

I. Introduction

In July 2004 the MOBIUS Collection Management Advisory Committee (MCMAC) was formed with the charge to, “survey, monitor, and evaluate the MOBIUS collections in order to strengthen the resource base of the member institutions, thereby promoting excellence in academic research and instruction.” Consequently, the committee spent a great deal of time exploring ways to gain a clear understanding of the age, strengths, weaknesses, and overlaps that exist within the collections of the MOBIUS consortium. MCMAC determined the best way to evaluate the collections of MOBIUS would be through the use of a collection analysis tool. The tool chosen was OCLC’s WorldCat Collection Analysis Service (OCLC – WCA).

MCMAC received a grant from the Missouri State Library to fund the project. However, because of the size of collections and the number of libraries, the funding was could not cover all MOBIUS libraries. As a result, MCMAC included a group of libraries (listed in the table below) that might best collectively reflect MOBIUS. In addition to MOBIUS member libraries, MCMAC determined that it would be useful to include several of the larger public libraries in the analysis. This determination was made based on the current trend toward including public libraries in MOBIUS as “Cooperating Partners.” All libraries included in the analysis were chosen based on location, size, and population served.

Selected libraries include:

MOBIUS LIBRARIES
Central Missouri State University
Maryville University
Missouri Southern State University
Missouri State Library
Missouri Western State College
Northwest Missouri State University
Saint Louis University
Southeast Missouri State University
Southwest Missouri State University
Stephens College
St. Charles Community College
St. Louis Community College
Truman State University
University of Missouri-Columbia
University of Missouri-Kansas City
University of Missouri-Rolla
University of Missouri-St. Louis
Washington University
Webster University/Eden Theological Seminary
Public Libraries
Kansas City Pub Libr

Mid-Continent Pub Libr
Saint Louis Cnty Libr
Saint Louis Pub Libr
Springfield-Greene County Library

The goal of the Statewide Collection analysis project is to produce a series of four reports. The reports will include the following:

1. Overview of all collections
2. Regional analysis
3. Comparative analysis of public and academic libraries
4. Final summary report

The present report is the first installation in the series and will provide an analysis of the uniqueness, overlaps, and age of collections statewide as it relates to copyrighted materials.

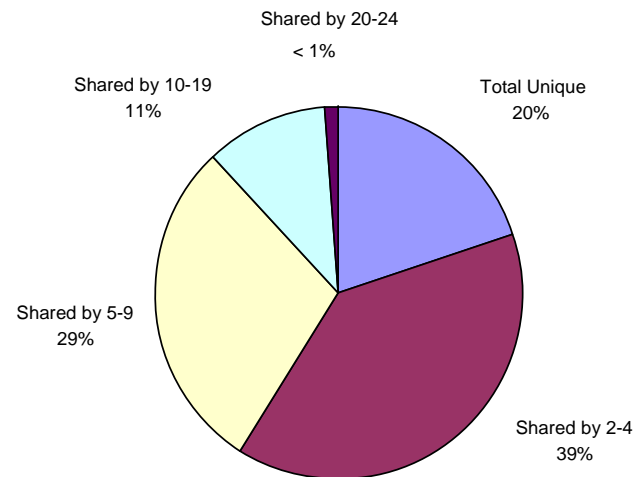
II. Unique Titles

This section of the report provides an overview of all unique, non-juvenile, English monograph titles held by libraries participating in the project and includes percentages of titles shared within the group. In addition, this section provides a comparative overview of non-juvenile, English titles published for the periods 1990-1999 and 2000-2006 respectively. The goal being to identify uniquely held titles that have been published recently, as well as to identify collecting trends before and after the establishment of MOBIUS.

The broad categories used throughout this report are generated by the WorldCat Collection Analysis service, and are based on the OCLC Conspectus which includes 32 subject divisions. The subject divisions are as follows: 1. Agriculture; 2. Anthropology; 3. Art & Architecture; 4. Biological Sciences; 5. Business and Economics; 6. Chemistry; 7. Communicable Diseases & Miscellaneous; 8. Computer Science; 9. Education; 10. Engineering & Technology; 11. Geography & Earth Sciences; 12. Government Documents; 13. Health Facilities, Nursing & History; 14. Health Professions & Public Health; 15. History & Auxiliary Sciences; 16. Language, Linguistics, & Literature; 17. Law; 18. Library Science, Generalities, & Reference; 19. Mathematics; 20. Medicine, 21. Medicine by Body System; 22. Medicine by Discipline; 23. Music; 24. Performing Arts; 24. Performing Arts; 25. Philosophy & Religion; 26. Physical Education & Recreation; 27. Physical Sciences; 28. Political Science; 29. Preclinical Science; 30. Psychology; 31. Sociology; and 32. Unknown Classification.

Graph 1. Percentage of Unique and Shared Titles reflects total uniqueness and shared titles for the group of 25 libraries included in this study. The total number of non-juvenile, English, monograph titles for the group was 8,963,124 when the initial report was generated. Of the 8,963,124 titles, 1,793,019 were identified as unique (20%); 3,503,191 are shared by 2- 4 institutions (39%); 2,667,520 are shared by 5-9 institutions (29%); 985,297 are shared by 10-19 institutions (11%); and 14097 are shared among 20-24 libraries (less than 1%)

Graph 1. Percentage of Unique and Shared Titles



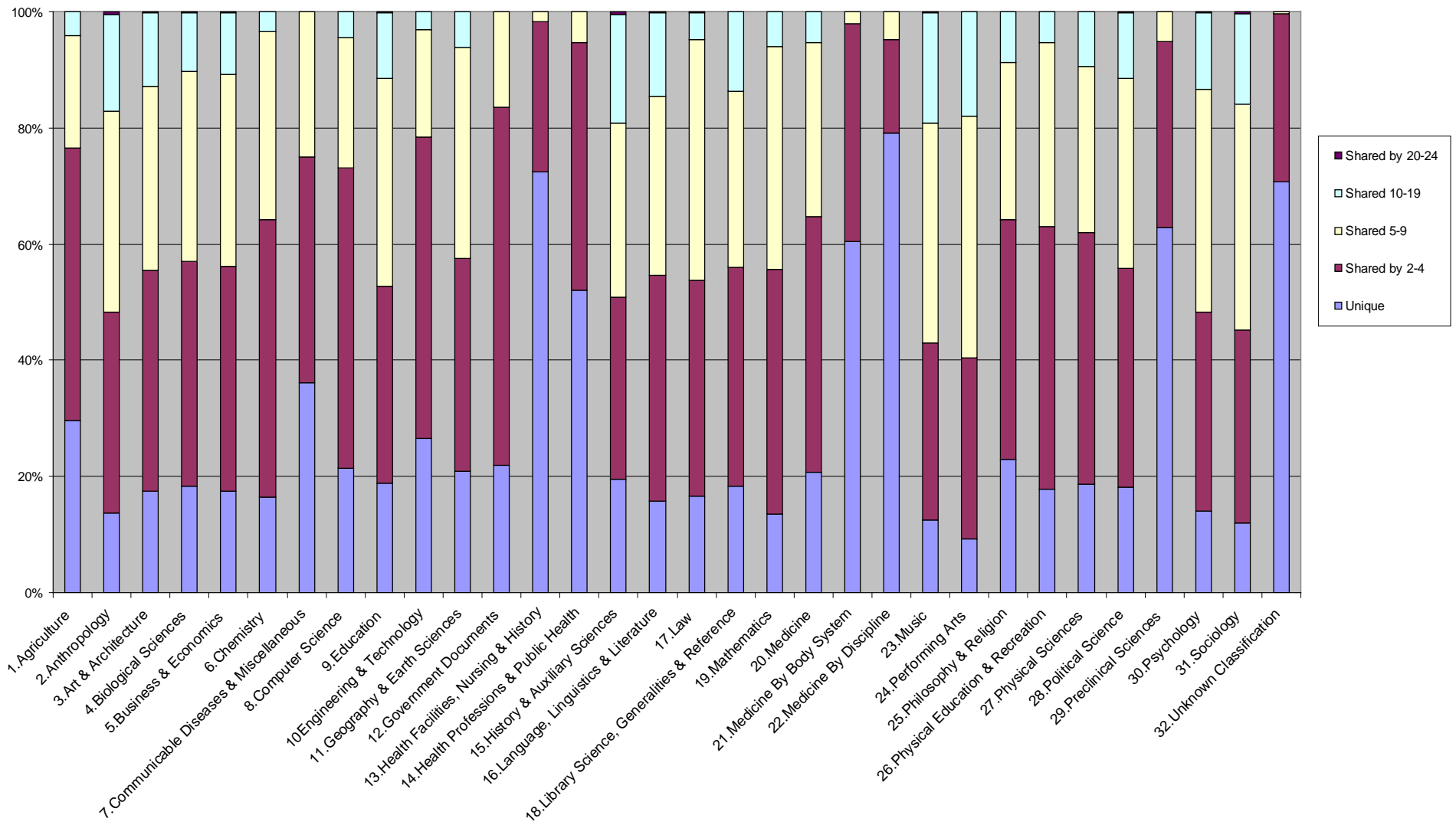
Graph 2. Percentage of Unique and Shared Titles by Division reveals the percentage of unique titles as they compare with the percentage of titles shared by the institutions included in this project. The divisions with the highest percentage of unique titles are: Communicable Diseases & Miscellaneous; Health Facilities, Nursing & History; Health Professions & Public Health; Medicine by Body System; Medicine by Discipline; Preclinical Sciences; and Unknown Classification. The total number of holdings for the divisions listed above (not including the Unknown Classification division) represents only 3977 of 8.9 million titles. While the total number of titles for the categories in question is low, the percentage of unique titles is high at 56%. The primary reason for the distortion in the divisions listed above is directly related to the fact that medical libraries were not included in the study. WorldCat Collection Analysis pulls data based on OCLC symbols. In most cases an institution's OCLC symbols are different for their main library and their branch libraries. This report only includes OCLC symbols for the main library. This is important to note as it is not clearly reflected in Graph 2.

