

Are We Coming Together? The Archival Descriptive Landscape and the Roles of Archivist and Cataloger

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ABSTRACT

Traditionally, archival description remained distinct from bibliographic description due to differences in material format, usage, and professional traditions. However, archival descriptive standards and practice have undergone numerous changes in recent years. This evolution is in part due to the advent of MARC and its adoption by the academic archives community. How much influence has the use of MARC and overall bibliographic description had on academic archival description as well as on the collaboration between traditional catalogers and archivists? To address this question, this article presents the findings of a landscape survey of the Association of Research Libraries members' descriptive practices surrounding MARC records, linked and embedded metadata, and authority records. Survey responses indicate that archival descriptive work remains concentrated in the archival domain, with archivists creating description as one component of job responsibilities at most institutions. Descriptive work—including MARC record creation—has not been passed off to cataloging colleagues despite their longer professional experience with the standard even though the OPAC is the most commonly cited archival information system available to respondents. Decisions about appropriate levels of description, standards to be employed, workflows, and other factors related to archival description do not appear to rely on external buy-in or approval in most repositories, and descriptive practices employ a mix of standards from both the archival and bibliographic traditions. These and other findings provide a baseline understanding of current archival descriptive practices and workflows, enhancing our ability to improve archival description and therefore findability and access to archival materials.

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KEY WORDS

Description, Cataloging, Encoded Archival Description (EAD), Metadata

Archival descriptive standards and praxis have undergone numerous changes in recent years. To understand the current archival descriptive landscape including the assignment of responsibility for bibliographic and archival cataloging, as well as the relationship between archivists and catalogers, and technical services departments and archival units, we examined past descriptive practices and crafted a survey to document and analyze current practices. Given that the creation of MARC¹ records has become increasingly common within academic archival repositories in the thirty-five years since its adoption,² we questioned whether workflows remain split between cataloging and archival units, or if archivists frequently find themselves in the role of cataloger, with or without experience in that role. By understanding the evolution of archival descriptive standards, the archival profession's use of bibliographic standards, and the historic relationships between archivists and catalogers, we hope to shed light on how a bifurcation of responsibilities emerged. Through a survey of the current descriptive landscape, the profession can come to better understand prevailing descriptive workflows and what effect those workflows have on how archival materials are described. These data provide insights into what standards are currently in use and to what extent, and how this adoption of standards and workflows impacts profession-wide efforts to increase findability and accessibility of archival materials.

Literature Review

To understand the current archival description landscape, it is necessary to review how modern archival description began and evolved alongside bibliographic description.

ARCHIVAL DESCRIPTION: 1970S TO PRESENT

With the development of the MARC AMC (Machine Readable Cataloging Archives and Manuscripts Control) standard, the archival profession added a new tool to increase discoverability of archival materials. While imperfect in its representation of archival hierarchy and relationships, its structure conformed enough to traditional archival description that many repositories chose to implement the MARC AMC standard, thus enabling representation of archival collections alongside library materials in library catalogs and bringing together the realms of archival and bibliographic description.

Archival collections³ represent unique accumulations of material; generally speaking, each exists as a single instance and no collection at any other repository can be described in exactly the same manner. This emphasis on uniqueness both in terms of the materials' description and as a primary source has limited

the archival profession's ability to standardize both archival description and structures. Emphasizing context and hierarchy, archival description begins at the collection level and iterates down to the lowest level necessary (e.g., series, subseries, folder, item) as determined by the archivist. Archival description may include item-level description; though this is less common in modern archival descriptive practices, it continues to exist within legacy finding aids created over decades by predecessors and may be employed when describing some small, specialized, digitized, or born-digital collections. This hierarchical descriptive practice can provide significant benefit by drawing attention to the multitude of items that comprise an archival collection.⁴ The finding aid, combining a narrative with details on creator(s), scope, and contents as well as a box and folder list, reflected the profession's notion of archival description prior to the advent of bibliographic standards, the Internet, and digitization efforts.⁵ Over time, the profession has come to embrace a broader definition of description as an ongoing process that centers around the notion of control. The Working Group on Standards for Archival Description proposed in 1989 that "archival description is the process of capturing, collating, analyzing, and organizing any information that serves to identify, manage, locate, and interpret the holdings of archival institutions and explain the contexts and records systems from which those holdings were selected."⁶

In contrast, bibliographic description typically employed by catalogers⁷ describes a single item at a single level. It focuses on the item as artifact rather than providing additional contextual information as done by archival description, lending bibliographic records a standardization, both in description and structure. This standardization makes bibliographic records reusable by other institutions, often with only minimal changes.

By the early 1970s, MARC had become the US national standard for bibliographic data transmission; catalogers had more than a decade of implementation experience before MARC AMC was approved in 1983 and published by the Library of Congress in 1984. Prior to the adoption of the MARC AMC standard, archival repositories operated in an extremely siloed and insular world. As archivists, like their library colleagues, came to embrace the sharing of descriptive information through technological means, they realized that standards and collaboration would be required if descriptive data was to be shared and reused.⁸ Idiosyncratic local practices could no longer be the norm, and the profession began to look outside of individual repositories to establish acceptable practices. With no archival organization poised to lead the development of archival description standards, "[National Information Systems Task Force] NISTF⁹ concluded that the best way to pursue archival descriptive standards was through an adaptation of MARC cataloging and that active participation in that process might yield a satisfactory result over which archivists could maintain

some measure of control.”¹⁰ It was at this point that “archival descriptive work should no longer be considered completely different from other cataloging practices.”¹¹ While description of archival materials had previously resided squarely in the purview of the archivist,¹² those at institutions with independent cataloging departments could, after the adoption of MARC AMC, draw upon the related MARC expertise of colleagues within the institution, forming new relationships, collaborations, and workflows for bibliographic description of archival materials.

Through a succession of National Endowment for the Humanities (NEH) grants, the Society of American Archivists (SAA) from 1985 to 1989 offered numerous workshops, presentations, and publications on the MARC AMC format, training individuals from more than 140 repositories throughout the United States in the format. MARC AMC adoption was further advanced by the National Historic Publications and Records Commission (NHPRC)–funded government records projects run through the Research Libraries Group (RLG) and resulting in publications that provided examples and recommendations for the use of the format. At the same time, NHPRC funding of the Working Group on Standards for Archival Description (WGSAD) led to increased systematization in standards development and approval.¹³ As the WGSAD wrote in the introduction to a fall 1989 report in a special section of *American Archivist*, “The unthinkable happened. Archivists, struggling to absorb the unfamiliar notions and language of MARC, began talking to librarians and other information professionals for whom standards of one kind or another were part of their vocabulary.”¹⁴

These grant-funded activities ushered in the adoption of the MARC AMC standard. Within nine years of its approval, 57.1% (80) of academic archives responding to a survey on its use reported using MARC AMC.¹⁵ At the time, the majority (60%) were doing this descriptive work collaboratively, with 35% reporting archivists working individually, and 5% reporting catalogers working by themselves.¹⁶ Retrospective cataloging projects providing initial opportunities for archivists and catalogers to work together met with mixed results: successful collaborations between units as well as challenges are documented in the literature. Mark A. Vargas and Janet Padway called attention to the need for clear definition of job responsibilities and the importance of ongoing communication.¹⁷ Given the intricacies of cataloging rules and cataloging systems, archivists who previously relied on the finding aid or inventory as a primary mode of archival description and found themselves tasked with cataloging responsibilities frequently required crash-courses in cataloging and opportunities for consistent hands-on use of those cataloging skills.¹⁸ Pointing to these differences in education and training, Susan Hamburger suggested, “The project manager needs to ask if the processing archivists can learn and correctly apply cataloging principles, if book catalogers can adapt their knowledge and skills to encoding

collections rather than single items . . .”¹⁹ In other words, questions emerged in the 1980s and 1990s about the degree to which archivists and catalogers should remain specialists with their own domain knowledge and specializations, and, as a result, workflows for bibliographic cataloging of archival materials varied from institution to institution.

Historically, a division of cataloging labor accrued a number of benefits, including efficiencies.²⁰ Individuals assigned cataloging responsibility who dedicated time exclusively to that role become more experienced at and productive in those tasks.²¹ Catalogers in many institutions were thus assigned areas of specialization, reinforcing expertise and increasing efficiency in their particular areas of knowledge. Over time, this relegated archival cataloging to the periphery because bibliographic catalogers prioritized materials that were quick to process and reflected more familiar rules and formats. As Padway explains, “Nontraditional and ephemeral materials, archival collections, and materials in foreign languages and in unusual formats will wait—sometimes for years—to be processed after the English-language monographs and serials.”²² Unlike their library colleagues in cataloging or interlibrary loan departments, archivists employing MARC AMC did not amass the same efficiencies of copy cataloging, thus requiring more human resources to complete original cataloging for each collection; some institutions chose to prioritize other work.²³ Some early adopters saw increased use of collections after cataloging projects,²⁴ while others did not,²⁵ calling into question the return on the investment of time and resources. To this day, one can find repositories that have not created MARC records for all of their archival collections, investing descriptive resources for some collections, but not all.

