1.89%	1.56%	9.37%	1.30%	100.00%	2.80%	7.62%	49.28%	8.20%	0.72%	4.82%	5.79%	76.43%	44.27%	51.76%	49.80%	72.85%	25.85%
(MZ5)	5.56%	2.08%	5.56%	1.39%	24.31%	4.17%	29.86%	100.00%	56.94%	45.14%	33.33%	2.78%	23.61%	13.19%	54.86%	27.78%	9.72%	14.58%	46.53%	26.39%
(ZAD)	8.17%	1.36%	6.81%	1.17%	22.57%	2.92%	22.76%	15.95%	100.00%	39.30%	24.32%	1.17%	16.73%	13.62%	43.97%	25.68%	9.92%	13.81%	45.33%	21.87%
(XII)	2.63%	0.44%	2.24%	1.04%	17.34%	1.04%	41.41%	3.56%	11.05%	100.00%	12.96%	0.49%	7.88%	8.59%	76.31%	55.53%	55.42%	51.75%	69.04%	27.30%
(SEM)	5.29%	1.06%	4.41%	0.71%	35.45%	2.12%	22.22%	8.47%	22.05%	41.80%	100.00%	1.59%	11.82%	20.11%	50.97%	18.17%	21.16%	10.23%	43.21%	22.15%
(MOV)	25.00%	10.00%	10.00%	0.00%	35.00%	5.00%	55.00%	20.00%	30.00%	45.00%	45.00%	100.00%	35.00%	30.00%	20.00%	30.00%	5.00%	25.00%	35.00%	29.47%
(MKN)	9.12%	1.82%	7.66%	4.74%	29.93%	4.38%	27.01%	12.41%	31.39%	52.55%	24.45%	2.55%	100.00%	19.34%	52.92%	25.91%	24.09%	19.34%	56.20%	26.62%
(MCW)	3.66%	0.35%	2.96%	0.87%	28.05%	1.92%	15.51%	3.31%	12.20%	27.35%	19.86%	1.05%	9.23%	100.00%	32.23%	12.54%	18.29%	4.88%	19.51%	16.51%
(MUU)	1.33%	0.10%	1.44%	1.10%	11.70%	0.67%	30.13%	2.03%	5.80%	35.80%	7.42%	0.10%	3.72%	4.75%	100.00%	31.00%	33.74%	30.51%	58.97%	18.96%
(UMK)	1.92%	0.51%	2.43%	1.34%	8.89%	1.09%	43.48%	2.56%	8.44%	64.90%	6.59%	0.38%	4.54%	4.60%	77.24%	100.00%	57.03%	64.32%	76.02%	27.70%
(UMR)	0.65%	0.19%	1.10%	1.04%	11.68%	0.65%	51.59%	0.91%	3.31%	65.74%	7.79%	0.06%	4.28%	6.81%	85.33%	57.88%	100.00%	65.48%	77.29%	28.51%
(UMS)	1.95%	0.30%	1.95%	1.88%	6.08%	0.68%	57.39%	1.58%	5.33%	70.97%	4.35%	0.37%	3.98%	2.10%	89.20%	75.47%	75.69%	100.00%	85.15%	30.76%
(WTU)	1.39%	0.24%	1.63%	1.06%	13.01%	0.80%	33.09%	1.98%	6.89%	37.32%	7.24%	0.21%	4.55%	3.31%	67.95%	35.16%	35.22%	33.56%	100.00%	20.24%
AVG.	10.36%	6.63%	9.53%	6.54%	24.84%	7.78%	37.36%	11.53%	23.16%	46.34%	22.05%	6.77%	18.01%	16.54%	57.97%	37.49%	31.47%	32.32%	55.78%	24.34%

