

**Middle East Library Partnership Project
Proposal to the Mellon Foundation
Charles Kurzman
March 25, 2014**

Proposal Narrative

1. Internationalization and American Academic Libraries

The proposed project grows out of the Task Force on Global Dimensions of Scholarship and Research Libraries (<http://blogs.library.duke.edu/globalscholarship>), convened by Duke University and the Center for Research Libraries (CRL) and supported by the Mellon Foundation. The Task Force brought together experts from around the United States and beyond, who issued a series of recommendations in Spring 2013 for next steps in the internationalization of library collections and access to global research materials more broadly.¹

As noted in the Task Force's deliberations and report, internationalization has been a major priority for academic institutions and U.S. education policy for many years. This priority was the impetus for the federal government's first sustained investment in higher education, the National Defense Education Act of 1958, which declared that "the security of Nation" required more training in foreign languages.² This priority has been reaffirmed numerous times by federal agencies and task forces, most recently in the Department of Education's "International Strategy" of 2012: "In today's globalized world, an effective domestic education agenda must address global needs and trends and aim to develop a globally competent citizenry."³ Federal funding for international education has fluctuated over the decades,⁴ and the conceptualization of "international education" has taken many forms, from a focus on foreign languages to a focus on area studies knowledge to a focus on "global competencies." Yet the importance of an increased international component in American education has remained a recurrent theme in federal and educational priorities for more than half a century.

Library collections have played a vital role in meeting the need for international education. These collections have served the growing demand for instructional and research materials, and the academic libraries in the United States, taken collectively, now constitute the most comprehensive repository of global knowledge that humanity has ever compiled.

However, growth of these global library collections has stalled in recent years. Beginning in approximately 2000, the number of international books in American academic libraries has stagnated, after four decades of steady growth (see Figure 1). This finding, presented to the Duke/CRL Task Force by Charles Kurzman, the principal investigator in this proposal, is a

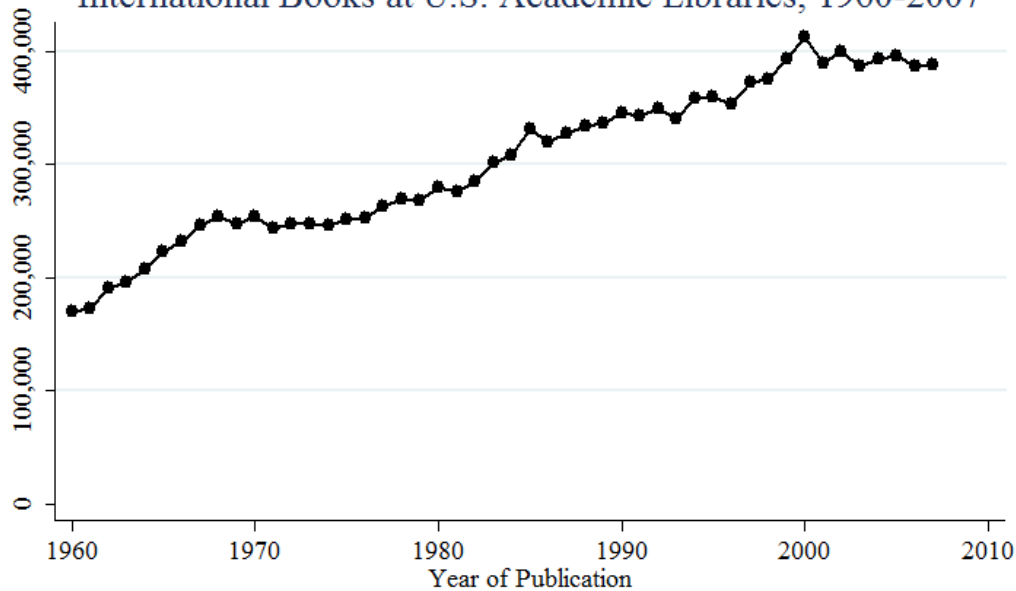
¹ Deborah Jakubs, "The Global Dimensions of Scholarship and Research Libraries: Finding Synergies, Creating Convergence," Duke University/Center for Research Libraries Task Force on Global Dimensions of Scholarship and Research Libraries, April 2013.

² National Defense Education Act of 1958, Public Law 85-864, Title I, Section 101.

³ "Succeeding Globally Through International Education and Engagement: U.S. Department of Education International Strategy, 2012-16," November 2012.

⁴ Charles Kurzman, "Crippling International Education," April 26, 2013, <http://kurzman.unc.edu/international-education>.

Figure 1.
International Books at U.S. Academic Libraries, 1960-2007



Note: Books published outside of the U.S. and held by at least one U.S. academic library.
Data: 26,862,224 book records, Worldcat database. We thank the OCLC for sharing the data for this analysis.