A division of labor for bibliographic and archival cataloging also reflected the structural arrangement and positioning of the archives within parent institutions.²⁶ In many institutions, archives have been a peripheral part of library operations, physically located in the same building or organizationally under the same operational division, but considered intellectually separate, foreign, and difficult to understand, the realm of a specialist. Archivists were further cut off intellectually from much of the rest of the library due to their own distinct practices, which embraced the creation of bibliographic records well after traditional library catalogers did so.²⁷ Given the inherent differences between the professions and the entrenched separation often found in libraries at academic institutions, some institutions continued to operate parallel descriptive units; others passed responsibilities for MARC description from archival units to cataloging units, building on the expertise the catalogers had developed. For these and other reasons, an array of localized approaches emerged and responsibility for bibliographic cataloging of archival materials came to reside in a variety of units.²⁸ The trend, however, appears to be moving toward bringing the two

together physically or organizationally. Geoff Brown and Kathryn Harvey credit a shared physical location as essential to their project's success at Dalhousie University.²⁹ Carol Ou, Katherine Rankin, and Cyndi Shein describe the creation of a technical services department focused on archival description and collection management within special collections and archival units at the University of Nevada–Las Vegas in 2014, noting that while their responsibility was to improve access to and discovery of archival collections, their success also depended upon collaboration with a more traditional and broadly focused cataloging team within the library's Discovery Services Department.³⁰

ARCHIVAL VERSUS BIBLIOGRAPHIC DESCRIPTION

Concurrent with the adoption of MARC AMC, Steven Hensen's *Archives, Personal Papers, and Manuscripts: A Cataloging Manual for Archival Repositories, Historical Societies, and Manuscript Libraries* (APPM) brought rules for data content standardization to the archival profession in 1983. APPM was the archival answer to *Anglo-American Cataloguing Rules, Second Edition* (AACR2), chapter 4, published in 1978, which provided instructions for cataloging manuscript materials. AACR2 reconciled many of the contradictions in AACR, adopted in 1967.³¹ As described by Steven Hensen, AACR2, chapter 4, remained insufficient in its handling of archival description due to

[...] a failure to distinguish sufficiently between the bibliographic nature and requirements of published and unpublished materials. [Which] was, in turn, related to some general misunderstandings regarding the nature of archival description. These were reflected most particularly in the failure to place the proper emphasis on the needs of collection or series level description, or to recognize that archival description was not "static" in the same way that bibliographic description was.³²

Major issues with AACR2 rectified by APPM included legitimizing the finding aid as a source for bibliographic description, providing description instructions, and improving provisions for collection-level description and the inherent recognition of contextual importance.³³

MARC AMC cataloging projects undertaken during this period underscored the limitations of MARC AMC in representing archival collections and confirmed that "catalog records are not as representative of archival materials as the traditional documentation created by archivists."³⁴ Even as archives began creating bibliographic records, the preferred method for describing archival materials was and remains the finding aid³⁵ (developed entirely within the purview of the archivist and prior to the advent of technologies that allowed for its sharing and delivery online), due to its ability to represent hierarchical relationships. As the Internet matured and archivists realized that they could increase the public's

awareness of collections by placing finding aids online, a new data structure emerged in the form of Encoded Archival Description (EAD).³⁶ The 1998 release of EAD Version 1.0 provided a standard organized around the finding aid's intellectual structure designed for online availability and aggregated to facilitate search and discovery across repositories. EAD's standardization and online delivery were envisioned as having the potential to enhance the discoverability of archival materials as MARC records and union catalogs had for library materials, but in an archival rather than a bibliographic structure.³⁷ Essentially, EAD would be to finding aids what MARC was to a title card in a card catalog.

EAD has proven successful for providing a machine-readable structure paralleling the hierarchical nature of archival description, but it has not enjoyed widespread adoption. Barriers to EAD adoption are well documented throughout the literature.³⁸ Some challenges, such as the lack of browsers able to display EAD without first converting to HTML, have been resolved, but other obstacles persist, including a lack of staff, development of workflows for encoding and online delivery, budgetary resources, and a desire to edit and revise legacy finding aids to bring them into compliance with DACS or other modern-day standards. However, EAD implementation has been wholesale in some repositories, generating increased opportunities for collaboration as well as theoretical and practical projects involving both catalogers and archivists working to crosswalk data between systems representing the bibliographic and archival (this will be discussed further). Despite these collaborations, actual EAD creation (unlike MARC) is generally limited to archivists.³⁹

DACS AND RDA—COMBINING CONTENT AND STRUCTURAL STANDARDS

As archivists and catalogers continued to apply and refine their own structural standards,⁴⁰ content standards progressed. The 2004 release of *Describing Archives: A Content Standard* (DACS), expanded to include authority description in 2013, provided archivists with an up-to-date descriptive standard designed to work in multiple outputs, including EAD. DACS accommodates both single and multilevel description as required; combinations of its twenty-five elements fulfill required, optimum, and added-value levels of description. Individual DACS-formatted elements inserted into EAD's structural elements create an output that can be searched in a structured way. As archivists began to transition from APPM to DACS, catalogers faced their own shift in content standards with the 2010 publication of AACR2's successor, *Resource Description and Access* (RDA). The progression in description from AACR2 to RDA brought major changes for catalogers, but for archivists who were already familiar with bibliographic standards, the changes were minor as DACS already included them.⁴¹

With descriptive responsibilities situated in both archives and cataloging units, each with their own professional standards and frames of reference, institutions faced choices about how to catalog their materials, and the flexibility of the standard allowed for a variety of local practices. The same records could be cataloged following AACR2 or APPM conventions, using DACS or RDA standards, with each institution making the choice based on local practices and influences. Despite the similarities between DACS and RDA, many institutions used one or both of the standards in their day-to-day work, depending on who was creating the description, the output tool or framework for sharing, and local practices and preferences. For example, some academic institutions implemented DACS within their finding aid systems, but described the same materials using RDA within MARC-based systems such as the library's online public access catalog (OPAC).⁴² Others chose to use DACS within both systems. As of 2014, DACS appeared to be the preferred content standard for description of archival materials, with 75.9% of respondents in a survey conducted by Karen Gracy and Frank Lambert reporting use of DACS for archival description.⁴³ While Gracy and Lambert inquired about respondents' awareness of RDA and whether discussions had taken place within repositories about its implementation, the survey did not capture data on actual use of RDA or the potential for use of both RDA and DACS in different forms of archival description within a single institution (e.g., RDA in catalog records and DACS in finding aids). A reported 26.2% indicated that their repositories were considering updating their information systems for RDA. This update could possibly have been to accommodate a move away from DACS in favor of RDA, the adoption of RDA in place of AACR2, or a combination of factors. Regardless, while RDA may be selected as the single standard to describe all materials within the institution, this is perhaps more likely to occur in institutions where "*library catalogers* have the responsibility of creating bibliographic records at the collection level for archival materials"⁴⁴ (emphasis added).

EAC-GPF—ARCHIVAL AUTHORITY RECORDS AND CONTROL

Traditional archival description did not separate authority control from the description of the archival material. Archival material is unique, as are its creators and subjects, therefore, archival practice precluded the creation and reuse of an authority record. However, this does not mean that authority content was not included in finding aids, it only indicates that authority information was not necessarily controlled, tracked, and reused as in bibliographic cataloging. This lack of control prevented interoperability between repositories (and collections within the same repository), inhibiting collection discovery through related persons and corporate bodies; findability that collections with authority

records enjoyed. Lisa Weber describes the intermingling of creator and collection information in MARC AMC records, and the difficulty of modifying existing authority formats for archives' use.⁴⁵ Similarly, David Bearman laments that traditional controlled vocabularies (e.g., the Library of Congress Name Authority file) are not diverse enough for archival materials.⁴⁶

Alexander Thurman attributes the particular importance of authority description within the archival profession to the central principle of provenance, as well as the "compelling reasons to separate and formalize the collection and maintenance of this type of information."⁴⁷ Not until 2011, however, did the archival profession have an internal data structure standard to address authority records, Encoded Archival Context for Corporate Bodies, Persons, and Families (EAC-CPF), and not until DACS's second edition in 2013 did an authority content standard arise. Like EAD, EAC-CPF is hierarchical and has a nested structure for recording and capturing authority description. Initially, content standard guidelines referred to RDA, but a revision of DACS heeded Pitti's suggestion and separated authority from bibliographic control, providing an archives-specific content standard for authorities. Used together, EAC-CPF's and DACS's authority content standards would allow for reuse of authority records, linking relationships between authority and collection records, as well as archivists' professional capabilities to create the system Pitti had described in 2001.⁴⁸

In contrast, authority control and bibliographic description have long been separated within the cataloging realm whereby a single record (i.e., an agent such as a personal name) serves as the authority record. This single authority record is reused thereafter, referenced in each bibliographic record of which it is the creator or subject. This process provides numerous benefits. Internally, it centralizes editing and updating work within the authority record only, improving efficiency and eliminating multiple records for the same agent. For users, Jinfang Niu notes that cataloging and its associated systems allow one to find all related content internally and across repositories through collocation and disambiguation by providing each agent a unique ID.⁴⁹ Bibliographic cataloging practices and tools have developed to support authority work done in this manner. Archival collection management software, however, does not yet offer this support: "Until recently, archival collection management systems did not include functionality for any kind of structured authority metadata—and certainly not the export or sharing of these kinds of records."⁵⁰ Gracy and Lambert's 2014 study, which found only 5.1% ($n = 16$) of respondents used EAC-CPF, backs up this notion.⁵¹

The ongoing inaccessibility (statistically) of materials described solely with archival structural standards (i.e., EAD and EAC-CPF) has undoubtedly helped drive the archival profession's continued desire to make materials discoverable in multiple systems (e.g., library systems with a larger user base). This often

results in archivists and catalogers working together, commonly crosswalking data between siloed systems.