Agriculture																				
Overlap	(ELW)	(MVC)	(MOZ)	(MOL)	(MOU)	(MWS)	(MNW)	(MZ5)	(ZAD)	(XII)	(SEM)	(MOV)	(MKN)	(MCW)	(MUU)	(UMK)	(UMR)	(UMS)	(WTU)	AVG.
(ELW)	100.00%	3.28%	8.20%	1.64%	16.39%	1.64%	13.11%	4.92%	27.87%	14.75%	21.31%	0.00%	9.84%	16.39%	34.43%	9.84%	3.28%	9.84%	16.39%	16.48%
(MVC)	11.76%	100.00%	11.76%	11.76%	17.65%	5.88%	17.65%	5.88%	11.76%	11.76%	17.65%	0.00%	11.76%	11.76%	29.41%	11.76%	0.00%	11.76%	29.41%	17.34%
(MOZ)	5.43%	2.17%	100.00%	3.26%	19.57%	1.09%	34.78%	4.35%	13.04%	16.30%	18.48%	1.09%	10.87%	9.78%	44.57%	16.30%	7.61%	29.35%	21.74%	18.94%
(MOL)	1.37%	2.74%	4.11%	100.00%	6.85%	4.11%	53.42%	1.37%	5.48%	26.03%	8.22%	0.00%	34.25%	2.74%	93.15%	30.14%	23.29%	47.95%	42.47%	25.67%
(MOU)	1.35%	0.40%	2.42%	0.67%	100.00%	1.21%	11.57%	1.88%	10.63%	7.27%	11.57%	0.00%	4.85%	8.75%	29.48%	4.44%	2.02%	5.79%	11.17%	11.34%
(MWS)	3.57%	3.57%	3.57%	10.71%	32.14%	100.00%	25.00%	0.00%	28.57%	17.86%	14.29%	0.00%	21.43%	17.86%	50.00%	10.71%	0.00%	17.86%	14.29%	19.55%
(MNW)	1.46%	0.55%	5.85%	7.13%	15.72%	1.28%	100.00%	3.29%	12.98%	11.88%	15.72%	0.55%	12.25%	9.87%	47.90%	14.08%	7.31%	20.48%	17.18%	16.08%
(MZ5)	6.25%	2.08%	8.33%	2.08%	29.17%	0.00%	37.50%	100.00%	62.50%	41.67%	20.83%	2.08%	18.75%	25.00%	50.00%	12.50%	12.50%	25.00%	31.25%	25.66%
(ZAD)	3.84%	0.45%	2.71%	0.90%	17.83%	1.81%	16.03%	6.77%	100.00%	16.25%	19.19%	0.23%	9.48%	11.29%	32.96%	6.77%	3.16%	8.58%	17.83%	14.53%
(XII)	3.57%	0.79%	5.95%	7.54%	21.43%	1.98%	25.79%	7.94%	28.57%	100.00%	18.25%	0.79%	16.67%	11.90%	51.98%	23.02%	18.25%	34.52%	38.89%	21.99%
(SEM)	2.82%	0.65%	3.69%	1.30%	18.65%	0.87%	18.65%	2.17%	18.44%	9.98%	100.00%	0.43%	9.11%	8.68%	37.09%	6.94%	3.47%	9.11%	12.15%	13.91%
(MOV)	0.00%	0.00%	12.50%	0.00%	0.00%	0.00%	37.50%	12.50%	12.50%	25.00%	25.00%	100.00%	12.50%	37.50%	12.50%	0.00%	0.00%	25.00%	12.50%	17.11%
(MKN)	3.51%	1.17%	5.85%	14.62%	21.05%	3.51%	39.18%	5.26%	24.56%	24.56%	24.56%	0.58%	100.00%	11.70%	54.97%	19.30%	14.62%	20.47%	30.99%	22.13%
(MCW)	3.00%	0.60%	2.70%	0.60%	19.52%	1.50%	16.22%	3.60%	15.01%	9.01%	12.01%	0.90%	6.01%	100.00%	25.53%	4.80%	1.80%	4.50%	11.11%	12.55%
(MUU)	1.03%	0.24%	2.00%	3.32%	10.69%	0.68%	12.79%	1.17%	7.13%	6.40%	8.35%	0.05%	4.59%	4.15%	100.00%	14.75%	11.08%	15.14%	24.12%	11.98%
(UMK)	1.36%	0.45%	3.41%	5.00%	7.50%	0.68%	17.50%	1.36%	6.82%	13.18%	7.27%	0.00%	7.50%	3.64%	68.64%	100.00%	36.59%	38.41%	54.32%	19.66%
(UMR)	0.79%	0.00%	2.76%	6.69%	5.91%	0.00%	15.75%	2.36%	5.51%	18.11%	6.30%	0.00%	9.84%	2.36%	89.37%	63.39%	100.00%	36.22%	66.54%	22.73%
(UMS)	1.39%	0.46%	6.26%	8.12%	9.98%	1.16%	25.99%	2.78%	8.82%	20.19%	9.74%	0.46%	8.12%	3.48%	71.93%	39.21%	21.35%	100.00%	33.41%	19.62%
(WTU)	1.14%	0.57%	2.28%	3.53%	9.45%	0.46%	10.71%	1.71%	9.00%	11.16%	6.38%	0.11%	6.04%	4.21%	56.26%	27.22%	19.25%	16.40%	100.00%	15.05%
AVG.	8.09%	6.32%	10.23%	9.94%	19.97%	6.73%	27.85%	8.91%	21.54%	21.12%	19.22%	5.65%	16.52%	15.85%	51.59%	21.85%	15.03%	25.07%	30.83%	18.02%