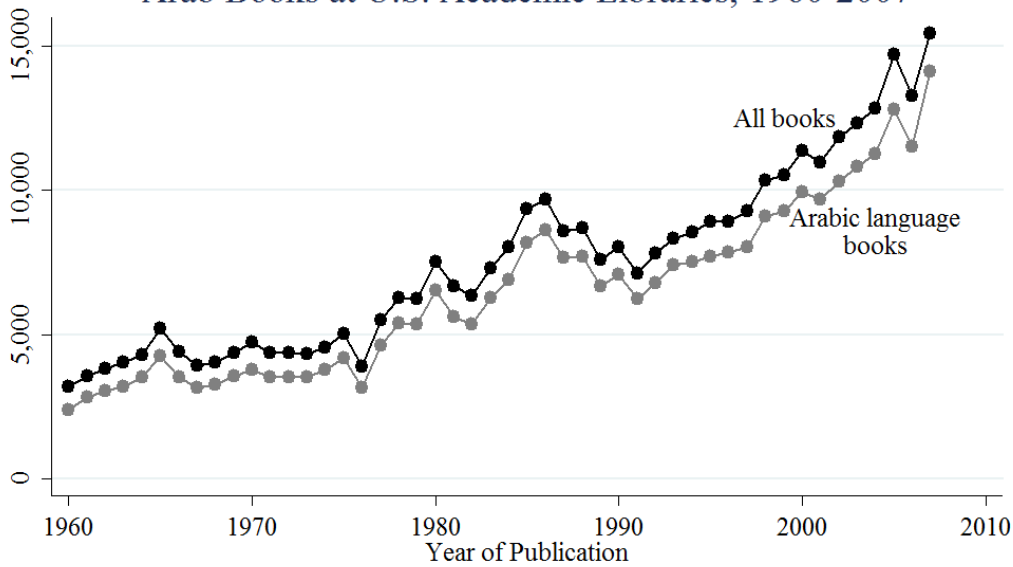
troubling indicator of the financial limits that libraries now face. In a world of ever-expanding information flows, library budgets have not kept pace with rising costs.

This plateau in international library collecting is not visible for all regions of the world. The growth in books from Arab countries, in particular, has continued to grow since 2000, with annual collecting doubling between 1992 and 2007 (see Figure 2). This increase reflects the growth in scholarly and public-policy interest in the Middle East, both before and after the violence of September 11, 2001. As of 2007, the number of books from Arab countries collected by American academic libraries was in the middle of world regions of comparable populations (200-600 million) – one eighth of the total from Western Europe (even excluding the United Kingdom), 40 percent of Eastern Europe, half of Latin America, slightly higher than Southeast Asia, and more than twice as high as Sub-Saharan Africa.

The recent rise in library collecting from Arab countries should not overshadow the historic lack of Arab materials in U.S. academic libraries. Until recently, books from Arab countries were second lowest of any region of comparable population, just above Sub-Saharan Africa. For decades, books from Arab countries totaled two thirds of books from Southeast Asia, one third or less than books from Latin America books, and one fifth or less than books from Eastern Europe (see Figure 3). In one year, 1976, U.S. academic libraries purchased fewer books from Arab countries than from Sub-Saharan Africa. These trends suggest that there may be a considerable backlist of Arab books not held by U.S. academic libraries, and reinforce the comments by numerous participants in the Duke/CRL Task Force that a large portion of the published works from Arab countries are not held by any U.S. academic library. That view underlies the Task

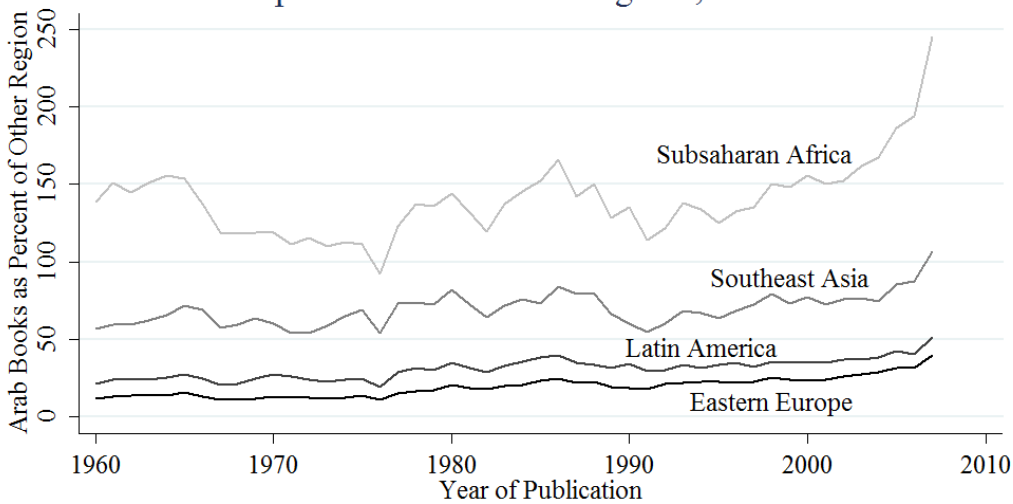
Force's recommendation that libraries be more proactive and creative in building their international collections.