USING MULTIPLE STANDARDS TO INCREASE DISCOVERABILITY

Increasing numbers of institutions are moving to collection management tools like ArchivesSpace, which exports records in multiple bibliographic and archival description standards. As digitized and born-digital materials become more commonplace in archival and information systems, both archivists and catalogers must consider and reconcile the creation, capture, and transmission of metadata about those objects within their own spheres of influence (library catalogs and discovery layers versus digital, preservation, and finding aid repositories). Conversations about how to crosswalk and share description between systems and standards are an important part of the current professional dialogue.

Cross-community sharing of metadata is increasingly important to the profession, as attested by the multitude of crosswalking projects being undertaken. Cory Nimer and J. Gordon Daines suggest, “Perhaps by developing modular standards with a common core that allows for sharing of information, as well as extensions to meet the needs of different user communities we would be able to meet both goals.”⁵² One such common discovery tool being adopted widely is ArchivesSpace, which, at the time of this writing,⁵³ has over 400 members and additional use by nonmember institutions. ArchivesSpace provides collection management, discovery, and access functionalities as well as library and archival description standards for both collections (MARC, EAD) and authorities (EAC-CPF). One natural area for collaboration between archivists and catalogers is in the crosswalking between EAD and MARC schemas from the system. While each standard provides for description of archival materials, it is done at different levels, for different purposes, with different strengths, making them “not interchangeable.”⁵⁴ Among MARC’s positive attributes are its ability to provide both an overview of the collection and “serendipitous connection between users and materials via the catalog.”⁵⁵ In contrast, EAD “creates a surrogate that is the equivalent of a model replica of the materials. The user can see the material as a whole, as well as get an in-depth glimpse into the structure and complexity of the material.”⁵⁶ As a result of separate bibliographic and archival information platforms and a desire to facilitate discovery possibilities, institutions frequently create both types of records for a single collection, “[achieving] two goals: it uses existing mechanisms to facilitate creator, title, subject and keyword searches of archival holdings; and it also increases the profile of archival holdings, in particular amongst an academic population that might not normally consider

archival resources.”⁵⁷ Ou, Rankin, and Shein describe using ArchivesSpace in the development of workflows to crosswalk metadata from the system to MARC records. They stress how ArchivesSpace improved the efficiency in their work and helped to create collaborations between the Discovery Services and Special Collections Technical Services Departments with future partnerships expected.⁵⁸ Collaborations such as these draw upon individual areas of expertise, assign clear responsibilities in alignment with that expertise, and result in less duplication of effort.⁵⁹ Other benefits of the collaboration are increasing awareness of authority control and controlled vocabularies, appreciation of archival materials and description, and “the opportunity to set standards, bridge differences in descriptive schemes, and build a base from which it is possible to work toward increasingly sophisticated delivery of information resources.”⁶⁰ As ArchivesSpace’s adoption continues to expand, the number of projects bringing together archivists and catalogers from different parts of the organization are likely to increase.

As born-digital materials and digitized archival materials become more the norm, archival description must accommodate digital files. Whereas MARC and EAD records act as descriptive surrogates for the archival collections, digital files require additional description using a metadata schema (e.g., Dublin Core) linked or embedded within the file to meet digital preservation needs. This is additional work, which has led to a trend of integrating non-MARC metadata duties into the workload of traditional catalogers; digital projects represent a large portion of these kinds of work. A 2008 survey of members of four cataloging discussion lists by Marielle Veve and Melanie Feltner-Reichert found that “most of the endeavors to integrate non-MARC metadata duties into the workflow of traditional catalogers at US academic institutions began in or after 2004, mainly prompted by an increasing number of digitized resources to catalog and an increasing demand by patrons for virtual access to library collections, rather than because of a decreasing number in print resources to catalog, as many believe.”⁶¹ At that time, Veve and Feltner-Reichert found that “the trend in most US academic institutions that have integrated non-MARC metadata duties into the workflow of catalogers is to have five or fewer catalogers working with non-MARC metadata, most of them dedicating 20% or less of their time to the task.”⁶² Catalogers primarily engaged with descriptive metadata, mirroring their expertise in describing materials, and most commonly employed the Dublin Core schema when not using MARC.

WHERE ARCHIVES ARE NOW

As Gracy and Lambert note, “The latest wave in archival description also attempts to bring several standards into alignment to increase

interoperability among archives, libraries, and museums, thus requiring archivists to have some familiarity with standards that may formerly have been considered inapplicable to archives.”⁶³ But how are descriptive standards being applied within archival repositories? And who is responsible for that work? As recently as 2014, archivists reportedly “feel considerable trepidation in their abilities to implement most standards, except for DACS. Thus, while many new standards are coming to fruition in the archival profession, the greatest challenge may be to help archivists learn about them and become confident in their application.”⁶⁴ To control for a certain amount of variability in organizational structure and adoption of standards, this study seeks to establish baseline data about archival descriptive practices within academic institutions.

Methodology

Initial decisions on collection methodology, sample (size, type, contact method), and survey instrument development impacted both the data obtained and its interpretability.

SURVEY DEVELOPMENT

The case studies in the literature review revealed limited data about current archival descriptive practices and responsibilities. To understand the broad landscape relative to current archival descriptive practices and to better inform subsequent research projects, a methodology that provided for collecting data from a large number of participants with minimal investment of time and other expenses was desired. Therefore, using an online survey distributed over email was the natural choice for data collection.

SAMPLE

All repositories holding archival materials and affiliated with a college or university listed as members of the Association of Research Libraries (ARL) in September 2017 were considered for participation in the survey. ARL member institutions serving broader national audiences (e.g., Library of Congress, Smithsonian), organizational members (Center for Research Libraries), and state or public library audiences (e.g., Boston Public Library) were not included (9 of 123 institutions).

Recognizing that descriptive practices can—and often do—vary from repository to repository on campuses with multiple archival repositories, we

visited the webpage of the library of each ARL member institution to identify individual units holding archival materials within the larger institution. Given the variety of organizational structures and names used to describe archival and special collections work, we considered for inclusion any unit listed on the member organization library's website that also appeared to hold archival materials (even if it appeared that archival services were but a small part of its mission). We defined archival materials as unique, one-of-a-kind resources (in any format) generally unavailable elsewhere; repositories whose "archival" collections consist entirely of reproductions created as convenience copies for the research community of an individual campus were not included.

Through this website review and analysis, we identified 211 individual repositories for inclusion in the survey. Generally speaking, we distributed surveys to the heads of individual repositories, though in several cases, we emailed a general department or reference inquiry email address when contact information was obscured on the website or when who had leadership responsibilities within the unit was unclear. As websites often do not make apparent the distribution of cataloging responsibilities within each repository, the email invitation asked recipients to forward the survey to the staff member in their repositories most familiar with archival description and/or archival cataloging in their place of employment.

Survey invitations were successfully distributed via email to 207 individuals using Qualtrics on January 8, 2018 (4 emails bounced in the first distribution; 2 emails were duplicated, and 2 emails failed), with follow-up reminder emails sent on January 22, 2018. As we had no budget, we offered no compensation. The survey had a 28% response rate, with a total of 58 surveys completed by the survey close date of February 9, 2018.

SURVEY INSTRUMENT

We developed a 50-question survey instrument to gather data about staffing arrangements and workflows archival repositories employ in their cataloging practices, the education and background of those who complete cataloging work, the types of descriptive output being generated at each institution, and practitioners' satisfaction with the workflows employed at their institutions. Respondents initially provided informed consent, and the remaining questions were grouped into 5 categories: background on descriptive practices, MARC records, embedded metadata, linked metadata, and authority records. Questions were primarily a mixture of multiple-choice, open-ended, and Likert-type scale, along with several that allowed for rank ordering. The survey instrument is included in Appendix A.

Findings

As one of the main purposes of this study was to better understand the relationship between archival and cataloging units in cataloging archival materials, we designed the survey to capture basic demographic information about those units at responding institutions and to collect data about descriptive practices and workflows for archival materials. We hoped to be able to examine relationships between the size of unit, the location of the cataloging work within the repository, and choices of standards and workflows. Unfortunately, the number of responses coupled with the wide variety of answer options employed yielded results too small for appropriate statistical analysis and tests (e.g., chi-square tests). Nonetheless, the survey provides baseline data on the current state of descriptive practices in ARL academic institutions.

DEMOGRAPHICS AND BACKGROUND

The size of archival departments within responding institutions ranged greatly, from .1 FTE to 25 FTEs, as illustrated in Figure 1. A staff of 7 FTEs was the most commonly reported (12.7%, or 7 responses), with staffing levels of 2 and 9 FTEs following with 6 responses each (10.9%).