CHEMISTRY																				
Overlap	(ELW)	(MVC)	(MOZ)	(MOL)	(MOU)	(MWS)	(MNW)	(MZ5)	(ZAD)	(XII)	(SEM)	(MOV)	(MKN)	(MCW)	(MUU)	(UMK)	(UMR)	(UMS)	(WTU)	AVG.
(ELW)	100.00%	9.68%	3.23%	0.00%	22.58%	3.23%	12.90%	22.58%	22.58%	48.39%	22.58%		29.03%	32.26%	54.84%	22.58%	35.48%	12.90%	54.84%	28.32%
(MVC)	16.67%	100.00%	0.00%	0.00%	16.67%	11.11%	11.11%	11.11%	22.22%	38.89%	11.11%		11.11%	22.22%	22.22%	22.22%	11.11%	0.00%	33.33%	20.06%
(MOZ)	4.00%	0.00%	100.00%	0.00%	28.00%	20.00%	8.00%	20.00%	12.00%	44.00%	20.00%		24.00%	12.00%	72.00%	24.00%	32.00%	12.00%	52.00%	26.89%
(MOL)	0.00%	0.00%	0.00%	100.00%	0.00%	0.00%	100.00%	0.00%	0.00%	100.00%	0.00%		0.00%	0.00%	100.00%	100.00%	100.00%	100.00%	100.00%	44.44%
(MOU)	2.82%	1.21%	2.82%	0.00%	100.00%	2.42%	5.24%	4.44%	5.24%	25.81%	10.48%		10.08%	9.68%	47.98%	16.53%	18.95%	5.65%	52.82%	17.90%
(MWS)	3.85%	7.69%	19.23%	0.00%	23.08%	100.00%	15.38%	23.08%	19.23%	50.00%	23.08%		23.08%	19.23%	57.69%	30.77%	26.92%	7.69%	42.31%	27.35%
(MNW)	6.06%	3.03%	3.03%	1.52%	19.70%	6.06%	100.00%	15.15%	15.15%	46.97%	19.70%		21.21%	22.73%	46.97%	28.79%	34.85%	4.55%	50.00%	24.75%
(MZ5)	10.29%	2.94%	7.35%	0.00%	16.18%	8.82%	14.71%	100.00%	22.06%	30.88%	11.76%		25.00%	16.18%	51.47%	20.59%	22.06%	5.88%	50.00%	23.12%
(ZAD)	8.97%	5.13%	3.85%	0.00%	16.67%	6.41%	12.82%	19.23%	100.00%	37.18%	12.82%		21.79%	15.38%	42.31%	21.79%	20.51%	6.41%	37.18%	21.58%
(XII)	3.99%	1.86%	2.93%	0.27%	17.02%	3.46%	8.24%	5.59%	7.71%	100.00%	12.23%		12.23%	7.45%	57.71%	21.01%	25.27%	5.32%	54.52%	19.27%
(SEM)	5.26%	1.50%	3.76%	0.00%	19.55%	4.51%	9.77%	6.01%	7.52%	34.59%	100.00%		16.54%	13.53%	54.89%	16.54%	16.54%	2.26%	57.14%	20.55%
(MOV)																				
(MKN)	6.00%	1.33%	4.00%	0.00%	16.67%	4.00%	9.33%	11.33%	11.33%	30.67%	14.67%		100.00%	11.33%	52.00%	23.33%	56.00%	5.33%	46.00%	22.41%
(MCW)	13.70%	5.48%	4.11%	0.00%	32.88%	6.85%	20.55%	15.07%	16.44%	38.36%	24.66%		23.29%	100.00%	61.64%	20.55%	32.88%	8.22%	56.16%	26.71%
(MUU)	1.50%	0.35%	1.59%	0.09%	10.53%	1.33%	2.74%	3.10%	2.92%	19.20%	6.46%		6.90%	3.98%	100.00%	13.63%	14.69%	2.57%	45.22%	13.16%
(UMK)	2.53%	1.44%	2.17%	0.36%	14.80%	2.89%	6.86%	5.05%	6.14%	28.52%	7.94%		12.64%	5.42%	55.60%	100.00%	26.35%	4.69%	53.07%	18.69%
(UMR)	3.16%	0.57%	2.30%	0.29%	13.51%	2.01%	6.61%	4.31%	4.60%	27.30%	6.32%		24.14%	6.90%	47.70%	20.98%	100.00%	5.17%	44.25%	17.78%
(UMS)	5.41%	0.00%	4.05%	1.35%	18.92%	2.70%	4.05%	5.41%	6.76%	27.03%	4.05%		10.81%	8.11%	39.19%	17.57%	24.32%	100.00%	37.84%	17.64%
(WTU)	1.76%	0.62%	1.35%	0.10%	13.59%	1.14%	3.42%	3.53%	3.01%	21.27%	7.88%		7.16%	4.25%	53.01%	15.25%	15.98%	2.90%	100.00%	14.23%
AVG.	4.87%	1.40%	2.80%	0.31%	17.27%	2.99%	7.65%	6.83%	7.31%	27.48%	10.28%	#DIV/0!	26.42%	20.00%	58.45%	30.19%	38.60%	18.41%	54.65%	18.66%