The Unknown Classification division represents those titles that have neither LC nor Dewey numbers available in the WorldCat record, which may explain the high percentage of unique titles for this category. The total number of holdings in the Unclassified division is 274,662, which represents 3% of the 8.9 million titles being analyzed.

While the divisions mentioned above have the highest percentages of unique titles, the divisions that have the highest real numbers and should be noted are as follows: Agriculture where the total holdings are 118648, of which 35156 are unique (29%); Engineering and Technology where the total holdings are 476678, of which 126815 are unique (26%); Philosophy and Religion where the total holdings are 545,083, of which 124,961 are unique (23%).

The division that has the largest total number of unique holdings is Language, Linguistics and Literature with 255,653 titles. Conversely, the division that has the largest number of shared titles is History and Auxiliary Sciences with 5,456 titles shared by 20 – 24 institutions. However, the total number of titles in the History and Auxiliary Sciences division is 1,199,382, which explains the large number of shared titles.

Graph 2. Percentage Unique and Shared Titles by LC Division



Graph 3. Percentage of Unique Titles by Publication Date measures uniqueness as it relates to publication periods. The following graph represents uniqueness by division for items published 1990–1999, and items published 2000 to the present. The group decided it would be useful to determine the number of unique titles that have also been published recently, particularly in divisions where currency is paramount.

As with the previous table, the percentages representing the medical divisions seem much higher. Again, this is directly related to the low number of titles relative to high levels of uniqueness in the following divisions: Communicable Diseases & Miscellaneous; Health Facilities, Nursing & History; Health Professions & Public Health; Medicine by Body System; Medicine by Discipline; Preclinical Sciences; and Unknown Classification.

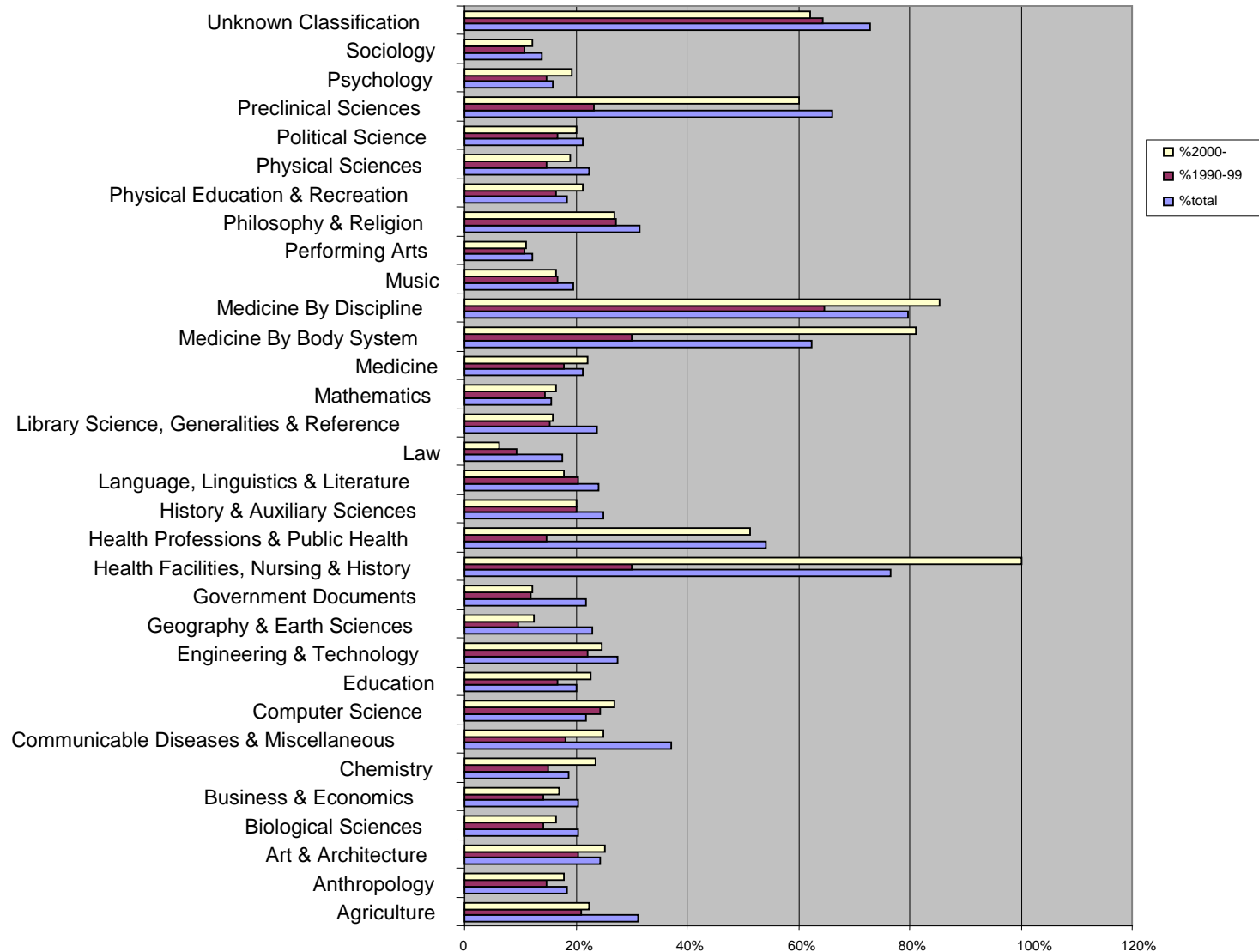
Overall the data indicated an increase in unique titles for the years 2000-2006 as compared with the 1990-1999 periods. For the period 1990-1999 the average percentage of unique titles by division was 20%. For the period 2000-2006 the average percentage of unique titles by LC division was 29%.