Figure 2.
Arab Books at U.S. Academic Libraries, 1960-2007



Note: Books published in Arab countries and held by at least one U.S. academic library.
Dates refer to year of publication, not year of acquisition.
Data: 360,635 book records, Worldcat database. We thank the OCLC for sharing the data for this analysis.

Figure 3.
Arab Books at U.S. Academic Libraries
Compared with Selected Regions, 1960-2007



Note: Ratio of books published in Arab countries to books published in regions of comparable population, held by at least one U.S. academic library.
Dates refer to year of publication, not year of acquisition.
Data: 15,792,417 book records, Worldcat database. We thank the OCLC for sharing the data for this analysis.

However, it is currently difficult to estimate the scale of the Arab publications missing from U.S. academic libraries, much less the individual items that are missing, and that uncertainty is another reason for exploring partnerships. Data on book publication in Arab countries are severely incomplete, but several estimates suggest that 12,000 or more books were published each year from the mid-1990s through the early 2000s:

Figure 4. Estimates of the Number of Books Published in Arab Countries			
Source	Number of Arab countries included	Years included	Estimated number of books published per year
Arab Human Development Report (2003) ⁵	8	1990s	11,893
UNESCO Institute of Statistics (2007) ⁶	12	1995-1999	11,924
Frankfurter Buchmesse (2010) ⁷	5	2002-2004	12,284

These estimates are strangely similar to one another, given the different number of countries covered (out of 19 Arab-majority countries). If we accept these estimates as reasonable, notwithstanding the omission of the rest of the Arab region, then U.S. academic libraries were collecting only two thirds of the books published in Arab countries in the early 1990s.

Ideally, we would be able to compare U.S. library holdings with Arab library holdings to identify material that has gone uncollected in the United States. For Arab countries, this procedure is challenging. Not all libraries in the region have electronic catalogs; not all libraries have made those catalogs accessible outside of the library building; and not all of the accessible catalogs are in formats that allow direct comparison with catalogs in the United States. One of the goals of the proposed project is to assess the status of each of these elements for libraries in Arab countries, so as to identify challenges and opportunities for greater integration of library catalogs in the future.

There are almost 800 libraries in the Arab region reporting holdings of more than 50 million bound books, according to *The Directory of Middle East & North African Libraries* (2011).⁸

⁵ *Arab Human Development Report 2003: Building a Knowledge Society* (New York: United Nations Development Programme, Regional Bureau for Arab States, 2003), Table A-12, pp. 204-206, “Number of book titles (per million people), 1990s.” I have multiplied the rate per million by 1995 population estimates from *World Population Prospects: The 2010 Revision*, CD-ROM Edition (New York: United Nations, Department of Economic and Social Affairs, Population Division, 2011). It should be noted that the total of 11,893 is almost double the controversial figure presented in the text of the report: “in 1991, Arab countries produced 6,500 books” (p. 77). So far as I know, nobody has publicly identified this discrepancy between the figures in the text and the appendix. For a review that expresses suspicion about the report’s figures on Arab book production, but offers no alternative estimates, see Eugene Rogan, “Arab Books and Human Development,” *Arab Studies Quarterly*, Vol. 26, No. 2, Spring 2004, pp. 67-79.

⁶ UNESCO Institute for Statistics, “Table 21: Historic Data (1995-1999): Book production: Number of titles by UDC classes,” May 2007, <http://stats.uis.unesco.org/unesco/TableViewer/tableView.aspx?ReportId=5594>.

⁷ Frankfurter Buchmesse, “Book Markets,” May 2010, http://www.book-fair.com/en/international/book_markets.

⁸ *The Directory of Middle East & North African Libraries*, 2nd ed. (Sydney, Australia: Asia Pacific InfoServ Pty Ltd, 2011).