COMPUTER SCIENCE																				
Overlap	(ELW)	(MVC)	(MOZ)	(MOL)	(MOU)	(MWS)	(MNW)	(MZ5)	(ZAD)	(XII)	(SEM)	(MOV)	(MKN)	(MCW)	(MUU)	(UMK)	(UMR)	(UMS)	(WTU)	AVG.
(ELW)	100.00%	1.39%	0.37%	0.83%	21.18%	2.50%	15.36%	3.70%	9.81%	22.29%	7.96%	0.09%	5.00%	12.40%	17.21%	7.86%	6.75%	7.49%	14.99%	13.54%
(MVC)	13.27%	100.00%	0.00%	1.77%	20.35%	0.88%	15.93%	6.19%	15.93%	30.09%	15.93%	0.00%	6.19%	14.16%	10.62%	6.19%	8.85%	9.73%	5.31%	14.81%
(MOZ)	12.12%	0.00%	100.00%	12.12%	21.21%	6.06%	36.36%	3.03%	15.15%	21.21%	6.06%	0.00%	6.06%	18.18%	12.12%	21.21%	21.21%	12.12%	18.18%	18.02%
(MOL)	11.11%	2.47%	4.94%	100.00%	13.58%	4.94%	23.46%	2.47%	17.28%	27.16%	2.47%	0.00%	7.41%	4.94%	34.57%	16.05%	23.46%	24.69%	23.46%	18.13%
(MOU)	14.27%	1.43%	0.44%	0.69%	100.00%	1.68%	9.72%	2.93%	7.66%	20.06%	7.66%	0.19%	3.68%	9.72%	18.94%	5.92%	5.73%	7.79%	16.45%	12.37%
(MWS)	24.32%	0.90%	1.80%	3.60%	24.32%	100.00%	25.23%	8.11%	18.92%	36.04%	11.71%	0.00%	21.62%	16.22%	29.73%	9.91%	17.12%	8.11%	16.22%	19.68%
(MNW)	19.58%	2.12%	1.41%	2.24%	18.40%	3.30%	100.00%	10.26%	16.51%	27.71%	12.85%	0.12%	8.25%	13.44%	19.58%	8.14%	11.91%	8.61%	14.15%	15.71%
(MZ5)	13.70%	2.40%	0.34%	0.68%	16.10%	3.08%	29.79%	100.00%	29.11%	30.82%	9.93%	0.34%	10.96%	12.67%	13.01%	9.59%	7.88%	6.16%	13.36%	16.31%
(ZAD)	14.13%	2.40%	0.67%	1.87%	16.40%	2.80%	18.67%	11.33%	100.00%	25.60%	10.00%	0.13%	8.27%	13.07%	12.80%	9.33%	7.33%	6.53%	10.40%	14.30%
(XII)	13.95%	1.97%	0.41%	1.27%	18.64%	2.32%	13.61%	5.21%	11.12%	100.00%	10.65%	0.12%	5.50%	10.65%	27.45%	8.86%	9.21%	10.83%	20.96%	14.35%
(SEM)	15.69%	3.28%	0.36%	0.36%	22.45%	2.37%	19.89%	5.29%	13.69%	33.58%	100.00%	0.18%	10.40%	12.96%	28.65%	9.12%	8.58%	9.85%	22.63%	16.81%
(MOV)	25.00%	0.00%	0.00%	0.00%	75.00%	0.00%	25.00%	25.00%	25.00%	50.00%	25.00%	100.00%	25.00%	50.00%	0.00%	25.00%	25.00%	50.00%	50.00%	30.26%
(MKN)	21.51%	2.79%	0.80%	2.39%	23.51%	9.56%	27.89%	12.75%	24.70%	37.85%	22.71%	0.40%	100.00%	14.34%	26.69%	13.94%	13.55%	9.96%	23.90%	20.49%
(MCW)	12.86%	1.54%	0.58%	0.38%	14.97%	1.73%	10.94%	3.55%	9.40%	17.66%	6.81%	0.19%	3.45%	100.00%	11.90%	6.43%	4.89%	6.62%	9.31%	11.75%
(MUU)	6.84%	0.44%	0.15%	1.03%	11.18%	1.21%	6.11%	1.40%	3.53%	17.44%	5.78%	0.00%	2.46%	4.56%	100.00%	5.08%	6.44%	23.99%	37.67%	12.38%
(UMK)	17.45%	1.44%	1.44%	2.67%	19.51%	2.26%	14.17%	5.75%	14.37%	31.42%	10.27%	0.21%	7.19%	13.76%	28.34%	100.00%	12.73%	17.66%	26.28%	17.21%
(UMR)	11.13%	1.52%	1.07%	2.90%	14.02%	2.90%	15.40%	3.51%	8.38%	24.24%	7.16%	0.15%	5.18%	7.77%	26.68%	9.45%	100.00%	12.20%	20.43%	14.43%
(UMS)	4.85%	0.66%	0.24%	1.20%	7.49%	0.54%	4.37%	1.08%	2.94%	11.20%	3.24%	0.12%	1.50%	4.13%	39.07%	5.15%	4.79%	100.00%	72.56%	13.95%
(WTU)	5.21%	0.19%	0.19%	0.61%	8.48%	0.58%	3.86%	1.25%	2.51%	11.63%	3.98%	0.06%	1.93%	3.12%	32.90%	4.11%	4.31%	38.91%	100.00%	11.78%
AVG.	18.79%	6.68%	6.06%	7.19%	24.57%	7.83%	21.88%	11.20%	18.21%	30.32%	14.75%	5.38%	12.63%	17.69%	25.80%	14.81%	15.78%	19.54%	27.17%	16.12%