The only division that saw a decrease in unique titles for the 2000-2006 period was Language, Linguistics, and Literature. For the period 1990–1999, 20% of all titles in the Language, Linguistics, and Literature Division were unique. For the period 2000-2006 the percentage of unique titles in the Language, Linguistics, and Literature dropped to 17%.

Outside of the health and medical divisions, the divisions that saw the greatest percentage growth in unique titles were Chemistry, Education, Art & Architecture, Physical Education, Physical Sciences, and Psychology.

- In the Chemistry division the percentage of unique titles for the periods 1990-1999 and 2000-2006 grew from 15% to 23%.
- In the Education division the percentage of unique titles for the periods 1990-1999 and 2000-2006 grew from 16% to 22%.
- In the Art & Architecture division the percentage of unique titles for the periods 1990-1999 and 2000-2006 grew from 20% to 25%.
- In the Physical Education & Recreation division the percentage of unique titles for the periods 1990-1999 and 2000-2006 grew from 16% to 21%.
- In the Physical Sciences division the percentage of unique titles for the periods 1990-1999 and 2000-2006 grew from 14% to 19%.
- In the Psychology division the percentage of unique titles for the periods 1990-1999 and 2000-2006 grew from 14% to 19%.

Graph 3. Percentage of Unique Titles By Publication Period



III. Collection Overlap by Institution

The overlap reports from the WorldCat Collection Analysis service generate library to library comparisons of overlap in titles. Reports can be run that measure overlap for each collection in the study. Reports can also be run that reflect overlap by LC division on a library to library basis. This report will cover overlap for each collection in the study. Division overlap by institution reports will be provided in MCMAC's next report.

In an effort to present data in a manageable fashion, libraries were grouped by type.

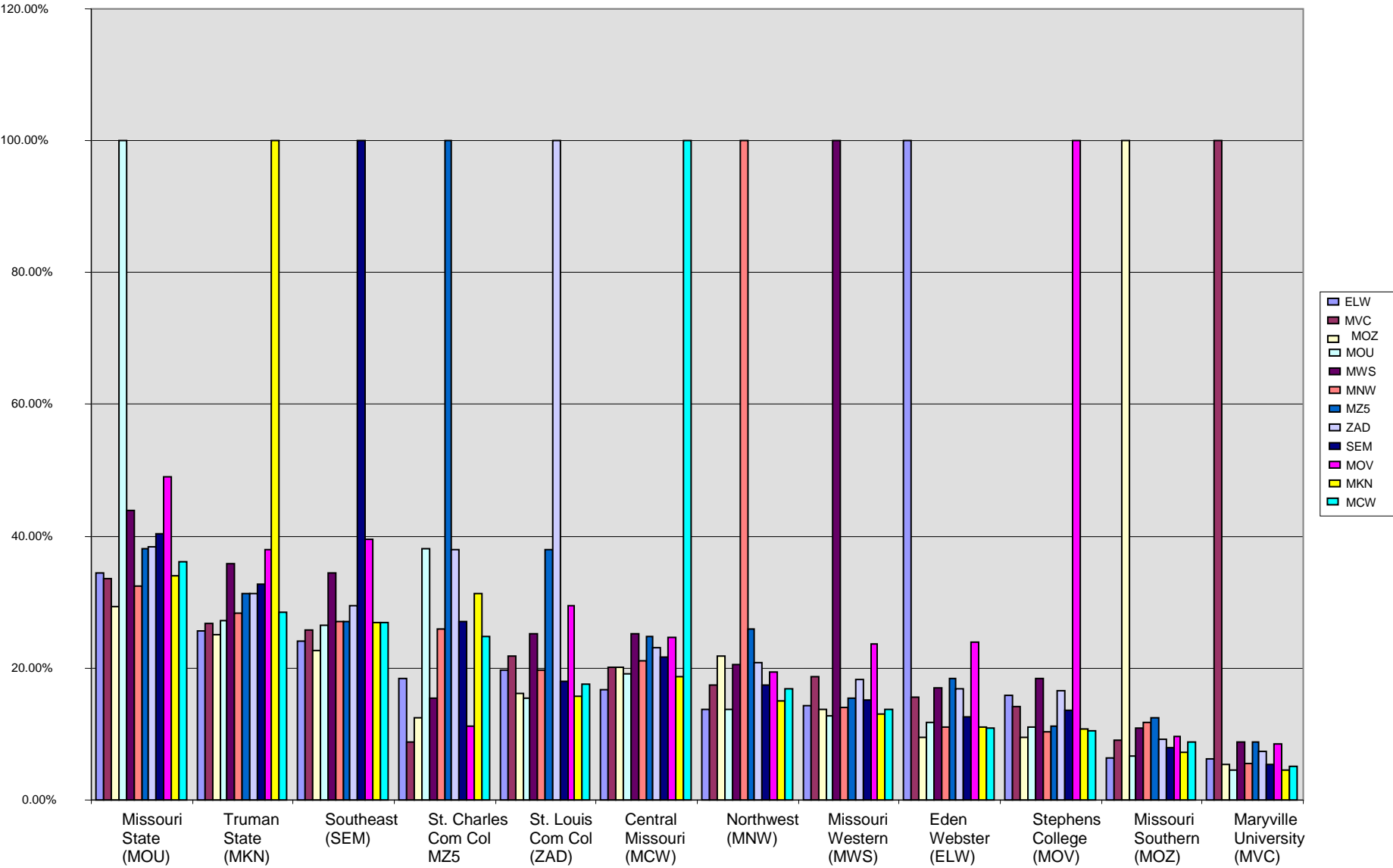
Graph 4. Percentage of Overlap among Small and Medium Size Libraries represents total overlap by institution for twelve academic libraries that MCMAC classified as small and medium Size institutions. Libraries are identified by name and OCLC symbol in order to improve readability of the graphs. The Libraries included are as follows: Eden Webster (ELW), Maryville University (MVC), Missouri Southern State (MOZ), Missouri State University (MOU), Missouri Western State University (MWS), Northwest Missouri State (MNW), St. Charles Community College (MZ5), St. Louis Community College (ZAD), Southeast Missouri State (SEM), Stephens College (MOV), Truman State University (MKN), and Central Missouri Library (MCW).

In this grouping of libraries, Missouri State University has the largest number of non-juvenile, English, monographs with holdings of 461,020. Missouri State University also has the highest rate of overlap within this group. On average, when each of the above mentioned library's holdings are compared with Missouri State University's collection, the occurrence of overlap is 37.25%.

Maryville University experiences the lowest rate of overlap. Maryville's non-juvenile, English monograph holdings are 65,567. On average, when each of the above mentioned library's holdings are compared with Maryville University's collection, the occurrence of overlap is 6.39%.

When examining overlap among all libraries in the Liberal Arts group, on average, the rate of overlap from library to library is approximately 20%.

Graph 4. Percentage of Overlap among Small and Medium Size Libraries



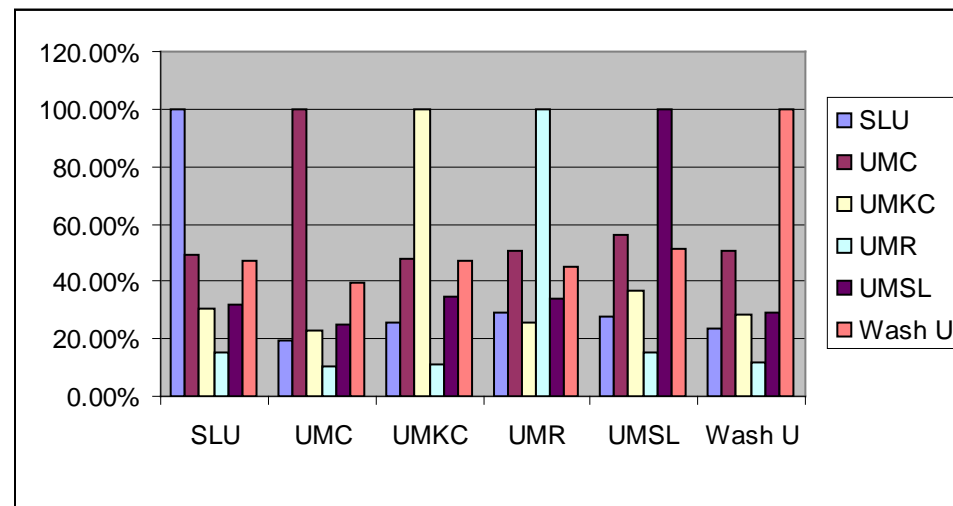
Graph 5. Percentage of Overlap among Research Libraries represents total overlap by institution for five academic libraries that MCMAC classified as research institutions. The research libraries included are as follows: St. Louis University (SLU); University of Missouri, Columbia (UMC); University of Missouri, Kansas City (UMKC); University of Missouri, Rolla (UMR); University of Missouri, St. Louis (UMSL); and Washington University (Wash U).