Preliminary analysis of this directory, using Python text-analysis tools to extract information from an electronic version of the directory, finds that 378 of these libraries, just under half, libraries report having a web address, more than double the 175 library websites identified by a study published in 2005.⁹

Figure 5. Libraries in Arab Countries			
Country	Libraries	Websites	Books
Algeria	79	41	4,247,289
Bahrain	25	19	765,000
Egypt	144	44	13,324,363
Iraq	31	9	2,742,700
Jordan	38	17	3,282,995
Kuwait	24	18	1,199,945
Lebanon	52	26	3,336,586
Libya	41	11	1,015,700
Morocco	82	31	3,481,575
Oman	23	18	395,900
Palestine	21	14	1,093,800
Qatar	15	9	4,598,480
Saudi Arabia	37	30	5,314,170
Syria	20	7	843,705
Tunisia	49	10	5,296,500
United Arab Emirates	85	69	3,113,645
Yemen	12	5	1,088,000
Total	778	378	55,140,353

As one would expect, larger libraries are more likely than smaller libraries to have a website – 17 of the 20 libraries with holdings of 500,000 books or more have websites, and libraries with websites account for just over two thirds of all book holdings in the region.

Holdings include books published in the United States and elsewhere, and we do not know yet how many books in these libraries are also held in American libraries. Only 53 libraries in Arab countries are members of OCLC, the international consortium of online library catalogs. Of the 2 billion records in the OCLC’s Worldcat catalog (<http://worldcat.org>), fewer than 2 million are drawn from libraries in the Arab region, and most of these records are not fully integrated with the rest of the catalog.¹⁰ One set of activities of the proposed project examines technical and institutional barriers to this integration.

2. International Partnerships

⁹ Sharif Kamal Shahin, “Faharis al-maktabat al-‘arabiyya al-mutaha ‘abr shabakat al-intirnit” (Arab Library Catalogs Available on the Internet), *Cybrarians Journal*, No. 4, March 2005, <http://www.journal.cybrarians.org>.

¹⁰ “OCLC partners with King Abdulaziz Public Library in Saudi Arabia to make Arabic-language resources available through WorldCat.org,” November 29, 2011, <http://www.oclc.org/news/releases/2011/201169.en.html>.

One of the Duke/CRL Task Force's three main sets of recommendations involved library partnerships: given the huge growth of informational materials in recent years, coupled with declining resources for library collections, libraries have already made great strides in moving from single-institution collection strategies to regional and national-level partnerships. The next step, the Task Force proposed, is concerted attention to international partnerships that would benefit not just American research libraries but also libraries abroad, especially in countries where resources for library collections are especially limited.

Among the recommendations were:

- Pursue international activities within existing and new “global” programs by recruiting participants (and leaders) from outside the United States.
- Engage more fully with libraries and kindred organizations beyond the United States and Canada through umbrella organizations such as the Association of Research Libraries (ARL) and the Association of College and Research Libraries (ACRL).
- Foster research library collaborations with non-U. S. institutions and particularly through universities' international offices and campuses.
- Develop a better understanding of the potential roles and contributions of the International Federation of Library Associations and Institutions (IFLA), national libraries, foreign universities, and other organizations as partners in international digital initiatives.
- Explore international partnerships in the realms of user support, technical processing, and preservation, as well as collections and content.
- Explore collaborations that have arisen in other countries and regions (for example Germany's distributed responsibilities for area acquisitions, European Union projects, etc.) as a basis for their further extension and also as possible models for new regional or international initiatives.
- Develop an inventory of successful collaborations and identify areas in which new partnerships would be beneficial.

The proposed project will explore these possibilities through collaboration between two professional associations of librarians:

- The Middle East Librarians Association (MELA, <http://mela.us>), based in the United States, was established in 1972. MELA members meet annually, in conjunction with the annual conference of the Middle East Studies Association, to discuss trends, projects, collections, and services related to Middle Eastern studies. The association has more than 100 members, most of them affiliated with academic libraries in the U.S. The principal investigator for the proposed project was the keynote speaker at the MELA conference in 2012, where he presented preliminary data on the trends described in this proposal and built relationships for ongoing professional collaborations.
- The Arab Federation for Libraries and Information (AFLI, <http://arab-afli.org>), currently based in Saudi Arabia, was established in Tunisia in 1986. It is a far larger organization than MELA, with several thousand members, and its annual meeting brings together hundreds of librarians to discuss trends and challenges in librarianship in the region.

The current and past presidents of both organizations have agreed to participate in the project and serve on its advisory board:

- Christof Galli, Middle East librarian at Duke University and president of the Middle East Librarians Association.
- David Hirsch, Middle East librarian at UCLA and past president of the Middle East Librarians Association.
- Khaled al-Halabi, professor of library and information science at Cairo University in Egypt and president of the Arab Federation for Libraries and Information.
- Hasan al-Sereihy, professor of information science at King Abdulaziz University in Saudi Arabia and past president of the Arab Federation for Libraries and Information.
- Jasim Jerjees, professor of library and information sciences at the American University in Dubai and founding executive director of the Arab Federation for Libraries and Information.