Similarly, the size of cataloging or technical services departments within responding institutions varied significantly, ranging from staffs of 0 FTE to a staff of 64 (see Figure 2). Five respondents (9.6%) reported that their cataloging or technical services departments had no FTEs. These respondents may have been thinking only of FTEs within their units rather than more broadly throughout

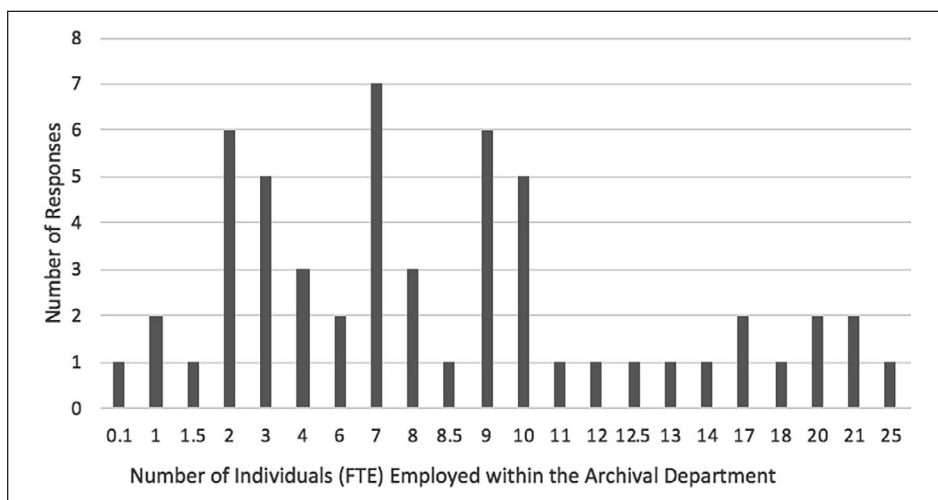


FIGURE 1. Number of FTEs employed within institutions' archival departments

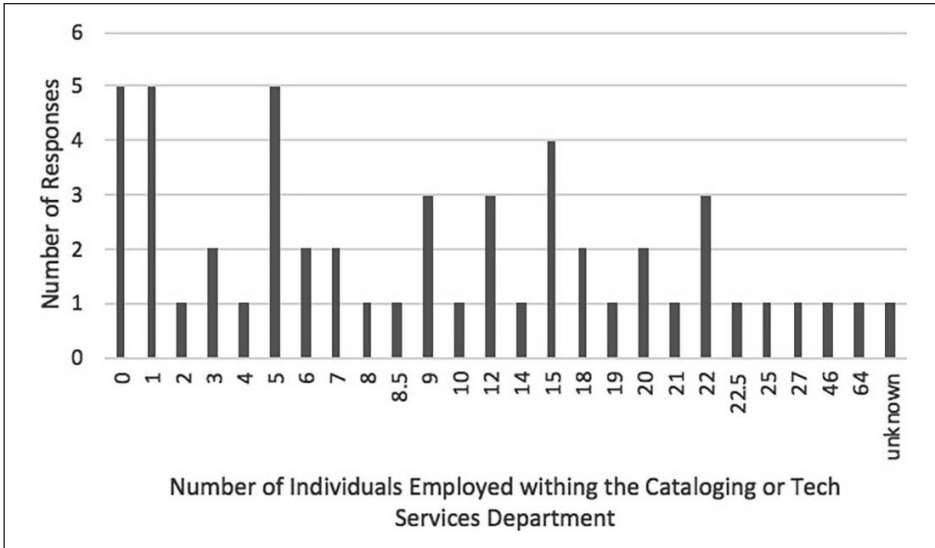


FIGURE 2. Number of FTEs within institutions' cataloging or technical services departments

their institutions. Staffing sizes of 1 FTE and 5 FTEs were also reported with the same frequency of 5 responses each (9.6%).

Perhaps unsurprisingly, the vast majority of respondents ($n = 50$, or 89.3%) were positioned within an archives or special collections unit, versus technical services (7.1%). Archival descriptive work is only one part of the job duties of many respondents, with most devoting less than half of their time to it (73.2%, see Table 1). While nearly a quarter spend less than 10% of their time on descriptive work (23.2%), 10.7% devote more than 75% of their time to descriptive work, indicating some institutions may concentrate descriptive responsibilities.

Of the 56 job titles supplied, 48 were unique. The following appeared more than once in survey responses: archivist (4), associate archivist (2), director (3), and head of archival processing (3). Participants' job titles reflect specialization as well as a combination of duties in one role, including titles such as "head, access and outreach services," "director of special collections, archives and preservation," "head, special collections and archival and metadata librarian," "senior archivist/records manager," and "director/university archivist."

As illustrated in Table 2, respondents received training related to their archival descriptive work through a combination of sources, with graduate-level courses (81.8%), SAA/ACA workshops or

Table 1. Portion of Time Devoted to Doing Archival Description Work ($n = 56$)

Response	Frequency (%)
Less than 10%	13 (23.2%)
11%–25%	15 (26.8%)
26%–50%	13 (23.2%)
51%–75%	9 (16.1%)
More than 75%	6 (10.7%)

Table 2. Archival Descriptive Training Received (Select All that Apply) (n = 55)

Response	Frequency (%)
Graduate-level courses	45 (81.8%)
SAA/ACA workshops or webinars	41 (74.5%)
Workshops or webinars offered by a regional archival association	40 (72.7%)
Peer-to-peer training within your institution	31 (56.4%)
Workshops or webinars offered by a state or provincial library or archival association	18 (32.7%)
Other	7 (12.7%)
Workshops or webinars offered by ALA/CLA	5 (9.1%)

webinars (74.5%), and workshops or webinars offered by regional archival associations (72.7%) most commonly cited. Just over half of respondents (56.4%) received peer-to-peer training within their institutions. That a majority of respondents' received archival description training from national and regional archival associations may be an early demographic indicator that archivists, rather than librarians, perform the majority of archival description work or that individuals doing the work more closely identify and affiliate with archival professional organizations.

Thirteen individuals completing the survey hold Academy of Certified Archivists' certification, and 10 hold a Digital Archives Specialist Certificate; 47.6% of respondents hold no certifications. No one reported holding SAA's Arrangement and Description certificate, which likely reflects its relatively recent establishment (2016).

BACKGROUND ON DESCRIPTIVE PRACTICES

To understand the basic landscape of tools and resources available for description, we posed several questions to place descriptive practices and decision-making in the context of available technical systems and workflows.

When asked "What type of archival information system does your institution have right now?," the most commonly cited system (see Table 3) was an "online public access catalog (OPAC)," with 50 out of 57 respondents (87.7%) selecting this option. This is not surprising given the historical importance of MARC records in archival description as explained in the literature review. An archival management system such as ArchivesSpace, Archivists' Toolkit, or Archon was selected by 46 out of 57 respondents (80.7%), followed by 32 reporting a "digital collection management system (such as CONTENTdm)" (56.1%). Use of databases was reported by 28 respondents (49.1%), with 17 reporting access to a content management system (29.8%). A small number of respondents listed other information systems, including Excel sheets, a homegrown EAD portal,

Table 3. Types of Archival Information Systems at Institutions (Select All that Apply) (n = 57)

Response	Frequency (%)
Online public access catalog (OPAC)	50 (87.7%)
Archival data management system (e.g., ArchivesSpace, Archivists' Toolkit, Archon)	46 (80.7%)
Digital collection management system (such as CONTENTdm)	32 (56.1%)
Database (such as FileMaker Pro, Access, etc.)	28 (49.1%)
Content management system (such as Drupal)	17 (29.8%)
Other	7 (12.3%)

Archive-It, the Museum System, and Access to Memory (AtOM), each with 1 response. Thus, while the majority of institutions still rely upon bibliographic catalogs for archival access, newer, archives-specific systems are quickly gaining momentum. Most institutions using archival data management systems (91.3%) employ them in tandem with an OPAC, with the remaining 4 institutions utilizing them as their sole access system. This is notable because only 6 (10.5% of $n = 57$) of institutions use a single access system.

Archival description appears to primarily occur within the unit of the individual responding to the survey. Of the 57 responses to the question “Please indicate which types of archival description your department creates in-house,” 55 (96.5%) generate finding aids or inventories, 42 (73.7%) generate collection-level MARC records, and 33 (57.9%) generate item-level metadata records (Table 4). Four respondents (7.0%) indicated that they generate series-level (or below) MARC records within their departments; the same number ($n = 4$, or 7.0%) create linked data within their departments.

The most common forms of archival description provided by other departments or cooperating institutions are item-level metadata records (41.5%) and

Table 4. Type of Archival Description Created In-House (Select All that Apply) (n = 57)

Response	Frequency (%)
Finding aids or inventories (in any format, e.g., MS Word, MS Excel, PDF, HTML, EAD, etc.)	55 (96.5%)
Collection-level MARC records	42 (73.7%)
Item-level metadata records	33 (57.9%)
Series-level (or below) MARC records	4 (7.0%)
Linked data	4 (7.0%)
Other	5 (8.8%)
None	0 (0%)

Table 5. Types of Archival Description Provided by Other Departments within Your Institution or Cooperating Institutions (Select All that Apply) (*n* = 53)

Response	Frequency (%)
Item-level metadata records	22 (41.5%)
Collection-level metadata records	21 (39.6%)
None	15 (28.3%)
Finding aids or inventories (in any format, e.g., MS Word, MS Excel, PDF, HTML, EAD, etc.)	13 (24.5%)
Linked data	6 (11.3%)
Series-level (or below) MARC records	2 (3.8%)
Other	0 (0%)

collection-level MARC records (39.6%) (see Table 5). Over a quarter of respondents (28.3%) reported that no other departments or cooperating institutions provide archival description, and nearly a quarter (24.5%) indicated that another department or cooperating institution prepares finding aids or inventories. While initially these results seem to point to a lack of archival departmental involvement in description creation, comparing types of archival description created within the department with types of archival description provided by other departments in the institution or cooperating institutions reveals collaboration. For departments creating item-level metadata (*n* = 33), nearly one-third (*n* = 11) also have item-level metadata provided by an outside department or institution. Similarly, for those departments creating finding aids (*n* = 55), 20% also have finding aids provided externally.

Those responding were primarily situated in departments that have the authority to directly post descriptive information without approval or validation. When asked “Does another department in your institution review or approve archival descriptive information prior to its public release (via the library catalog, online image repository, etc.?),” 71.9% (41 of *n* = 57) said no. Only 28.1% reported that another department in their institutions reviews or approves archival descriptive information prior to its public release.