In this grouping of libraries, UMC has the largest number of non-juvenile, English, monographs with holdings of 1,402,128. UMC also experiences the highest rate of overlap within this group. On average, when each of the above mentioned library's holdings are compared with UMC's collection, the occurrence of overlap is 51%.

SLU experiences the lowest rate of overlap. SLU's non-juvenile, English, monograph holdings are 553,396. On average, when each of the above mentioned library's holdings are compared with SLU's collection, the occurrence of overlap is 25%.

When examining overlap among all libraries in the research group, on average the rate of overlap from library to library is approximately 44%.

Graph 5. Percentage of Overlap among Research Libraries



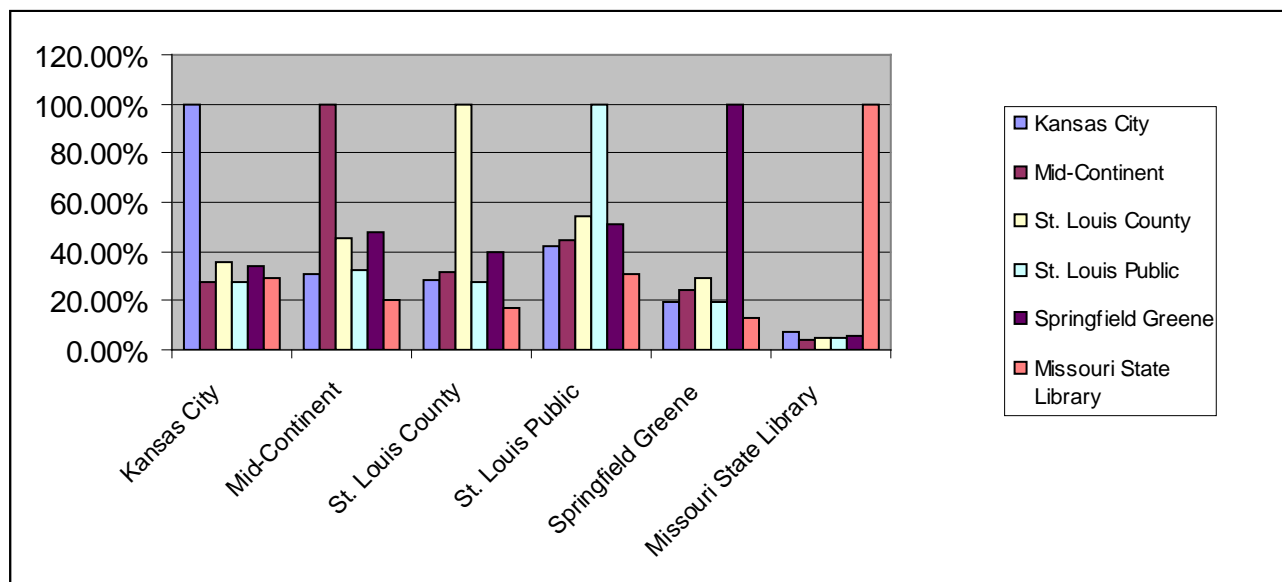
Graph 6. Percentage of Overlap among Public Libraries represents total overlap by institution for 5 libraries that MCMAC classified as public. The public libraries included are as follows: Kansas City Public, Mid-Continent, St. Louis County, St. Louis Public, Springfield Greene, and the Missouri State Library.

In this grouping of libraries, St. Louis Public Library has the largest number of non-juvenile, English monographs with holdings of 569261. St. Louis Public also experiences the highest rate of overlap within this group. On average, when each of the above mentioned library's holdings are compared with St. Louis Public Library's collection, the occurrence of overlap is 48%.

Missouri State Library experiences the lowest rate of overlap and has the lowest number of non-juvenile, English monograph holdings at 90,335. On average, when each of the above mentioned library's holdings are compared with Missouri State Library's collection, the occurrence of overlap is 5%.

When examining overlap among all libraries in the public group, on average the rate of overlap from library to library is approximately 35.3%. However, when the Missouri State Library is not included, the average jumps to 41.3%.

Graph 6. Percentage of Overlap among Public Libraries



IV. Collection Analysis pre-1925

This section of the report examines collections for materials published pre-1925 in order that materials published during this period might be identified as in the public domain and are thus prime candidates for digitization or weeding.

The data in these reports are subject to some potential confusion based on vagaries of cataloging practices. At times publication dates have been entered incorrectly or not at all. Additionally, some records do not distinguish microform reproductions from original monographs. Finally, the division Unknown Classification contains many records that have no LC or DDC classification attached.

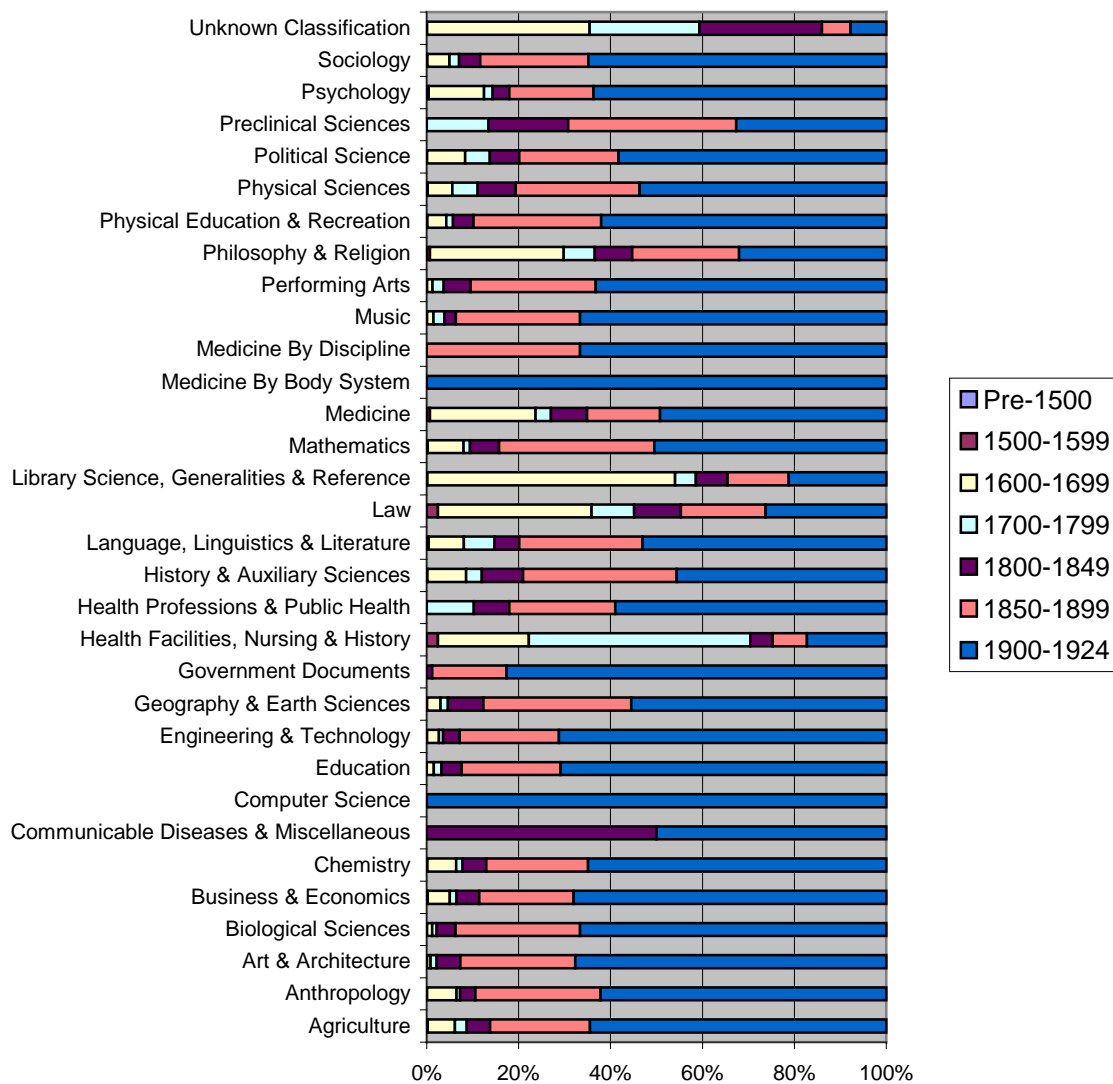
Some of the most interesting data is in table 2, which presents totals for materials for which WorldCat shows no other holdings anywhere. Examining these materials more closely should show areas in which digitization could make a marked contribution to the wider community. Comparing uniquely held books and other materials indicates that we have significant numbers of unique non-book materials, such as maps and scores.