Additional board members include other individuals who are active in forging partnerships between American and Arab libraries:

- Mohamed Hamed, the Middle East librarian at UNC-Chapel Hill, who is active in both MELA and AFLI and serves as this project's liaison to AFLI.
- Barbara Moran, professor of library and information science at UNC-Chapel Hill and director of Educating Librarians in the Middle East (ELIME), the first graduate training project to link library schools in the U.S. and the Arab region (<http://elime.web.unc.edu/about>).
- William Kopycki, Cairo field director for the Library of Congress.
- Arthur Smith, OCLC director for the Middle East and India.
- Seteney Shami, founder and director of the Arab Council for the Social Sciences, based in Beirut, Lebanon, and a member of the steering committee of the Duke/CRL Task Force.

The board includes library professionals and other specialists from three universities in the United States, three universities in the Middle East, and three non-university organizations. The parameters of the proposed project took shape through a conference call in August 2013 and subsequent communications by e-mail and telephone.

3. Project Activities

The project will pursue three methods to assess and improve the state of library collaboration between the Middle East and the United States:

a. Surveys

The first activity, to be conducted in the summer and fall of 2014, involves an online survey of the membership of MELA and AFLI to inquire about the libraries' current state of international collaborations, examples of innovative collaborative practices, the level of desire for further collaboration, and the challenges that collaboration has faced or may face. The survey will be

conducted using the Qualtrics survey tool, which is licensed for use by the University of North Carolina at Chapel Hill (<https://software.unc.edu/qualtrics>). The project's procedures for obtaining informed consent and managing confidentiality will require approval by UNC's Institutional Review Board. The survey will solicit suggestions for collaboration and gauge interest in several particular forms of collaboration that might be undertaken if enthusiasm is widespread and future funding can be secured, including:

- Workshops for librarians in the Middle East on best practices in librarianship, perhaps held in conjunction with AFLI's annual conference, or perhaps held in multiple sites in various countries.
- Interlibrary borrowing arrangements, especially through digitization.
- Joint collection development plans.
- Partnerships in cataloging, perhaps training and hiring librarians in the Middle East to catalog Arabic materials for U.S. libraries.
- Partnerships in archiving of born-digital materials, perhaps combining the local knowledge of librarians in the Middle East for the identification of important materials and the digital archive technologies of libraries in the United States for storage and access of these materials.

b. Delegations

A second activity is to bring together delegations of leaders from MELA and AFLI to develop joint strategies for collaboration. Despite some overlap in membership and personal ties, the two organizations have not engaged one another with a view toward joint action on issues facing Middle East librarianship.

The project would bring five leading librarians from the Arab region to Washington, D.C., for a week-long visit in November 2014 to coincide with MELA's annual meeting. Three members of the delegation will be the AFLI leaders who have agreed to serve on the project's advisory board. Two additional members are yet to be determined – we hope to include two leaders of the Arabic Union Catalog (<http://aruc.org>), based in Saudi Arabia, which is the largest interlibrary collaboration in the Arab region to date, and has been the primary interlocutor for the OCLC in the region. Their participation in the project has not yet been confirmed. All of the delegation members have worked or studied in the United States or the United Kingdom and are fluent in English.

The second delegation would involve a week-long trip by U.S. librarians to the Middle East in February 2015 to meet with AFLI leaders and follow up on the initiatives broached during the first delegation visit. The ideal timing for this trip would coincide with AFLI's annual meeting, but it is scheduled for the end of November, only two weeks after the MELA meeting. Instead, AFLI leaders have agreed to host a special meeting of AFLI board members to engage the delegation in February 2015 in Cairo, Egypt, to coincide with the annual Cairo Book Fair, the oldest and largest publishing event in the Arab region. Despite political upheavals, the Cairo Book Fair has continued to be held each year at the Cairo International Fair Grounds. Cairo is also the home of Professor al-Halabi, the current president of AFLI. The preliminary list of delegation members includes Charles Kurzman, the principal investigator; Mohamed Hamed, the

project's liaison to AFLI; and Christof Galli and David Hirsch, current and past presidents of MELA. The project will subsidize travel by four AFLI leaders to Cairo for this meeting.