A related question asked, “Who in your institution is responsible for making decisions about appropriate levels of description, standards to be employed, workflows and other factors related to archival description?,” and asked respondents to select all responses that applied. A number of scenarios emerged, heavily weighted to a focus on responsibility solely within the realm of the archives staff (see Table 6). The most commonly selected scenario assigned responsibility to the general archives staff (36.8%), followed by 26.3% selecting archives staff with technical services or cataloging-specific responsibilities, and 14% reporting a shared responsibility between generalist and specialized archives staff.

Table 6. Who Makes Decisions about Levels of Description, Standards, Workflows, and Other Archival Description Factors? (Select All that Apply) (n = 57)

Response	Frequency (%)
Archives staff (general)	21 (36.8%)
Archives staff with technical services or cataloging-specific responsibilities	15 (26.3%)
Archives staff (general) and archives staff with technical services or cataloging-specific responsibilities	8 (14%)
Technical services or cataloging staff (external department) and archives staff (general)	4 (7%)
Archives staff (general) and other	2 (3.5%)
Other	2 (3.5%)
Technical services or cataloging staff (external department) and archives staff with technical services or cataloging-specific responsibilities	2 (3.5%)
Technical services or cataloging staff (external department), archives staff with technical services or cataloging-specific responsibilities, and other	1 (1.8%)
Technical services or cataloging staff (external department) and archives staff with technical services or cataloging-specific responsibilities	1 (1.8%)
Archives staff (general), archives staff with technical services or cataloging-specific responsibilities, and other	1 (1.8%)

MARC RECORD CREATION

The vast majority of respondents (78.9%) indicated that their institutions, a consortial partner, or a vendor creates MARC records for all archival collections held by their departments, again in line with current research. But 21.2% (11 respondents) have not created MARC records for all of their archival collections. Those who do not create MARC records for all collections were asked how their departments determine which collections receive records; responses varied. One indicated that they are currently working to create MARC records for collections (“We are working on creating records for all collections”); another reported a deliberate move away from MARC cataloging (“We actually no longer add MARC records, because currently they aren’t worth the return on investment”); and a third reported a need to develop a workflow for MARC record creation in light of a move to ArchivesSpace (“At one point in the past we created MARC records for processed collection [once we had a finding aid]; then we switched to MARC records for all collections with or without a finding aid but we didn’t get that far. Now, we are in Aspace [*sic*] and have not implemented any workflows for MARC record creation. This is to be developed in the future.”). One repository leaves the decision about creating a MARC record up to the archivist responsible

for that particular collecting area, and another repository appears to only create MARC records for its rare book collections.

Respondents who create MARC records for all archival collections were then asked about the tools or systems they use (see Table 7). One respondent uses ArchivesSpace exclusively (2%), and 7 (14%) exclusively use OCLC Connexion, while 84% of respondents use more than one tool or system in creating MARC records, with a total of 18 different combinations of tools and systems reported, suggesting that most institutions are crosswalking data between information systems. Despite advances with new systems that automatically generate MARC records from archival description, the data reveal that most respondents still engage in a multistep and multi-tool/multisystem workflow to generate MARC records. The tools and systems included in workflow combinations receiving more than 1 response are reported in Table 7.

Respondents employ a number of combinations of data content standards in preparing MARC records as well. The most commonly cited combination of standards employed by respondents were RDA and DACS (31.4%), followed by the combination of AACR2, RDA, and DACS (23.5%). Just under 10% of respondents use RDA exclusively, and only 1 (2%) reported using DACS exclusively. This suggests that the descriptive standards employed for MARC encoding at repositories today are being selected from both the library and archival traditions. Interestingly, 47.1% of responding institutions employ AACR2, which DACS replaced in 2004, it is the only standard in use at 2 institutions (3.9%) (see Table 8). Repositories reporting AACR2 usage may be actively creating records in that standard. Or perhaps respondents prepare new MARC records following more recently adopted standards but continue to maintain legacy MARC records originally created following AACR2.

At repositories that create MARC records for all collections, 98% ($n = 50$) load them into union catalogs such as OCLC; only 1 respondent does not do so. After creating OCLC records, 59.6% of

Table 7. Tools and Systems Used to Create MARC Records (Select All that Apply) ($n = 50$)

Response	Frequency (%)
ILS ⁶⁵	33 (66%)
OCLC Connexion	33 (66%)
ArchivesSpace	22 (44%)
MarcEdit	16 (32%)

Table 8. Data Content Standard(s) Used to Prepare MARC Records (Select All that Apply) ($n = 51$)

Response	Frequency (%)
DACS	39 (76.5%)
RDA	38 (74.5%)
AACR2	24 (47.1%)
I don't know	3 (5.9%)
DCRM ⁶⁶	2 (3.9%)
RAD	2 (3.9%)

respondents edit MARC records both locally and in OCLC; 25.5% only edit them locally; and 14.9% only edit them in union catalogs thereafter. While institutions commonly update finding aids due to accruals and deaccessions, it is less common to update bibliographic records. That 100% of respondents who include their MARC records in union catalogs also update these MARC collection records in some capacity reveals that archival description practice is standard in this area of MARC record creation for archival materials.

Respondents were asked to describe their workflows for the creation of MARC records by dragging and dropping a series of tasks in order, yielding 45 different workflows from 52 respondents. Those workflows receiving more than 1 response are reported in Figure 3. Interestingly, 88.5% of all responses begin with the task “Archivist creates finding aid.” An overwhelming majority of respondents (65.4%) include a cataloger at some point in the process, but 34.6% of respondents do not include a cataloger at all.

Generally speaking, respondents appear to be satisfied with their workflows for MARC record creation, with 25% ($n = 13$) responding that they strongly agree, and 48.1% ($n = 25$) somewhat agreeing that “I am satisfied with the current workflow for creating catalog records at my institution.” However, nearly 1 in 5 (19.2%) somewhat disagreed or strongly disagreed. When given

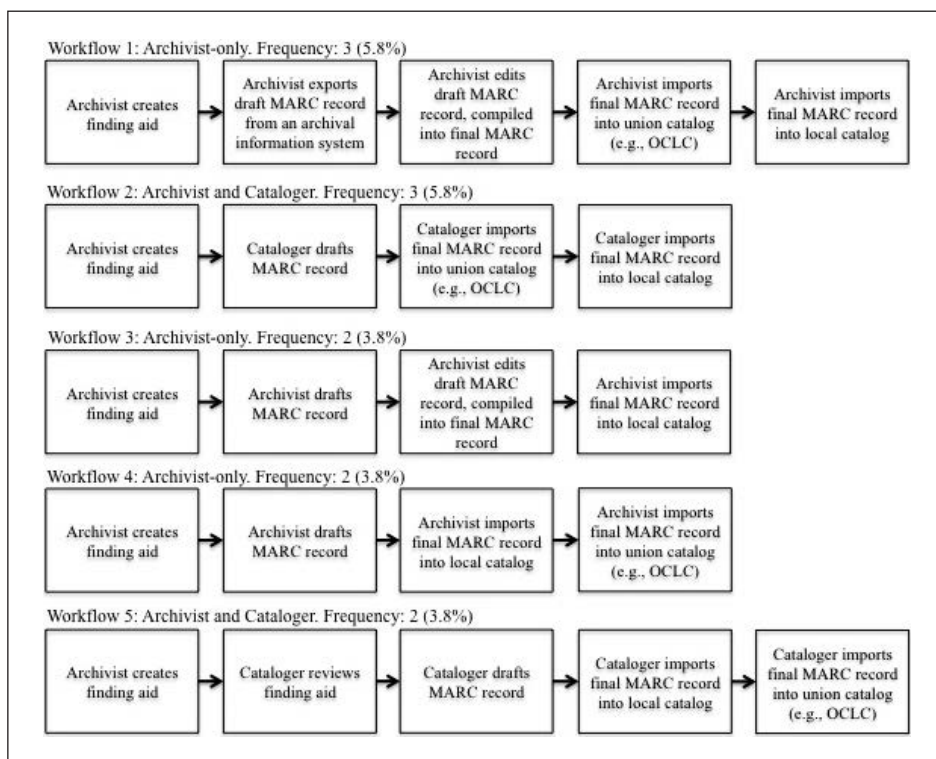


FIGURE 3. MARC record workflows

the opportunity to provide information about their ideal workflows, the most common responses (29.3%) featured a desire to use ArchivesSpace as part of their MARC workflow ($n = 12$) and the ability to directly export and/or import between systems ($n = 12$). Other desired improvements included increased automation or efficiency ($n = 11$), increased participation by archivists ($n = 7$), and increased collaboration ($n = 6$). It is also important to note that 22% ($n = 9$) of respondents reported that their workflows are fine as is.⁶⁷

EMBEDDED METADATA

More than half, 57.9% ($n = 57$), of respondents create item-level metadata within their departments, 41.5% ($n = 53$) report item-level metadata creation by another department in the institution or by a cooperating institution, and 10 institutions (17.2%) create item-level metadata records by both processes. Given that item-level metadata creation can take a number of forms, we inquired about 2 common forms of item-level metadata: embedded and linked. Slightly over three-quarters (75.9%) of respondents revealed that their institutions do not create embedded item-level metadata records for objects held in their department. The 14 participants who indicated that their institutions do create embedded item-level metadata records were then asked to list the tools or systems used in their creation. Ten of the 14 participants responded, providing a list of 14 tools employed at their institutions. Table 9 lists 9 unique tools and systems, but only 3, ArchivesSpace, Adobe Bridge, and Fedora, are used by more than 1 institution.