Graph 7. Books Published Pre-1925 by Division identifies the percentages of books by division that were published for the periods Pre-1500, 1500-1599, 1600-1699, 1700-1799, 1800-1849, 1850-1899, and 1900-1924.

The total number of titles published for the period 1500-1924 is 664,949. The period between 1500 and 1924 with the most titles is 1900-1924 with 269,138. The divisions with the highest number of titles published between 1500 and 1924 are History and Auxiliary Sciences with 144,471 titles, and Language, Linguistics & Literature with a total of 126,955 titles published before 1925. However, the Unclassified division includes 138,366 titles.

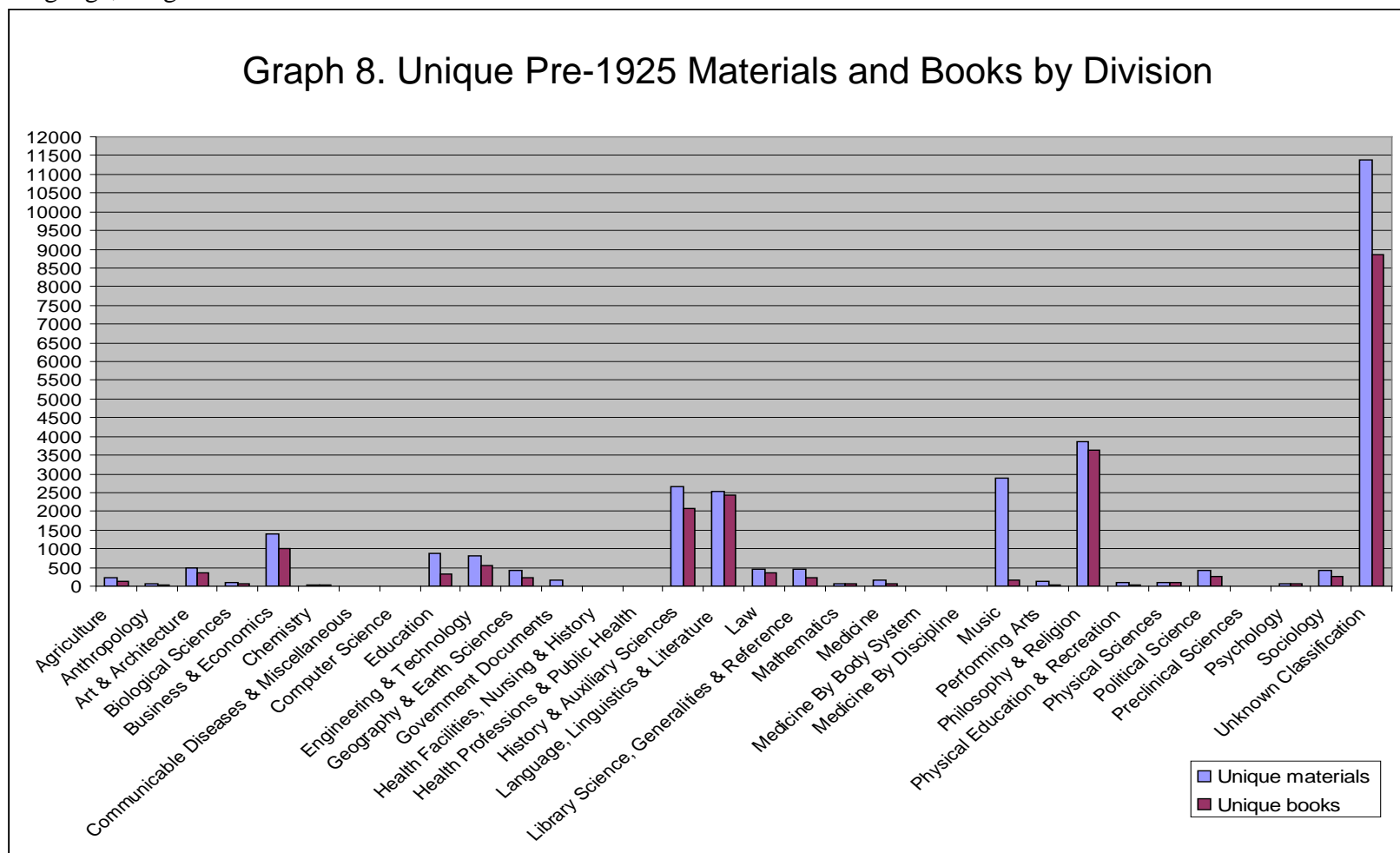
Note: The Unclassified division will have to be explored further to determine what titles are falling into that category.