ENGINEERING																				
Overlap	(ELW)	(MVC)	(MOZ)	(MOL)	(MOU)	(MWS)	(MNW)	(MZ5)	(ZAD)	(XII)	(SEM)	(MOV)	(MKN)	(MCW)	(MUU)	(UMK)	(UMR)	(UMS)	(WTU)	AVG.
(ELW)	100.00%	4.81%	3.61%	1.92%	14.66%	5.53%	14.90%	9.86%	23.32%	26.92%	10.34%	2.40%	9.62%	20.19%	19.23%	13.94%	7.69%	8.41%	26.92%	17.07%
(MVC)	11.90%	100.00%	7.74%	2.38%	16.07%	4.76%	16.07%	10.71%	24.40%	21.43%	8.93%	4.17%	10.71%	20.83%	22.62%	15.48%	8.33%	11.31%	30.95%	18.36%
(MOZ)	5.95%	5.16%	100.00%	7.94%	21.83%	7.94%	15.87%	7.94%	13.89%	24.60%	15.08%	2.78%	11.51%	15.48%	33.73%	15.87%	16.27%	19.05%	29.36%	19.49%
(MOL)	3.48%	1.74%	8.70%	100.00%	6.52%	1.74%	28.70%	3.91%	3.48%	35.22%	5.22%	0.43%	17.83%	2.61%	73.91%	34.78%	19.57%	44.78%	62.17%	23.94%
(MOU)	3.24%	1.43%	2.92%	0.80%	100.00%	2.50%	7.39%	5.53%	12.11%	17.91%	7.70%	1.49%	4.57%	15.67%	23.96%	10.57%	9.88%	4.57%	25.72%	13.58%
(MWS)	7.47%	2.60%	6.49%	1.30%	15.26%	100.00%	14.93%	9.42%	15.91%	21.10%	9.74%	1.95%	10.06%	21.10%	21.75%	12.66%	15.58%	6.17%	21.10%	16.56%
(MNW)	5.81%	2.53%	3.75%	6.19%	13.03%	4.31%	100.00%	8.53%	20.06%	26.71%	12.09%	1.50%	12.09%	15.28%	32.61%	17.99%	15.65%	16.12%	30.83%	18.16%
(MZ5)	9.28%	4.07%	4.52%	2.04%	23.53%	6.56%	20.59%	100.00%	54.52%	44.80%	14.48%	1.81%	17.65%	29.19%	22.40%	19.46%	14.03%	14.93%	36.43%	23.17%
(ZAD)	5.68%	2.40%	2.05%	0.47%	13.34%	2.87%	12.52%	14.10%	100.00%	24.87%	11.64%	1.52%	8.66%	20.89%	15.51%	13.34%	9.07%	6.85%	23.64%	15.23%
(XII)	3.64%	1.17%	2.02%	2.63%	10.96%	2.11%	9.27%	6.44%	13.83%	100.00%	7.68%	0.59%	6.18%	11.94%	34.06%	15.84%	20.23%	11.91%	30.06%	15.29%
(SEM)	4.37%	1.53%	3.87%	1.22%	14.75%	3.05%	13.12%	6.51%	20.24%	24.01%	100.00%	1.22%	9.16%	19.43%	24.62%	13.02%	13.02%	7.02%	23.40%	15.98%
(MOV)	7.63%	5.34%	5.34%	0.76%	21.37%	4.58%	12.21%	6.11%	19.85%	13.74%	9.16%	100.00%	9.16%	35.88%	34.35%	16.03%	3.82%	3.82%	28.24%	17.76%
(MKN)	6.77%	3.05%	4.91%	6.94%	14.55%	5.25%	21.83%	13.20%	25.04%	32.15%	15.23%	2.03%	100.00%	20.47%	31.47%	21.15%	22.00%	16.07%	30.63%	20.67%
(MCW)	3.47%	1.45%	1.61%	0.25%	12.20%	2.69%	6.74%	5.33%	14.76%	15.18%	7.90%	1.94%	5.00%	100.00%	23.82%	7.28%	12.53%	3.89%	21.26%	13.02%
(MUU)	1.00%	0.47%	1.06%	2.12%	5.62%	0.83%	4.33%	1.23%	3.30%	13.04%	3.01%	0.56%	2.32%	7.17%	100.00%	8.17%	19.86%	8.36%	27.15%	11.03%
(UMK)	3.87%	1.73%	2.67%	5.34%	13.28%	2.60%	12.81%	5.74%	15.21%	32.49%	8.54%	1.40%	8.34%	11.74%	43.76%	100.00%	25.55%	29.75%	46.50%	19.54%
(UMR)	0.70%	0.31%	0.90%	0.99%	4.09%	1.06%	3.67%	1.36%	3.41%	13.69%	2.82%	0.11%	2.86%	6.67%	35.09%	8.43%	100.00%	7.06%	19.87%	11.22%
(UMS)	2.96%	1.61%	4.06%	8.71%	7.27%	1.61%	14.54%	5.58%	9.89%	30.94%	5.83%	0.42%	8.03%	7.95%	56.72%	37.70%	27.13%	100.00%	50.97%	20.10%
(WTU)	2.14%	0.99%	1.41%	2.73%	9.24%	1.24%	6.28%	3.07%	7.71%	17.64%	4.39%	0.71%	3.45%	9.81%	41.61%	13.30%	17.24%	11.51%	100.00%	13.39%
AVG.	9.97%	7.49%	8.82%	8.14%	17.77%	8.49%	17.67%	11.82%	21.10%	28.23%	13.67%	6.69%	13.54%	20.65%	36.38%	20.79%	19.87%	17.45%	35.01%	17.03%