Next, respondents were tasked with creating their embedded item-level metadata records workflow by dragging and dropping a series of tasks in order. Eleven respondents answered, resulting in 7 unique workflows. Five of these workflows are unique to their institutions, but 2 workflows⁶⁹ have 2 and 4 users respectively. The only difference between the two workflows used by multiple institutions is that one adds higher-level (i.e., collection-level, series-level, etc.) embedded metadata to each individual record ($n = 4$), whereas the other ($n = 2$) does not. Indeed, the majority of respondents (81.8%) add higher level (i.e., collection-level, series-level, etc.)

Table 9. Tools and Systems Used to Create Embedded Item-Level Metadata Records (Write-in) ($n = 14$)⁶⁸

Response	Frequency (%)
Adobe Bridge	3 (21.4%)
ArchivesSpace	3 (21.4%)
Fedora	2 (14.3%)
AVCC	1 (7.1%)
CONTENTdm	1 (7.1%)
Islandora	1 (7.1%)
Luna	1 (7.1%)
Photoshop	1 (7.1%)
Spreadsheets	1 (7.1%)

embedded metadata to their records (there does not appear to be a correlation between tool/system and not adding higher-level metadata). And while catalogers feature in about a third (36.4%) of the respondents' workflows, catalogers and archivists collaborate in only 1 workflow (9.1%).

Workflow satisfaction ranged from somewhat disagree ($n = 1$), ambivalence (neither agree nor disagree) ($n = 5$), to somewhat agree ($n = 5$). When given the opportunity to provide their ideal workflows,⁷⁰ 8 respondents provided comments. Suggestions for improvements included enhancing systems integration, completing tasks in bulk, and providing archivists with more involvement like obtaining permissions to the preservation storage area in D-Space, and, as 1 respondent said, "allowing the archivists to QC the metadata at some point in the workflow."

LINKED METADATA RECORDS

Only about a quarter of respondents (25.9%) affirmed that their institutions create *linked* item-level metadata for digital objects ($n = 58$), and 14 respondents reported that they create *embedded* item-level metadata records. Eight institutions (13.8%) create both linked and embedded item-level metadata.⁷¹ These participants were then asked to list the tools or systems used during the creation of linked metadata records; as seen in Table 10, 9 respondents provided a list of 13 tools, 9 of which were unique. Mirroring the popularity of tools used in the creation of embedded metadata data records described above, ArchivesSpace is the most popular choice (5). Fedora is a close second (3).

Thirteen respondents described their workflows for creating linked item-level metadata, revealing 11 unique workflows and that 3 (23.1%) of these institutions follow the same workflow. Despite the variations, similarities exist between the workflows. At 11 of the 13 institutions, an archivist or cataloger creates a linked metadata file and adds item-level metadata for each record. Additionally, at 10 of these institutions, this is the initial step.⁷³ In the 2 workflows that do not use this task, spreadsheets that include higher-level information (i.e., higher-level hierarchical description like collection/series) are merged with Metadata Encoding and

Table 10. Tools and Systems Used to Create Linked Item-Level Metadata Records (Write-in) ($n = 13$)⁷²

Response	Frequency (%)
ArchivesSpace	5 (38.5%)
Fedora	3 (23.1%)
Adobe Bridge	1 (7.7%)
Excel	1 (7.7%)
Finding Aids Database	1 (7.7%)
Islandora	1 (7.7%)
Spreadsheets (manual data creation)	1 (7.7%)

Transmission Standard (METS) records instead. Some of the other workflows use spreadsheets and METS records because unique IDs are not used.

Archivists play a large role in linked metadata workflows, participating in 84.6% of them, and they are the lone participants in 61.5%. While this shows that the most likely scenario is archivist-only workflows, it reveals that collaboration between archivists and catalogers is more prevalent (23.1%) than cataloger-only workflows (15.4%).

All the workflow respondents went on to indicate their satisfaction with their current workflows for creating metadata records at their institutions, which ranged from somewhat disagreeing ($n = 1$), to strongly agreeing ($n = 3$, or 23.1%). The majority of respondents were neutral (“neither agree nor disagree”) (53.8%). When asked to describe their ideal workflows,⁷⁴ only 8 respondents left comments, half lamenting the amount of manual effort or wanting the ability to automate, with 1 stating, “Overall this works. The biggest issue is that it is currently a very manual processing (alot [sic] of cutting and pasting of data.)” Only 1 commenter was entirely fine with the current workflow, stating, “as it is.”

AUTHORITY RECORDS

The majority of respondents (69.0%, $n = 58$), create archival authority records in some way: within their own departments (29.3%), in another department within the organization (12.1%), or both (27.6%).⁷⁵ When asked what authority descriptive standard(s) are used to create these records, the majority selected RDA and/or DACS (see Table 11), which is unsurprising given that these are the most recently adopted professional standards.

Respondents were asked to describe their workflows for creating archival authority records from the steps provided. The 36 respondents reported 23 unique workflows. Interestingly, of these 23 unique workflows, 91.3% began with either the archivist or cataloger checking to see if the authority record already existed.⁷⁶ The 2 workflows that did not start with this step began with “Archivist creates authority record following institution’s preferred data standard.”

Half of the workflows reveal archivist and cataloger collaboration. Both archivists and catalogers complete the step of checking the appropriate thesauri/controlled vocabulary to see if the authority record already existed in 10 (43.5%)

Table 11. Authority Descriptive Standards Used to Create Archival Authority Records (Select All that Apply) ($n = 61$)

Response	Frequency [%]
RDA	25 (40.1%)
DACS	24 (39.3%)
AACR2	9 (14.8%)
RAD	3 (4.9%)

of the 23 unique workflows.⁷⁷ The step did not provide a means of specifying if different staff members reviewed corresponding thesauri/controlled vocabularies, as one would assume. Of the remaining workflows without collaboration, a third are only archivists, and a sixth are only catalogers.

The majority of respondents (59.5%) strongly or somewhat agreed that they are satisfied with their workflows, versus (18.9%) who strongly or somewhat disagreed and 8 (21.6%) who were neutral. This was reflected when respondents (*n* =24) were asked to provide their ideal workflows, with 25% (6) indicating that they are happy with what they are currently using, and 38% (9) wanting to add EAC-CPF as part of their workflows.

The survey also asked about archival authority record usage. The majority of respondents (86.2%) affirmed that authority records are used in their institutions' archival descriptions. When asked what types of archival descriptive records include authority records, the most frequent choices were finding aids or inventories and collection-level MARC records (see Table 12).

Respondents were then asked to select the types of archival authorities and controlled vocabularies used in their archival description records. As indicated in Table 13, Library of Congress Subject Headings (LCSH) and Library of Congress Name Authority File (LCNAF) are most frequently used for describing authority records.

For those institutions that do not use authority records in their archival descriptions, the reasons included lack of staff, "systems limitations," and general lack of understanding as to why these records are not created. In terms of satisfaction with the decision not to include authority records in their archival descriptions, 7 rated their satisfaction with that decision, ranging from neither agree nor disagree (2), to somewhat disagree (3), to strongly disagree (2).

Table 12. Archival Descriptive Records that Use Authority Records (Select All that Apply) (*n* = 49)

Response	Frequency (%)
Finding Aids or inventories (in any format, e.g., MS Word, MS Excel, PDF, HTML, EAD, etc.)	47 (95.9%)
Collection-level MARC records	43 (87.8%)
Dublin Core records	12 (24.5%)
Series-level MARC records	4 (8.2%)
Linked Data	4 (8.2%)
Other (please describe)	4 (8.2%)
Institution also submits to NACO	1
ArchivesSpace records	1
Accession records	1
RAD descriptions in AtoM	1

Table 13. Archival Authorities and Controlled Vocabularies Used at Institutions (n = 48)

Archival Authorities and Controlled Vocabularies Used	Frequency (%)
LCSH	43 (89.6%)
LCNAF	40 (83.3%)
Art & Architecture Thesaurus (AAT)	31 (64.6%)
Thesaurus for Graphic Materials (TGM)	17 (35.4%)
Virtual International Authority File (VIAF)	14 (29.2%)
In-house thesaurus	11 (22.9%)
EAC-CPF/International Standard Archival Authority Record for Corporate Bodies, Persons, and Families (ISAAR-CPF)	7 (14.6%)
Other (please describe)	2 (4.2%)
Library of Congress Genre/Form Terms (LCGFT); Printing and Publishing Evidence: A Thesaurus for Use in Rare Book and Special Collections Cataloging (RBPUB)	1 1
Open Researcher and Contributor ID (ORCID)	0 (0.0%)

Conclusion

Given the number of response options provided for each question combined with the total number of survey responses, multivariable data analysis was not possible with the data set and instead primarily limited to descriptive analysis. This was a significant limitation of the study, and increasing the survey population and therefore generating a larger pool of responses might have elucidated relationships between some variables (e.g., size of archival staff and adoption of certain descriptive standards). However, expanding the survey size would have necessitated increasing options for some questions to account for the broader variation in cataloging practices that nonacademic organizations employ, thus distributing the responses among more possibilities, and counteracting the focus of the survey on academic institutions.

Generally speaking, according to the survey results, archival descriptive work remains concentrated in the archival domain, with archivists creating description as one component of job responsibilities at most institutions. Descriptive work—including MARC record creation—has not been passed off to cataloging colleagues despite their longer experience with the standards even though the OPAC is the most commonly cited archival information system available to respondents. Decisions about appropriate levels of description, standards to be employed, workflows, and other factors related to archival description do not appear to rely on external buy-in or approval in most repositories, implying that institutions view archivists as capable of controlling their own descriptive destinies and that archival professionals have developed the skills and expertise to engage in this work. Descriptive practices employ a mix of standards from

both the archival and bibliographic traditions, suggesting that archivists are familiar with the standards adopted and maintained outside the archival profession. This is unsurprising given that descriptive practices such as embedded and linked metadata are comparatively new, as are the digital materials that they are intended to support.