Graph 7. Books Published Pre-1925 by Division

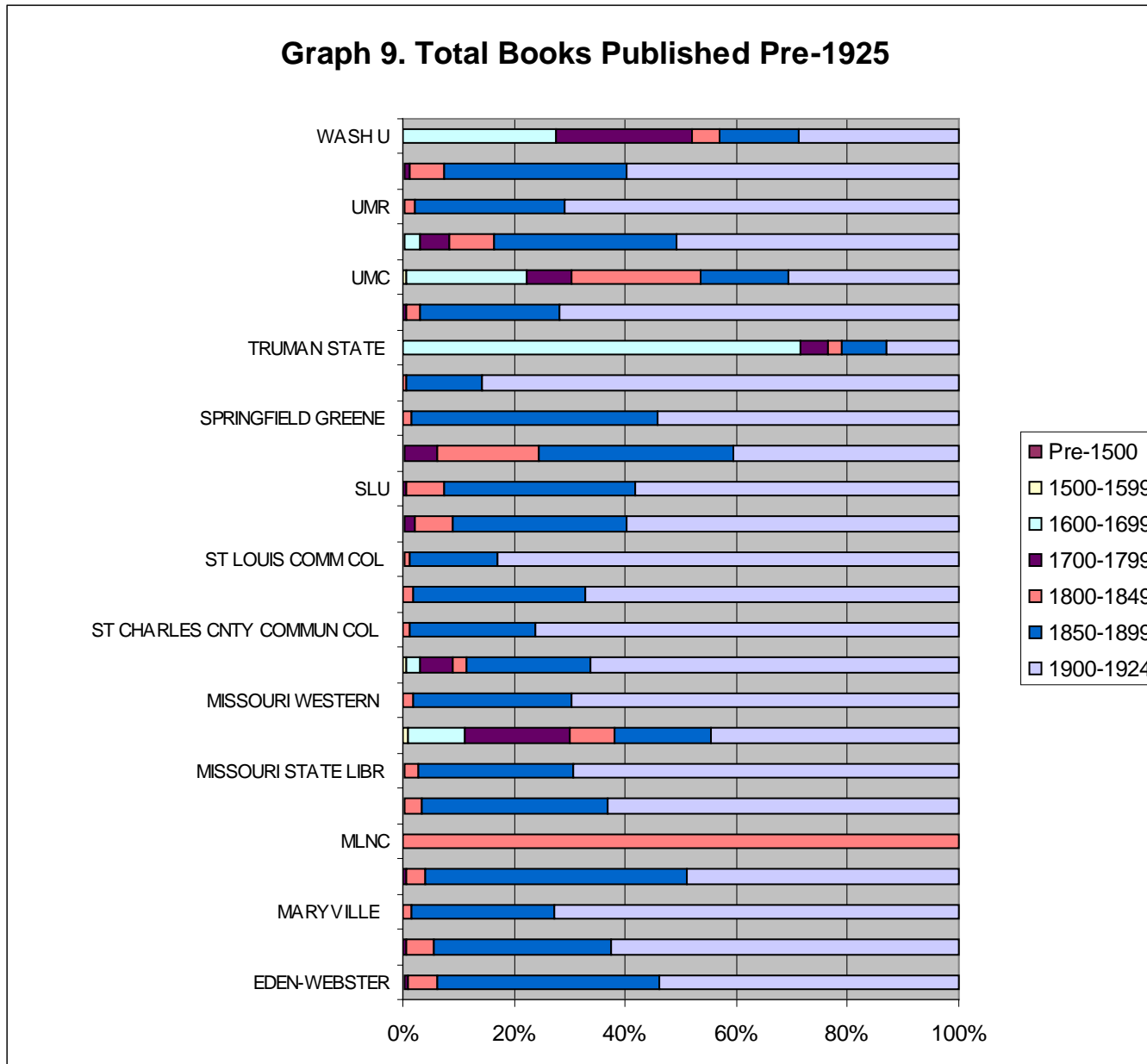


Graph 8. Uniquely Held Materials and Books by Division identifies pre-1925 book and non-book materials by division. The total number of uniquely held *materials* pre-1925 is 30,255 and the total number of uniquely held pre-1925 books is 21,357. The divisions, “unclassified” notwithstanding, with the highest number of uniquely held *materials* are Philosophy and Religion with 3867 unique items and Music with 2901 unique items.

The divisions, “unclassified” notwithstanding, with the highest number of uniquely held books are Philosophy and Religion with 3638 and Language, Linguistics and Literature with 2439.



Graph 9. Total books published pre-1925 identifies total books published for the periods Pre-1500, 1500-1599, 1600-1699, 1700-1799, 1800-1849, 1850-1899, and 1900-1924 by library.



V. Conclusion

In conclusion, while the first report includes a general overview of the status of collections in the libraries chosen for this project, it provides MOBIUS members with a snapshot of collections, as well as an opportunity to begin thinking about cooperative collection management in a broader context, and allows the ability to create benchmarks. For example, we learned that 20% of titles from the collections in the study are unique, and an additional 39% of titles are only duplicated 2-4 times throughout the group. The study also showed us an increase in the percentages of unique titles when comparing pre and post MOBIUS periods.

The overlap reports showed that when comparing like library collections on a one to one basis, collections duplicate each other at a much higher rate in the Research and Public libraries than the Liberal Arts libraries.

The pre-1925 collection analysis reports provide a point of reference for future collaborative digitization and weeding projects.

As we continue to move through this project we will use the data in this report as well, as future reports to meet the ultimate goal of improving collections and service to patrons throughout the state of Missouri.

Note: Attached please find an Appendix which includes 9 data tables that correspond to the 9 graphs in this report respectively.

APPENDIX

Table 1. Percentage Unique and Shared Titles by Institution

Uniqueness	Totals	Unique	Shared by 2	Shared by 3	Shared by 4	Shared by 5	Shared by 6	Shared by 7	Shared by 8	Shared by 9	Shared by 10	Shared by 11
EDEN-WEBSTER LIBR	158015	27059	20038	17007	13981	12086	10839	9635	8703	7687	6879	5870
KANSAS CITY PUB	374322	61649	56448	53208	48071	37814	25379	19380	15514	12744	10746	8884
MARYVILLE UNIV	62567	10461	7206	6279	5764	5195	4647	4039	3469	3006	2613	2135
MID-CONTINENT	422205	121809	73055	59288	46601	32214	19161	13927	11176	9242	8063	6629
MLNC	21	4	3	1	1	3	0	0	1	2	1	1
MISSOURI SOUTHERN	105659	12994	15856	11536	9344	9523	9295	7849	5978	4813	3932	3453
MISSOURI STATE LIBR	90335	9936	9514	12460	9955	9744	7357	7506	5744	3808	3163	2537
MISSOURI STATE UNIV	461020	60682	53660	57017	52823	50080	40798	33998	27330	21443	17078	13302
MISSOURI WESTERN	133644	13082	11941	11546	11888	11720	11189	10414	9529	8504	7377	6324
NORTHWEST	195892	16730	16280	16075	18853	26580	20610	18270	14256	10675	8772	7316
ST CHARLES COMMUN COL	42672	4167	3785	3429	3279	3368	3280	3161	2998	2673	2425	2166
SAINT LOUIS CNTY	293304	42759	40025	43139	40740	31058	19284	14639	11866	9993	8922	7499
ST LOUIS COMMUN COL	184719	16138	14921	15174	15947	16371	15703	14687	13632	12477	11138	9756
SAINT LOUIS PUB	569261	113393	100521	82283	66319	49180	33638	26532	21533	17886	14843	11740
SLU	553396	92200	71643	67000	60759	54301	47967	40785	30779	22967	17899	13705
SOUTHEAST	303232	33815	27784	30263	32099	34138	28750	24732	20800	17208	14068	11104
SPRINGFIELD GREENE	215153	37795	33836	34242	31253	22542	12221	8652	6823	5584	4842	3983
STEPHENS	104019	6121	6330	6935	7674	8344	8655	8815	8580	8061	7559	6555
TRUMAN STATE	368832	47500	32732	68321	33044	33940	29993	26127	22107	18306	14824	11681
UNIV OF CENTRAL	243743	36832	27578	25327	24816	25830	20140	17177	14413	12027	9828	7760
UMC	1402128	470795	229528	219809	131049	99223	69736	51688	36222	25714	19535	14582
UMKC	661065	138769	98719	86315	81484	65971	50237	39089	27197	19583	14809	11241
UMR	285065	64112	38868	34718	28708	26303	22938	18255	12033	8594	7043	5658
UMSL	627952	85207	91706	102672	84834	67703	51971	39712	27728	20070	15249	11672
WASHI U	1104903	269010	182305	195677	119902	91929	66956	50349	35357	25363	19282	14592
Total	8963124	1793019	1264282	1259721	979188	825160	630744	509418	393768	308430	250890	200145

Table 1. Unique and Shared Titles by Institution(cont.)