Items on the agenda for the delegations will include:

- Reviewing the results of the project's survey of MELA and AFLI members.
- Reviewing preliminary results of the project's survey of technical standards at Middle East libraries (to be discussed in the next section of this proposal).
- Identifying areas for formal collaboration between MELA and AFLI.
- Identifying institutions and individual librarians who might be especially well-suited for pilot projects and innovative collaborations.
- Airing and addressing concerns about challenges to increased collaboration.

c. Technical assessment

Alongside its other activities, the project will examine two technical challenges facing digital cataloging of Middle East material, one focusing on Arab countries and one focusing on the United States. The first aspect involves assessing the standards currently in use in libraries in Arab countries. Libraries in the region that have digital catalogs use a variety of computer systems for the development, storage, search, and presentation of bibliographic records, many of which are not directly compatible with one another or with the systems used by the OCLC and libraries in the United States. This issue has prompted concern since the early years of digitized library catalogs in the Middle East.¹¹

Identifying which libraries use which systems is a first step toward approaching library leaders to encourage standardization, which is one possibility for future joint activities by MELA and AFLI. Standardization will facilitate entry of Middle East library catalogs into Worldcat, which will help make the heritage and collections of Middle Eastern libraries more visible to scholars around the world.

Past studies have examined Arab library websites by hand in order to obtain information about their systems and standards,¹² and this project will begin with a similar approach. The graduate research assistant will access a sample of 10 library websites and examine the availability of information about the structure of the catalog metadata and the systems and standards used to develop the catalog. Often this information is visible in the source code of the bibliographic records presented by the library's server to users on the Internet; sometimes this information may be deduced from the characteristics of the records.

The graduate research assistant will then develop an automated process to collect bibliographic information from as many as possible of the 378 library websites identified by *The Directory of*

¹¹ Zahiruddin Khurshid, "ARABMARC: A Long Way to Go," *World Libraries*, Vol. 8, No. 2, Spring 1998, <http://www.worlib.org>; Zahiruddin Khurshid, "From MARC to MARC 21 and Beyond: Some Reflections on MARC and the Arabic Language," *Library Hi Tech*, Vol. 20, No. 3, 2002, pp. 370-377.

¹² Shahin, "Faharis al-maktabat al-'arabiyya"; Zayn 'Abd al-Hadi, "Wasa'if al-bayanat (Metadata) fi muwaqi' al-maktabat al-'arabiyya fi kul min misr wa'l-sa'udiyya" (Metadata in Arab Library Websites in Egypt and Saudi Arabia), *Cybrarians Journal*, No. 4, March 2005, <http://www.journal.cybrarians.org>.

Middle East & North African Libraries and identify the systems and standards used at each of them. Where this information cannot be obtained from the website, the project will contact information technology staff members at the relevant libraries. This component of the project will result in a dataset of libraries in Arab countries with online catalogs, the metadata available in each catalog, the bibliographic standard used in each catalog, and the computer system used to develop the catalog.

A second technical challenge the project will explore involves the problem of Romanized records of Arabic-language materials in U.S. library collections, another factor that has hindered the integration of Arab library catalogs into the Worldcat system. “Romanized” records are catalog metadata, such as titles and author names, that are transliterated into the Roman alphabet. This has been common practice for decades, a holdover from the era before multilingual Unicode character sets when U.S. library servers could only handle Latin scripts. Most Arabic-language materials in Worldcat are still represented without Arabic characters. As a result, digitized library catalogs that use Arabic script, as is common in Arab countries, cannot be merged in straightforward way with Worldcat records, except for material that includes ISBN/ISSN numbers or other indices from consortial or national registries. In addition, Romanized records present a hurdle for library catalog users, who are required to be familiar with the Library of Congress’s Romanization system – and not the Romanization systems used in the Middle East or elsewhere -- in order to find these materials. Library users in the Middle East may be unable to find Arabic-language materials in Worldcat when they search with Arabic script.

Efforts are underway in MELA to add Arabic-script metadata to Arabic-language catalog records, primarily through manual data entry. However, the MELA Committee on Cataloging has also developed a preliminary version of automated procedures that would de-Romanize records at a faster pace.¹³ The graduate research assistant will contact the MELA Committee on Cataloging in order to assess the strategies they are pursuing and the progress they have made.

The graduate research assistant will also contact researchers working on automated Arabic-English transliteration systems – not specifically designed for library catalogs – in order to learn whether their methods might be applicable to bibliographic material. Leaders in this field include teams of researchers at GEOLSemantic in Paris,¹⁴ the Laboratoire d’Informatique de l’Université du Maine in France¹⁵ and Microsoft.¹⁶

The graduate research assistant will test the accuracy of each of these de-Romanization approaches with a sample set of 1,000 library records that have already been de-Romanized by

¹³ Mark Muehlhaeusler, “A Process for Batch-Converting Romanized Text to Arabic Script in Bibliographic Records,” presentation at the annual meeting of the Middle East Librarians Association, San Diego, California, November 16, 2010.

¹⁴ H. Saadane et al., “Transcription of Arabic Names into Latin,” pp. 857-866 in *6th International Conference on Sciences of Electronics, Technologies of Information and Telecommunications (SETIT)*, March 21-24, 2012.