Historical Analysis

The final reports run for the pre-1925 analysis were intended to guide the Committee in identifying potential digitization and/or weeding projects. In addition to tabular data, title level lists for each division have been run and are posted on the MOBIUS website <http://mco.mobius.missouri.edu/> for archiving purposes. The title level lists have been run in order that if a digitization project is identified, title lists are readily available to determine whether the contents of a particular subject division are of real value. Title lists and tabular data are limited to unique titles held by fewer than 6 libraries in WorldCat.

Below is a table that includes a breakdown of historically unique materials by division and time period prior to 1925, and that are held by fewer than 6 libraries in WorldCat. The table below highlights the fact that the group possesses enough rare materials that there are definitely opportunities for valuable digitization projects. Additionally, upon further investigation of individual title lists, it is clear that there are also opportunities for small scale digitization projects. However, projects would to be very well defined and targeted. For example, within the business divisions there were quite a few titles related to railroads (LC class HE), which could potentially result in a small digitization project and might fit nicely with the types of projects found on the Virtually Missouri website.

Another avenue might be a larger scale digitization project. This would require a comprehensive look at the unique, pre-1925 title lists mentioned above. This type of project might be more suited for one of the larger aggregators, such as Google.

Further assessment of historical title level lists made it clear that further assessment would be needed to establish where value in the collections lie in order to determine where digitization would be most beneficial. Additionally, closer examination of historical title lists point to caveats with the records in the WorldCat database. For example, classifications are sometimes questionable, and there are multiple instances of duplication.

The historical analysis table, in conjunction with the historical title level lists, indicates that the group owns enough unique or rare material that digitization of, at least, parts of the collection would benefit others. Conversely, the historical analysis allows MCMAC the opportunity to explore older collections already in storage and determine what has already been digitized in order that the hardcopy materials in storage are linked to outside electronic resource that would afford ready access to the user. It seems that digitizing non-circulating materials, or materials in storage, would make those resources more immediately accessible.