Uniqueness	Totals	Unique	Shared by 12	Shared by 13	Shared by 14	Shared by 15	Shared by 16	Shared by 17	Shared by 18	Shared by 19	Shared by 20	Shared by 21	Shared by 22
Libraries	0	0	0	0	0	0	0	0	0	0	0	0	0
EDEN-WEBSTER LIBR	158015	27059	4798	3841	3041	2187	1565	1058	718	466	275	162	84
KANSAS CITY PUB	374322	61649	6955	5298	4052	2878	1957	1320	886	551	302	173	80
MARYVILLE UNIV	62567	10461	1774	1482	1145	939	696	541	452	309	196	115	69
MID-CONTINENT	422205	121809	5495	4354	3528	2565	1759	1251	891	571	311	190	91
MLNC	21	4	0	0	1	1	1	0	1	0	0	0	0
MISSOURI SOUTHERN STATE	105659	12994	2735	2118	1685	1341	1010	758	565	384	225	153	79
MISSOURI STATE LIBR	90335	9936	2098	1796	1282	1061	809	579	385	268	146	102	57
MISSOURI STATE UNIV	461020	60682	9986	7393	5356	3733	2441	1578	1041	625	330	198	92
MISSOURI WESTERN STATE	133644	13082	5229	4170	3266	2482	1737	1234	861	539	305	185	86
NORTHWEST	195892	16730	5679	4558	3457	2622	1841	1239	894	559	314	188	88
ST CHARLES COMMUN COL	42672	4167	1859	1541	1260	969	706	520	408	273	180	129	63
SAINT LOUIS CNTY	293304	42759	6262	4877	3932	2837	1999	1345	929	571	313	189	90
ST LOUIS COMMUN COL	184719	16138	7872	6285	4837	3475	2394	1558	1052	634	340	200	92
SAINT LOUIS PUB	569261	113393	9179	6924	5225	3673	2458	1574	1052	638	342	200	92
SLU	553396	92200	10269	7515	5485	3754	2451	1578	1041	634	340	197	91
SOUTHEAST	303232	33815	8406	6368	4624	3212	2228	1443	963	597	317	190	88
SPRINGFIELD GREENE	215153	37795	3345	2602	2197	1658	1176	831	635	416	249	163	80
STEPHENS	104019	6121	5398	4345	3456	2479	1714	1154	791	492	285	164	78
TRUMAN STATE	368832	47500	8832	6726	4979	3500	2378	1527	1035	624	334	195	91
UNIV OF CENTRAL MISSOURI	243743	36832	6096	4645	3519	2591	1823	1288	883	557	308	184	86
UMC	1402128	470795	10642	7731	5611	3834	2474	1605	1059	633	336	195	91
UMKC	661065	138769	8334	6166	4409	3080	2125	1395	931	573	328	185	89
UMR	285065	64112	4668	3699	2856	2104	1564	1106	774	492	282	168	86
UMSL	627952	85207	8793	6427	4763	3398	2250	1503	1009	622	335	200	92
WASHI U	1104903	269010	10588	7751	5620	3797	2508	1595	1048	626	327	196	89
Total	8963124	1793019	155292	118612	89586	64170	44064	29580	20304	12654	7020	4221	2024

Graph 2. Total Unique and Shared Titles by Division

	Totals	Unique	Shared by 2-4	Shared 5-9	Shared 10-19	Shared by 20-24
1.Agriculture	118648	35156	55718	22943	4788	43
2.Anthropology	59811	8227	20629	20738	9948	269
3.Art & Architecture	341751	59921	129415	108260	43767	388
4.Biological Sciences	172536	31543	66882	56518	17281	312
5.Business & Economics	740025	129174	286595	243841	79200	1215
6.Chemistry	50396	8314	24078	16280	1724	0
7.Communicable Diseases & Miscellaneous	116	42	45	29	0	0
8.Computer Science	86913	18564	44970	19457	3901	21
9.Education	314418	59050	106891	112336	35700	441
10.Engineering & Technology	476678	126815	247389	87490	14796	188
11.Geography & Earth Sciences	146457	30533	53833	53104	8883	104
12.Government Documents	412437	90626	253678	67800	333	0
13.Health Facilities, Nursing & History	359	260	93	6	0	0
14.Health Professions & Public Health	1604	836	683	85	0	0
15.History & Auxiliary Sciences	1199382	234271	375220	359170	225265	5456
16.Language, Linguistics & Literature	1621951	255653	629201	501382	233154	2561
17.Law	325956	54301	121190	134827	15323	315
18.Library Science, Generalities & Reference	230619	42117	87000	69763	31577	162
19.Mathematics	121001	16428	50926	46428	7177	42
20.Medicine	340646	70640	150093	101591	18199	123
21.Medicine By Body System	250	151	94	5	0	0
22.Medicine By Discipline	1264	1000	204	60	0	0
23.Music	148307	18657	45209	55930	28302	209
24.Performing Arts	115849	10759	36155	48052	20822	61
25.Philosophy & Religion	545083	124961	225066	147698	47011	347
26.Physical Education & Recreation	116178	20659	52529	36882	6108	0
27.Physical Sciences	142893	26689	61793	40973	13373	65
28.Political Science	284285	51781	106788	93103	32299	314
29.Preclinical Sciences	414	260	133	21	0	0
30.Psychology	133798	18741	45863	51245	17657	292
31.Sociology	438437	52637	145315	170619	68697	1169
32.Unknown Classification	274662	194253	79513	884	12	0
Total	8963124	1793019	3503191	2667520	985297	14097

Table 3. Percentage of Unique Titles by Publication Date

Uniqueness	%total	%1990-99	%2000-
Agriculture	0.31197957	0.209424259	0.223008141
Anthropology	0.18569628	0.148316522	0.179029078
Art & Architecture	0.24348455	0.204738851	0.253537831
Biological Sciences	0.20422204	0.142727618	0.165215954
Business & Economics	0.20368092	0.1410088	0.171228836
Chemistry	0.18632241	0.150926446	0.235135796
Communicable Diseases & Miscellaneous	0.37288136	0.180327869	0.25
Computer Science	0.21747284	0.244477028	0.270681978
Education	0.20067982	0.166556587	0.226754165
Engineering & Technology	0.27583862	0.22147831	0.246116324
Geography & Earth Sciences	0.23030853	0.09766269	0.124340993
Government Documents	0.2195719	0.118302589	0.122925808
Health Facilities, Nursing & History	0.76590909	0.301204819	1
Health Professions & Public Health	0.54206161	0.147651007	0.514705882
History & Auxiliary Sciences	0.24920146	0.200895454	0.201831263
Language, Linguistics & Literature	0.24118612	0.205633689	0.177870368
Law	0.17688143	0.094738912	0.062378168
Library Science, Generalities & Reference	0.23777888	0.152324332	0.159308176
Mathematics	0.15695911	0.144649258	0.164798206
Medicine	0.21386762	0.178278689	0.219908224
Medicine By Body System	0.62361624	0.3	0.8125
Medicine By Discipline	0.79851301	0.646239554	0.854700855
Music	0.1949294	0.166884739	0.163592082
Performing Arts	0.12151134	0.106725997	0.109655578
Philosophy & Religion	0.31500546	0.271212646	0.270887592
Physical Education & Recreation	0.18565954	0.164420976	0.211838525
Physical Sciences	0.22360681	0.146865425	0.190220015
Political Science	0.21345773	0.16681609	0.200804608
Preclinical Sciences	0.66090713	0.233766234	0.6
Psychology	0.15922674	0.148316224	0.192544795
Sociology	0.13998592	0.10750984	0.121820996
Unknown Classification	0.73037282	0.643284834	0.621978234