¹⁵ Walid Aransa, Holger Schwenk, and Loic Barrault, “Semi-supervised Transliteration Mining from Parallel and Comparable Corpora,” pp. 185-192 in *Proceedings: IWSLT 2012, International Workshop on Spoken Language Translation*, December 6-7, 2012, Hong Kong University of Science and Technology, <http://hltc.cs.ust.hk/iwslt>.

¹⁶ Achraf Chalabi and Hany Gerges, “Romanized Arabic Transliteration,” pp. 89-96 in *Proceedings of the Second Workshop on Advances in Text Input Methods*, December 15, 2012, Mumbai, India, <http://aclweb.org/anthology/W/W12/#4800>.

hand in Worldcat. This component of the project will result in a review of the state of the art of de-Romanization techniques.

4. Project Staffing

The principal investigator for the project is Charles Kurzman, professor of sociology and co-director of the Carolina Center for the Study of the Middle East and Muslim Civilizations at UNC-Chapel Hill. Kurzman is author of three books in Middle East studies and editor of two anthologies in Islamic studies, for which he used dozens of libraries and archives in the Middle East and more than a hundred libraries and archives around the world. He served for a decade as an elected faculty representative to the Administrative Board of the Library of UNC-Chapel Hill, and was a participant and steering group member of the Duke/CRL Task Force on Global Dimensions of Scholarship and Research Libraries. He will be responsible for designing and analyzing the survey of MELA and AFLI members, in consultation with the project's advisory board; supervising the project's graduate research assistant; organizing and working with the delegations of MELA and AFLI leaders; and writing the project report, which will include recommendations for future collaborations between libraries and librarians in the United States and Arab countries.

The project's graduate research assistant, John D. Martin III, is a doctoral student at the School of Information and Library Sciences at UNC-Chapel Hill and one of the inaugural cohort of fellowship recipients of the ELIME graduate program. He is fluent in Arabic and is also an accomplished computer programmer. Mr. Martin will be responsible for the technical assessments and for managing the survey of MELA and AFLI members.

The project's liaison to AFLI, Mohamed Hamed, is the Middle East librarian for UNC-Chapel Hill and an active member of both MELA and AFLI. He holds a B.A. and M.A. in library and information science from Cairo University in Egypt and previously worked as a senior cataloging and outsourcing supervisor at the library of the American University in Cairo. He will work 10 percent time on the project to make arrangements with AFLI for the survey of its membership and the delegation visits.

Administrative assistance for the project will be provided by a staff member (to be determined) at the Odum Institute for Research in Social Science at UNC-Chapel Hill. The Odum Institute, founded in 1924, is the oldest university-based interdisciplinary social-science research institute in the United States. It currently manages dozens of research grants, as well as providing workshops and individualized consulting services for UNC researchers on quantitative and qualitative data and methods, a graduate certificate program in Survey Research Methods, a world-renowned data archive, and support for the development of grant proposals and management of grant awards. The administrator will work 4 hours per week at \$20 per hour, plus benefits, to manage travel arrangements for the delegations and the project's finances.

5. Intellectual Property

The project may develop two sets of algorithms that would be subject to an intellectual property agreement between the Mellon Foundation and the University of North Carolina at Chapel Hill. One set of algorithms involves the automated analysis of on-line library catalogs in the Middle

East, and the other involves de-Romanization of records for Arabic-language materials in U.S. library catalogs. These algorithms will be posted on the project website at the University of North Carolina at Chapel Hill and made freely available to users under Creative Commons Licensing. The project will rely on guidance from the Scholarly Communications Office at the UNC Libraries (<http://library.unc.edu/scholcom>), which has been active in promoting open access.

6. Reporting

Charles Kurzman, the principal investigator, will provide narrative and financial reports to the Mellon Foundation within three months after the end of the grant. In keeping with the Mellon Foundation's Grant Reporting Guidelines (http://www.mellon.org/grant_programs/grantmaking-guidelines-procedures/grant-reporting-guidelines), the narrative portion of the report will include:

- a. The grantee's legal name and mailing address and full contact details of the principal investigator or project leader;
- b. The Foundation's grant reference number;
- c. The exact period covered by the report;
- d. A 3-6 page executive summary of the activities during the reporting period setting forth:
 - a description of the project and purpose of the grant;
 - a summary of progress made and significant accomplishments;
 - any setbacks or challenges;
 - significant board, management, or staff changes;
 - plans and goals for the upcoming year;
- e. A list or description of any recent evaluations, publications, news articles, or other materials related to the grant;
- f. A narrative explanation of any significant variances (variance of more than 10 percent and above \$500) between proposed spending and actual spending in each category;
- g. The original signature of the principal investigator, including date of execution; and
- h. An appendix with additional information, as needed.