Most workflows related to the various kinds of archival description that might be employed at a repository feature very little collaboration with traditional catalogers and instead remain traditionally siloed, although the research points to a desire for additional partnership in the MARC record workflow. Based on the data, this is understandable given that the MARC record creation workflow comprises both traditionally archival and bibliographic tools and systems. In contrast, authority control work is ripe with collaboration. Given that standards for authority control emerging from the archival tradition are still relatively young, it seems likely that archivists may find themselves in positions of reliance on colleagues who are more familiar and have more experience with this aspect of descriptive work.

As descriptive standards change frequently and most archivists engaged in descriptive work received their training through graduate-level courses, SAA/ACA, and regional archival association workshops or webinars, the profession must continue to develop and make available educational offerings focused on descriptive practices. While definite progress has been made, continued work is still needed. Trainings that focus on archival description within finding aids and collection-level MARC records, the descriptive tools most commonly employed at responding institutions, are likely to find the widest audience and generate the most potential collaboration.

Areas for Future Research

This study's findings indicate several areas for future research. Additional research should use an alternate format for some questions to enable multivariate data analysis. For example, rather than providing open-text response fields, provide a finite list of numbers or number ranges.

Given the increasing popularity of archival data management systems like ArchivesSpace (currently at 408 members), it will be interesting to see if the institutions using these systems in conjunction with OPACS (80.7%) or as their sole access systems (7%) increases. On one hand, this seems unlikely given the long history of MARC's entanglement with archival description and access. However, MARC record workflows are still lengthy and involve multiple tools, whereas systems like ArchivesSpace enable efficiency (and potentially easier collaboration) with a single tool for both description and access. At the very

least, increased usage and ongoing programmatic improvements with these systems should improve the MARC record workflow.

Very few reports have been made of EAD adoption or implementation rates across the profession since the emergence of collection management tools such as ArchivesSpace that facilitate its creation. Additionally, as digital collections (born and digitized) continue to increase, it is likely that so will embedded and linked metadata, ensuring material preservation and discoverability. These two areas of description—collection management tools and digital metadata—should be further reviewed in the future, particularly as to the interaction and shared responsibilities between archivists and catalogers.

Similarly, this study revealed that most archives use authority records, with many creating their own given the uniqueness of archival materials, most often employing an LOC standard, with a few using the EAC-CPF standard. Given the relative newness of EAC-CPF and sharing services like SNAC, this is not surprising. However, with the rise of tools like ArchivesSpace providing public collection access and authority management, archival authority record creation is likely to be an area of growth. As archivists continue to create their own authority records, the desire and need to share these records and make them reusable (i.e., the use of EAC-CPF standard for interoperability) will increase. This presents possibilities for research including software/tool usage, standards, and cross-collaboration.

Appendix A: Survey Instrument

The survey is displayed as given to survey participants. The discrepancies in survey question numbering versus ordering are due to difficulties reordering questions using the Qualtrics survey software.

1. I agree to participate.
 - Yes
 - No > End of Survey

Demographic Questions

2. How many individuals (FTE) are employed within the **archival department** in your institution?

3. How many of the individuals (FTE) employed in the **archival department** of your institution do **archival** descriptive work?

4. How many individuals (FTE) are employed within the **cataloging or technical services** department of your institution?

5. How many of the individuals (FTE) employed within the **cataloging or technical services** department of your institution perform **archival** descriptive work?

6. What is your job title?

7. Please indicate all of the degrees you hold:
- High school diploma / GED
 - Associate
 - Bachelor's
 - Master's in Library Science / Information Science or similar
 - Other master's degree
 - PhD
 - JD
 - Other (please specify): _____
8. Please indicate all of the certifications you hold:
- Arrangement and Description Certification (SAA)
 - Digital Archives Specialist Certificate (SAA)
 - Academy of Certified Archivists (Certified Archivists)
 - Institute of Certified Records Managers (Certified Records Manager)
 - Project Management Institute
 - Other (please specify): _____
 - None
9. What is the primary function/role of the department of which you are a part?
- Archives or Special Collections
 - Technical Services
 - Information Technology
 - Other (please specify): _____
12. What portion of your time is devoted to doing **archival** descriptive work?
- Less than 10%
 - 11–25%
 - 26–50%
 - 51–75%
 - More than 75%
13. What training have you participated in relative to the **archival** descriptive work in which you engage (select all that apply)?
- Graduate-level course
 - SAA/ACA workshops or webinars
 - Workshops or webinars offered by a regional archival association
 - Workshops or webinars offered by a state or provincial library or archival association
 - Workshops or webinars offered by ALA/CLA
 - Peer-to-peer training within your institution
 - Other (please specify): _____

Background on Descriptive Practices

17. What type of archival information system does your institution have right now (select all that apply)?
- Online public access catalog (OPAC)
 - Content management system (such as Drupal)
 - Digital collection management system (such as CONTENTdm)
 - Archival data management system (e.g., ArchivesSpace, Archivists' Toolkit, Archon)
 - Database (such as FileMaker Pro, Access, etc.)
 - Other type of information system (please describe): _____
56. Who creates archival description for materials held in your **department** (select all that apply)?
- Staff in my department
 - Staff in another department in my organization
 - Staff outside my organization (we have a cooperative arrangement, work with a vendor, etc.)
19. Please indicate which types of **archival** description your **department** creates in-house (select all that apply):
- Finding aids or inventories (in any format, e.g., MS Word, MS Excel, PDF, HTML, EAD, etc.)
 - Collection-level MARC records
 - Series-level (or below) MARC records
 - Item-level metadata records
 - Linked data
 - Other (please describe): _____
 - None
23. Please indicate which types of **archival** description are provided by other departments in your institution or cooperating institutions (select all that apply):
- Finding aids or inventories (in any format, e.g., MS Word, MS Excel, PDF, HTML, EAD, etc.)
 - Collection-level MARC records
 - Series-level (or below) MARC records
 - Item-level metadata records
 - Linked data
 - Other (please describe): _____
 - None

24. Does another **department** in your institution review or approve archival descriptive information prior to its public release (via the library catalog, online image repository, etc.)?
- Yes
 - No
 - Other (please describe): _____
25. Who in your **institution** is responsible for making decisions about appropriate levels of description standards to be employed, workflows and other factors related to archival description (select all that apply):
- Technical services or cataloging staff (external department)
 - Archives staff (general)
 - Archives staff with technical services or cataloging-specific responsibilities
 - Other (please describe): _____

MARC Records

Display only if Q19 and/or Q23 selected "Collection-level MARC records" and/or "Series-level (or below) MARC records":

27. Does your institution, a consortial partner, or a vendor create MARC records for **all archival** collections held by your **department**?
- Yes
 - No

Display only if Q27 select "NO":

28. Please describe how your **department** determines which collections receive MARC catalog records at your institution.

Display only if Q19 and/or Q23 selected "Collection-level MARC records" and/or "Series-level (or below) MARC records":

29. What tools or systems does your institution or description/cataloging provider use to create MARC records (select all that apply)?
- OCLC Connexion
 - MarcEdit
 - Sky River
 - ArchivesSpace
 - Archivists' Toolkit
 - ILS (Sierra, Voyager, Millennium, Horizon, Alma, etc.)

- Other (please describe): _____

Display only if Q19 and/or Q23 selected "Collection-level MARC records" and/or "Series-level (or below) MARC records":

30. Please describe the workflow for the creation of catalog (MARC) records used by your institution (drag and drop only those activities that apply):

Items

- Archivist creates finding aid
- Cataloger reviews finding aid
- Archivist drafts MARC record
- Cataloger drafts MARC record
- Archivist shares draft MARC record with cataloger
- Cataloger shares draft MARC record with archivist
- Archivist suggests changes to draft
- Cataloger suggests changes to draft
- Archivist exports draft MARC record from an archival information system
- Cataloger exports draft MARC record from an archival information system
- Archivist edits draft MARC record, compiled into final MARC record
- Cataloger edits draft MARC record, compiled into final MARC record
- Archivist imports final MARC record into union catalog (e.g., OCLC)
- Cataloger imports final MARC record into union catalog (e.g., OCLC)
- Archivist imports final MARC record into local catalog
- Cataloger imports final MARC record into local catalog

Display only if Q19 and/or Q23 selected "Collection-level MARC records" and/or "Series-level (or below) MARC records":

31. I am satisfied with the current workflow for creating catalog records at my institution.

- | | | | | |
|-----------------------|-----------------------|----------------------------|-----------------------|-----------------------|
| <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Strongly agree | Somewhat agree | Neither agree nor disagree | Somewhat disagree | Strongly disagree |

Display only if Q19 and/or Q23 selected "Collection-level MARC records" and/or "Series-level (or below) MARC records":

32. What data content standard does your institution employ in preparing MARC records (select all that apply)?

- AACR2
- RDA
- DACS
- RAD
- I don't know
- Other: (please describe) _____

Display only if Q19 and/or Q23 selected "Collection-level MARC records" and/or "Series-level (or below) MARC records":

33. Are your MARC records loaded into union catalogs such as OCLC?

- Yes
 No
 I don't know

Display only if Q19 and/or Q23 selected "Collection-level MARC records" and/or "Series-level (or below) MARC records":

34. Where do you make changes to MARC records after creating OCLC records?

- Union catalogs (such as OCLC)
 Locally
 Both

Display only if Q19 and/or Q23 selected "Collection-level MARC records" and/or "Series-level (or below) MARC records":

35. Complete this sentence: my ideal workflow for creating MARC records at my institution would be:

Display only if Q19 and Q23 did NOT select "Collection-level MARC records" and did NOT select "Series-level (or below) MARC records":

36. Please describe why your institution does not create MARC records for your archival collections.

Display only if Q19 and Q23 did NOT select "Collection-level MARC records" and did NOT select "Series-level (or below) MARC records":

37. I am satisfied with the decision to not create MARC records at my institution.

- Strongly agree Somewhat agree Neither agree nor disagree Somewhat disagree Strongly disagree

Embedded Metadata Records

38. Does your institution create **embedded** item-level metadata for objects held by your department?

- Yes -> Q. 39
- No -> Q. 42

39. What tools or systems does your institution use to create **embedded** item-level metadata records? Please write the name of the tools or systems in the space below.