Historically Unique by Decade							
Uniqueness	- 1499	1500-99	1600-99	1700-99	1800-49	1850-99	1900-24
Agriculture	0	1	0	5	21	34	53
Biological Sciences	0	1	0	1	14	12	32
Chemistry	0	2	7	2	1	5	8
Computer Science	0	0	0	0	0	0	155
Engineering & Technology	0	0	1	9	53	198	117
Geography & Earth Sciences	0	1	5	7	16	51	1
Mathematics	0	1	1	5	11	24	26
Medicine	0	0	3	9	19	18	66
Physical Sciences	1	4	8	46	51	27	56
Uniqueness	- 1499	1500-99	1600-99	1700-99	1800-49	1850-99	1900-24
Anthropology	0	1	0	3	6	10	9
Business & Economics	0	2	3	18	148	690	862
Education	0	0	0	9	45	111	366
Government Documents	0	0	0	0	0	0	581
Law	0	13	22	116	77	123	123
Political Science	0	2	8	0	0	85	21
Psychology	0	6	4	12	12	16	64
Sociology	0	0	2	22	54	87	3550
Physical Education & Recreation	0	0	0	7	16	13	28
Uniqueness	- 1499	1500-99	1600-99	1700-99	1800-49	1850-99	1900-24
Art & Architecture	0	3	12	18	29	93	164
History & Auxiliary Sciences	2	19	66	204	310	568	795
Language, Linguistics & Literature	5	92	58	215	339	772	41
Philosophy & Religion	13	123	181	699	1091	1110	20
Music	0	2	2	8	21	48	13
Performing Arts	0	0	0	1	3	8	341
Uniqueness	- 1499	1500-99	1600-99	1700-99	1800-49	1850-99	1900-24
Library Science, Generalities & Reference	0	0	4	9	22	83	23
Unknown Classification	3	23	47	113	341	1711	
Total	24	296	434	1538	2700	5898	7515

V. Problems with data

Several shortfalls appeared when using the WorldCat Collection Analysis service. Medical divisions and the “Unknown Classification” is where the majority of discrepancies were found. The inconsistencies in the medical categories were tied to OCLC symbols. As a result, analysis of medical categories was limited.

MCMAC determined that variations in the data in the “Unknown Classification” division resulted from records in the OCLC database having neither LC nor Dewey numbers available in their bib record. This most likely explains the high percentage of unique titles for the “Unknown Classification” division. The total number of holdings in the “Unknown Classification” division is 274,662, which represents 3% of the 8.9 million titles analyzed over the last year. Upon further investigation, it appears that many of the titles in the “Unknown Division” are older titles in the Lang & Lit Division. We may need to revisit this issue at another time.

Other issues encountered included the occurrence of duplicate records in OCLC. It doesn’t appear that the occurrence is large enough to negate the data. However, the occurrence is frequent enough that it must be noted. The problem appears in all divisions.

Additionally, WCA is only updated quarterly. Consequently, any report generated was truly a snapshot of the collection at that moment in time.

VII. Recommendations

The recommendations below are based on the findings over the past year in the collection analysis project. Recommendations are also based on the expected goals/objectives/impacts described in the grant application. Recommendations will be integrated into the short and long term goals and objectives for MCMAC. While the Committee's recommendations are far-reaching and encompass large scale collaboration, the success of which depends on many unknowns, the recommendations provide sound direction for the future of collaborative collection management in the state of Missouri.

Enumerated below are the expected outcomes/goals/impacts as described in the grant application with appended recommendations based on the findings of the collection analysis project:

1. Promotion of statewide participation in shared collection development and management

Recommendation

During the one year grant period MCMAC has produced a series of reports that analyzes a group of 25 libraries including both public and academic libraries. The report reflects the overall make-up of the 25 library collections included in the grant. The analyses include collection strengths, collection overlap, and an historical overview.

MCMAC has reported on its activities in a presentation at the annual 2007 MOBIUS User's Conference, MOBIUS Executive Committee meetings, MOBIUS Council meetings, and the Committee has posted all findings on the MCO website. It is recommended that MCMAC continue to find vehicles such as the State Library, the Missouri Library Association, or MLNC to present the findings in its series of reports and educate the Missouri library community about its activities. It is also recommended that MCMAC encourage discussion of the reports at the MOBIUS cluster level and request feedback from the clusters on insights gained and potential projects to undertake. A form currently exists on the MOBIUS website <http://mco.mobius.missouri.edu/> to facilitate input for collection management projects.

2. Establishment of collection management standards for program planning, accreditation, and benchmarking.

Recommendation

The data reflected in institutional overlap and uniqueness tables gives evidence where individual institutional collections are stronger than others in the group. It is recommended that MCMAC use the data in the reports to target collections that could potentially provide a core title list in a specific division, or that might assume primary responsibility for maintaining a core collection available to the consortium. Both the fiscal implications of such delegated responsibility and potential adjustment of assessment criteria to include consortial access to materials as well as local ownership require further consideration.

Additionally it is recommended that MCMAC use the data in the overlap tables to target a specific division and develop a guideline for an acceptable level of duplication for the identified division. Consideration of circulation data, both local and consortial, should be included in this discussion.

3. Identification of unique materials for preservation or digitization

Recommendation

As mentioned earlier in this report, the historical analysis in conjunction with the correlating divisional title list provides direction for potential digitization projects. It is recommended that MCMAC use the historical data and title lists to identify a targeted small scale digitization project or explore a larger scale project with a large scale aggregator such as Google.