The financial accounting will include:

- a. The original amount of the grant, interest income earned, and the remaining balance;
- b. The budget as originally proposed for the reporting period;
- c. Expenditures for the reporting period using the same expense categories set forth in the proposal budget; and
- d. The original signature of a financial officer, including date of execution.

7. Time-Line

The project will run from July 1, 2014, to June 30, 2015.

July-August 2014: Survey of MELA and AFLI members.

- Preparation of survey by principal investigator and graduate research assistant, with input from the project advisory board.

- Application for approval from UNC's Institutional Review Board by principal investigator.
- Preparation of Qualtrics on-line survey instrument by graduate research assistant.

July-December 2014: Parsing of online Middle East library catalogs.

- Analysis of survey results by principal investigator and graduate research assistant.
- Sample analysis of 10 Middle East library catalogs by graduate research assistant.
- Review of findings from sample analysis by principal investigator.
- Development of algorithm to automate analysis of Middle East library catalogs by graduate research assistant.
- Review of findings from automated analysis by principal investigator.

July-October 2014: Preparations for AFLI delegation visit to MELA.

- Travel arrangements for delegation by administrative assistant and the project's AFLI liaison.

November 2014: AFLI delegation visit to MELA.

- Meetings at MELA conference to discuss survey results and future plans, by principal investigator and advisory board.

December 2014-January 2015: Preparations for MELA delegation visit to AFLI.

- Travel arrangements for delegation by administrative assistant and the project's AFLI liaison.

February 2015: MELA delegation visit to AFLI.

- Meetings to continue discussion of future plans, by principal investigator and advisory board.

January-June 2015: Analysis of de-Romanization strategies

- Review of literature on efforts to de-Romanize U.S. library metadata for Arabic material, by graduate research assistant.
- Contact by graduate research assistant with experts in this field.
- Evaluation of de-Romanization strategies by graduate research assistant and principal investigator.
- Graduate research assistant drafts summary of these efforts.
- Review of draft by principal investigator.

March-June 2015: Preparation of project report.

- Notes on delegation visits by principal investigator for review by advisory board.
- Draft of project report by principal investigator for review by advisory board.
- Dissemination of project report to MELA and AFLI members, as well as members of the Duke/CRL Task Force.

September 30, 2015: Final narrative and financial reports submitted to the Mellon Foundation.

- Final reports to be prepared by principal investigator.

8. Outcomes and Deliverables

The primary deliverable is the project report, which will summarize the results of the survey of AFLI and MELA members, the discussions of the AFLI and MELA delegations about challenges and opportunities for library partnerships, the analysis of Middle East library catalogs, and the state of the art in de-Romanization of Arabic-language records in U.S. library catalogs.

This report will be posted on the project's website at the University of North Carolina at Chapel Hill and disseminated via e-mail and newsletters to AFLI and MELA members, as well as members of the Duke/CRL Task Force, whose work instigated this project.

9. Possible Next Steps

Further dissemination efforts may be undertaken after the grant period, such as presentations to the Association of Research Libraries, the OCLC, and other library organizations.

Discussions between AFLI and MELA members are intended to generate ideas for future collaborations, both between the two organizations and between individual members and libraries. These efforts might include partnerships for joint library collecting, cataloging of new material, de-duplication of existing catalog records, digitization, and other aspects of Middle East librarianship.

10. Investment of Grant Funds

University institutional trust funds, endowment funds, and special funds accounts may earn interest on their cash balances by investing in the University Temporary Pool (referred to hereafter as the Temporary Pool) or the State Treasurer Short-Term Investment Fund (STIF). Both funds invest in short- to intermediate-term notes and bonds.

The UNC-Chapel Hill Money Market System is the official University mechanism for recording activity in Temporary Pool and STIF accounts, including purchase and sale transactions, distribution of investment earnings, and report creation by individual accounts. The distribution rate on money market deposits is set on a quarterly basis to match the 90-day US Treasury Bill plus 0.25%. Each quarter, income distribution is determined by multiplying the distribution rate by the average daily invested fund balance. Accounts in either the Temporary Pool or the STIF account may purchase and sell shares at a fixed value of \$1 per share, per day. In most instances, buying and selling shares is only granted for a given period at the beginning of each month.

The investment year for both funds runs from June 1 to May 31, with earned income distributed on a quarterly basis during the months of June, September, December and March, for the quarters ended May, August, November, and February, respectively.

The University will invest the grant funds in the Pool as described above, with the understanding that the interest earned will be credited to an interest account linked to the grant account and applied solely toward the purposes of the grant. The full Policy Statement can be found here: financepolicy.unc.edu/policy-procedure/403-short-term-investments-money-market/#policystatement