Table 4. Total Overlap of Liberal Arts Libraries

Overlap	EDEN- WEBSTER LIBR	MARYVILLE UNIV OF ST LOUIS	MISSOURI SOUTHERN STATE UNIV- JOPLIN	MISSOURI STATE UNIV	MISSOURI WESTERN STATE UNIV	NORTHWEST MISSOURI STATE UNIV	SAINT CHARLES CNTY COMMUN COL LIBR	SAINT LOUIS COMMUN COL	SOUTHEAST MISSOURI STATE UNIV	STEPHENS COL	TRUMAN STATE UNIV	UNIV OF CENTRAL MISSOURI LIBR
EDEN-WEBSTER LIBR	158015	9784	10060	54379	22700	21789	7855	31183	38130	24966	40615	26515
MARYVILLE UNIV OF ST LOUIS	9784	62567	5714	21038	11697	10891	3774	13625	16173	8871	16736	12584
MISSOURI SOUTHERN STATE UNIV	10060	5714	105659	30977	14483	23023	5337	17016	23890	10030	26555	21291
MISSOURI STATE UNIV	54379	21038	30977	461020	58678	63533	16237	70972	122398	50956	125644	88045
MISSOURI WESTERN STATE	22700	11697	14483	58678	133644	27381	6605	33767	46077	24654	47896	33647
NORTHWEST	21789	10891	23023	63533	27381	195892	11090	38572	52879	20158	55570	41251
ST CHARLES COMMUN	7855	3774	5337	16237	6605	11090	42672	16186	11528	4782	13377	10568
ST LOUIS COMMUN COL	31183	13625	17016	70972	33767	38572	16186	184719	54387	30718	57788	42742
SOUTHEAST	38130	16173	23890	122398	46077	52879	11528	54387	303232	41154	99066	65601
STEPHENS	24966	8871	10030	50956	24654	20158	4782	30718	41154	104019	39542	25613
TRUMAN STATE	40615	16736	26555	125644	47896	55570	13377	57788	99066	39542	368832	69237
UNIV OF CENTRAL MISSOURI	26515	12584	21291	88045	33647	41251	10568	42742	65601	25613	69237	243743

Table 5. Total Overlap Among Research Libraries

	UMC	WTU	UMK	UMS	SLU	UMR
SLU	270976	260317	169071	175862	553396	83973
UMC	1402128	556216	316761	353407	270976	145016
UMKC	316761	311345	661065	230314	169071	74107
UMR	145016	129450	74107	97826	83973	285065
UMSL	353407	322717	230314	627952	175862	97826
Wash U	556216	1104903	311345	322717	260317	129450

Table 6. Percentage of Overlap Among Public Libraries

Overlap	SAINT LOUIS PUBLIC	MID- CONTINENT	KANSAS CITY PUB	St. Louis County	SPRINGFIELD GREENE	MISSOURI STATE LIBR
KANSAS CITY PUB	158883	116034	374322	105471	73190	26157
MID-CONTINENT	186774	422205	116034	134152	102733	18048
MISSOURI STATE LIBR	28028	18048	26157	15266	11920	90335
SAINT LOUIS CNTY	159202	134152	105471	293304	85729	15266
SAINT LOUIS PUB LIBR	569261	186774	158883	159202	110453	28028
SPRINGFIELD GREENE	110453	102733	73190	85729	215153	11920

Table 7. Books Published Pre-1925 by Division

Publication Date	Totals	Pre-1500	1500-1599	1600-1699	1700-1799	1800-1849	1850-1899	1900-1924
Divisions	664949	59	1639	116890	56657	72854	147712	269138
Agriculture	5410	0	12	320	138	277	1173	3490
Anthropology	2445	0	2	156	19	81	667	1520
Art & Architecture	13889	0	5	108	188	715	3468	9405
Biological Sciences	8709	0	5	96	87	356	2362	5803
Business & Economics	22942	1	47	1104	339	1127	4709	15615
Chemistry	1963	0	3	123	27	101	435	1274
Communicable Diseases & Miscellaneous	2	0	0	0	0	1	0	1
Computer Science	18	0	0	0	0	0	0	18
Education	11146	0	1	172	183	490	2399	7901
Engineering & Technology	16027	0	16	408	143	581	3464	11415
Geography & Earth Sciences	8011	1	6	234	129	620	2574	4447
Government Documents	173	0	0	0	0	2	28	143
Health Facilities, Nursing & History	81	0	2	16	39	4	6	14
Health Professions & Public Health	39	0	0	0	4	3	9	23
History & Auxiliary Sciences	144471	7	181	12142	4998	12996	48299	65848
Language, Linguistics & Literature	126955	19	525	9705	8492	6778	34042	67394
Law	5907	1	142	1974	549	602	1088	1551
Library Science, Generalities & Reference	27922	0	34	15055	1262	1919	3719	5933
Mathematics	3238	0	7	253	45	205	1093	1635
Medicine	4624	0	31	1064	155	363	734	2277
Medicine By Body System	2	0	0	0	0	0	0	2
Medicine By Discipline	18	0	0	0	0	0	6	12
Music	6251	0	4	87	149	158	1687	4166
Performing Arts	2377	0	1	29	57	140	647	1503
Philosophy & Religion	76593	9	520	22290	5204	6208	17845	24517
Physical Education & Recreation	1880	1	1	78	27	84	522	1167
Physical Sciences	7926	0	14	428	436	655	2136	4257
Political Science	12680	0	11	1053	678	813	2730	7395
Preclinical Sciences	52	0	0	0	7	9	19	17
Psychology	3647	0	16	439	67	133	667	2325
Sociology	11185	0	18	537	233	509	2634	7254
Unknown Classification	138366	20	35	49019	33002	36924	8550	10816

Table 8. Unique Pre-1925 Materials and Books by Division

Publication Date	Unique materials	Unique books
All Divisions	30255	21357
Agriculture	225	116
Anthropology	51	36
Art & Architecture	472	356
Biological Sciences	84	66
Business & Economics	1385	1020
Chemistry	31	30
Communicable Diseases & Miscellaneous		
Computer Science	6	
Education	871	328
Engineering & Technology	824	539
Geography & Earth Sciences	434	211
Government Documents	159	1
Health Facilities, Nursing & History	1	
Health Professions & Public Health	4	
History & Auxiliary Sciences	2654	2085
Language, Linguistics & Literature	2521	2439
Law	439	369
Library Science, Generalities & Reference	453	220
Mathematics	76	66
Medicine	146	76
Medicine By Body System	2	
Medicine By Discipline	15	
Music	2901	159
Performing Arts	136	26
Philosophy & Religion	3867	3638
Physical Education & Recreation	94	37
Physical Sciences	106	92
Political Science	428	274
Preclinical Sciences		
Psychology	78	75
Sociology	423	254
Unknown Classification	11369	8844

Graph 9. Total books published pre-1925

	Totals	Pre-1500	1500-1599	1600-1699	1700-1799	1800-1849	1850-1899	1900-1924
Libraries	664949	59	1639	116890	56657	72854	147712	269138
EDEN-WEBSTER	12802	1	14	38	55	679	5128	6887
KANSAS CITY PUB	26072	5	1	4	124	1281	8314	16343
MARYVILLE	2603	1	0	0	1	35	672	1894
MID-CONTINENT	24037	5	0	3	106	838	11333	11752
MLNC	1	0	0	0	0	1	0	0
MISSOURI SOUTHERN STATE	1332	1	0	0	4	41	445	841
MISSOURI STATE LIBR	1430	0	0	0	4	36	398	992
MISSOURI STATE U	10746	0	110	1080	2046	840	1889	4781
MISSOURI WESTERN	2336	0	0	0	3	37	671	1625
NORTHWEST	3244	2	23	71	192	81	724	2151
ST CHARLES COMMUN COL	88	0	0	0	0	1	20	67
ST LOUIS CNTY	2743	1	0	0	3	47	850	1842
ST LOUIS COMM COL	483	0	0	0	1	5	76	401
SAINT LOUIS PUBLIC	36463	6	9	129	682	2482	11401	21754
SLU	29722	5	10	31	93	2047	10243	17293
SOUTHEAST	13445	1	2	59	778	2450	4705	5450
SPRINGFIELD GREENE	2654	2	0	0	1	41	1170	1440
STEPHENS	3230	0	0	0	2	17	442	2769
TRUMAN STATE	48655	0	8	34829	2313	1268	3853	6384
UNIV OF CENTRAL MISSOURI	8616	2	0	6	45	205	2182	6176
UMC	199327	12	1294	43243	15659	46832	30951	61336
UMKC	41280	5	116	1160	2223	3263	13541	20972
UMR	7307	0	1	1	18	136	1971	5180
UMSL	55337	5	13	158	443	3457	18196	33065
WASH U	130996	5	38	36078	31861	6734	18537	37743