4. Identification of duplicate materials

Recommendation

Earlier in this report, the following divisions were identified as having the highest average percentage of overlap (average overlap above 25%): History, Library Science, Music, Performing Arts, Political Science, and Sociology. It is recommended that MCMAC identify and promote potential collaborative collecting initiatives in those areas. Measures of usage or demand (circulation or lending statistics) would be useful in this area. Consideration of possibilities for sharing currently non-requestable materials that may account for higher degrees of duplication (reference materials, maps, recordings, scores, films, etc.) is recommended.

5. Promotion of cooperative purchasing of library materials

Recommendation

This recommendation is directly related to recommendation #5 and #1. It is also related to the current statewide book purchasing plan in place with YBP sponsored by MCMAC.

It is recommended that MCMAC continue to educate the Missouri library community about the findings from the collection analysis project as it relates to duplication between and among libraries. Further, as noted above MCMAC should identify and promote potential collecting initiatives in the divisions with the highest level of duplication.

6. Identification of collection gaps

No recommendation

The reports show relative strengths and weaknesses based on numbers of titles, usually of books only. A qualitative analysis would require comparison to a bibliographic standard or recognized model collection, which would vary by discipline and type of collection. This goes beyond the capacity of the current study, but might be undertaken on a smaller scale in conjunction with a specific cooperative project.

7. *Provision of access to collections of greater breadth for all Missouri library users*

No recommendation

This is a long term outcome expected from the results of the data in this grant and the projects that result. The current report shows an increase in the number of titles and the percentage of unique titles available through the libraries studied since 2000, thus, showing the MOBIUS consortium is committed to resource sharing and collaboration. The Committee anticipates that as libraries become more aware of the findings in this report, and increasingly confident in our ability to jointly deliver to our patrons, there will be a natural tendency to expand the collections and move increasingly move toward collaboration.

8. *Identification of subject strengths*

Recommendation

Not surprisingly the overall strengths for the group can be found in the Arts and Humanities: Language and Literature; History; Art and Architecture; and Religion Philosophy.

Additionally, as mentioned above, when academic and public library unique titles were compared, the relative strengths appear to be in the same divisions as the academic libraries reinforcing the idea that the public and academic collections complement one another rather than duplicate one another.

This recommendation is also directly related to recommendation #5 and #1.

It is recommended that MCMAC continue to educate librarians about the results of the collection analysis project and identify potential collaboration projects among the grant participants based on the subject strengths mentioned above.

9. *Use of data in conjunction with the preferred statewide monograph vendor's database to make informed purchasing decisions*

Recommendation

It is recommended that MCMAC look at purchasing patterns provided by the statewide monograph vendor, YBP, in conjunction with the data from the collection analysis to identify potential collaboration projects.

VII. Conclusion

The purpose of the statewide collection analysis grant was to provide an overview of the collections of 25 public and academic libraries that MCMAC felt appropriately represented the libraries of Missouri and in the end have a clear understanding of the strengths, overlaps, and age of collections for the institutions participating in this study. Using the WorldCat Collection Analysis Service, MCMAC has spent the previous year to realizing its goal. MCMAC feels the data gathered for this project has provided a clear roadmap through its recommendations for future collaboration in the state that will result in greater collaboration and communication within the Missouri library community; the realization of financial savings; collections of greater breadth and depth; and ultimately broader access to resources for Missouri library users.

VIII. Appendices

Appendix I.

Libraries participating in grant and their corresponding OCLC Symbol

LIBRARY	OCLC Symbol
University of Central Missouri	MCW
Maryville University	MVC
Missouri Southern State University	MOZ
Missouri State Library	MOL
Missouri Western State College	MWS
Northwest Missouri State University	MNW
Saint Louis University	XII
Southeast Missouri State University	SEM
Missouri State University	MOU
Stephens College	MOV
St. Charles Community College	MZ5
St. Louis Community College	ZAD
Truman State University	MKN
University of Missouri-Columbia	UMC
University of Missouri-Kansas City	UMK
University of Missouri-Rolla	UMR
University of Missouri-St. Louis	UMS
Washington University	WTU
Webster University/Eden Theological Seminary	ELW
Kansas City Pub Libr	KCP
Mid-Continent Pub Libr	CMI
Saint Louis Cnty Libr	ZAE
Saint Louis Pub Libr	SVP
Springfield-Greene County Library	MOS

Appendix II

OCLC Conspectus Divisions

Divisions
Anthropology
Biological Sciences
Chemistry
Computer Science
Engineering & Technology
Government Documents
Health Professions & Public Health
Language, Linguistics & Literature
Law
Library Science, Generalities & Reference
Mathematics
Medicine
Medicine By Body System
Medicine By Discipline
Music
Performing Arts
Philosophy & Religion
Physical Education & Recreation
Physical Sciences
Political Science
Preclinical Sciences
Psychology
Sociology
Unknown Classification

VIII. Appendices