40. Please describe the workflow used by your institution for creation of **embedded** item-level metadata records (drag and drop only those activities that apply):

Items

Archivist bulk adds (or oversees student adding) higher-level (i.e., collection-level, series-level, etc.) embedded metadata to multiple records

Cataloger bulk adds (or oversees student adding) higher-level (i.e., collection-level, series-level, etc.) embedded metadata to multiple records

Archivist adds (or oversees student adding) embedded item-level metadata to each individual record

Cataloger adds (or oversees student adding) embedded item-level metadata to each individual record

Archivist QCs embedded metadata in each individual record

Cataloger QCs embedded metadata in each individual record

41. I am satisfied with the current workflow for creating **embedded** item-level metadata records at my institution.

- | | | | | |
|-----------------------|-----------------------|----------------------------|-----------------------|-----------------------|
| <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Strongly agree | Somewhat agree | Neither agree nor disagree | Somewhat disagree | Strongly disagree |

42. Complete this sentence: my ideal workflow for creating **embedded** item-level metadata records at my institution would be:

Linked Metadata Records

61. Does your institution create **linked** item-level metadata for objects held by your department?
- Yes -> Q. 62
- No -> Q. 65
62. What tools or systems does your institution use to create **linked** item-level metadata records? Please write the name of the tools or systems in the space below.

63. Please describe the workflow used by your institution for creation of **linked** item-level metadata records (drag and drop only those activities that apply):

Items

Archivist creates (or oversees student creating) a linked (via same unique ID) metadata file and adds item-level metadata for each record)

Cataloger creates (or oversees student creating) a linked (via same unique ID) metadata file and adds item-level metadata for each record)

Archivist QCs individual linked metadata records

Cataloger QCs individual linked metadata records

Archivist exports all previously embedded metadata to a spreadsheet (spreadsheet captures metadata for each item in collection/series/etc.)

Cataloger exports all previously embedded metadata to a spreadsheet (spreadsheet captures metadata for each item in collection/series/etc.)

Archivist manually records (or oversees student recording) metadata for each item in a spreadsheet (spreadsheet captures metadata for each item in collection/series/etc.)

Cataloger manually records (or oversees student recording) metadata for each item in a spreadsheet (spreadsheet captures metadata for each item in collection/series/etc.)

Archivist QCs metadata spreadsheet

Cataloger QCs metadata spreadsheet

Archivist merges spreadsheet with output (e.g., METS record) from archival information system for ingest into preservation/access system

Cataloger merges spreadsheet with output (e.g., METS record) from archival information system for ingest into preservation/access system

64. I am satisfied with the current workflow for creating **linked** item-level metadata records at my institution.

- Strongly agree Somewhat agree Neither agree nor disagree Somewhat disagree Strongly disagree

65. Complete this sentence: my ideal workflow for creating **linked** item-level metadata records at my institution would be:

Authority Records

47. Are archival authority records created in your department or in a separate department in your organization?

- In my department -> Q. 48
 In another department in my organization -> Q. 48
 Both of the above -> Q. 48
 My organization does not create authority records internally -> Q. 44

48. What authority descriptive standard does your institution use to create archival authority records (Select all that apply)?

- RDA
 DACS
 RAD
 AACR2
 Other (please describe): _____

21. Please indicate which types of archival authorities your institution creates in-house (Select all that apply)?

- EAC-CPF / ISAAR-CPF
 LCNAF
 VIAF
 ORCID
 LCSH
 AAT
 TGM
 In-house thesaurus
 Other (please describe): _____

50. Please describe the process for the creation of authority records used by your institution (drag and drop only those activities that apply):

Items

Archivist checks appropriate thesauri/controlled vocabulary to see if authority record already exists

Cataloger checks appropriate thesauri/controlled vocabulary to see if authority record already exists

Archivist creates authority record following institution's preferred data standard

Cataloger creates authority record following institution's preferred data standard

Archivist adds authority to institution's in-house thesauri/controlled vocabulary for reuse

Cataloger adds authority to institution's in-house thesauri/controlled vocabulary for reuse

Archivist hand codes authority record into EAC-CPF

Cataloger hand codes authority record into EAC-CPF

Archivist exports authority record from archival information system in EAC-CPF

Cataloger exports authority record from archival information system in EAC-CPF

Archivist imports EAC-CPF authority record into a shared system where it can be reused by other institutions (e.g., SNAC)

Cataloger imports EAC-CPF authority record into a shared system where it can be reused by other institutions (e.g., SNAC)

51. I am satisfied with the current workflow for creating authority records at my institution.

-
- Strongly agree Somewhat agree Neither agree nor disagree Somewhat disagree Strongly disagree

52. Complete this sentence: my ideal workflow for creating authority records at my institution would be:

44. Does your institution currently use authority records in its archival description?

- Yes -> Q. 45
 No -> Q. 57

45. What archival descriptive records does your institution include authority records in (select all that apply)?

- Finding aids or inventories (in any format, e.g., MS Word, MS Excel, PDF, HTML, EAD, etc.)
- Collection-level MARC records
- Series-level MARC records
- Dublin Core records
- Linked data
- Other (please describe): _____

46. What archival authorities and controlled vocabularies does your institution use (select all that apply)?

- EAC-CPF / ISAAR-CPF
- LCNAF
- VIAF
- ORCID
- LCSH
- AAT
- TGM
- In-house thesaurus
- Other (please describe): _____

57. Please describe why your institution does not include authority records in your archival collections.

58. I am satisfied with the decision to not include authority records in archival description at my institution.

- | | | | | |
|-----------------------|-----------------------|----------------------------|-----------------------|-----------------------|
| <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Strongly agree | Somewhat agree | Neither agree nor disagree | Somewhat disagree | Strongly disagree |

Appendix B: Sample

ARL institutions and units asked to participate in the survey

ARL Institution	Individual Units Contacted (if Different from Library System)
University of Alabama Libraries	Hoole Special Collections
University at Albany, SUNY, Libraries	M.E. Grenander Department of Special Collections & Archives
University of Alberta Libraries	Bruce Peel Special Collections & Archives
University of Arizona Libraries	Special Collections
Arizona State University Libraries	
Auburn University Libraries	Special Collections and Archives
Boston College Libraries	John J. Burns Library
Boston University Libraries	Howard Gotlieb Archival Research Center
Brigham Young University Library	L. Tom Perry Special Collections
University of British Columbia Library	Rare Books and Special Collections
	University Archives
Brown University Library	John Hay Library
University at Buffalo, SUNY, Libraries	Special Collections: The Poetry Collection
	Special Collections: University Archives
University of Calgary—Libraries and Cultural Resources	Archives and Special Collections
University of California, Berkeley Library	Bancroft Library / University Archives
University of California, Davis Library	Special Collections
University of California, Irvine Libraries	Special Collections & Archives
UCLA Library	Special Collections
University of California, Riverside Library	Special Collections & University Archives
University of California, San Diego Library	Special Collections & Archives
University of California, Santa Barbara Libraries	Special Research Collections
Case Western Reserve University Libraries	Special Collections
University of Chicago Library	Special Collections Research Center
University of Cincinnati Libraries	Archives and Rare Books Library
	Gorno Memorial Musical Library
	Winkler Center for the History of Health Professions
University of Colorado, Boulder Libraries	Special Collections & Archives
Colorado State University Libraries	Archives and Special Collections
Columbia University Libraries	Rare Book & Manuscript Library
	Fine Arts Library
University of Connecticut Libraries	Dodd Research Center, Archives & Special Collections
Cornell University Library	Division of Rare and Manuscript Collections
	Kheel Center for Labor-Management Documentation & Archives
	Medical Archives of the New York—Presbyterian Hospital / Weill Cornell Medical Center
Dartmouth College Library	Rauner Special Collections Library
University of Delaware Library	Special Collections and Museums
Duke University Libraries	David M. Rubenstein Rare Book & Manuscript Library

ARL Institution	Individual Units Contacted (if Different from Library System)
Emory University Libraries	Stuart A. Rose Manuscript, Archives, and Rare Book Library
	Woodruff Health Sciences Center Library
University of Florida Libraries	Special & Area Studies Collections
Florida State University Libraries	Special Collections Research Center
George Washington University Library	Special Collections Research Center
Georgetown University Library	Booth Family Center for Special Collections
University of Georgia Libraries	Hargrett Rare Book and Manuscript Library and University Archives
	Richard Russell Library for Political Research and Studies
	Walter J. Brown Media Archives & Peabody Awards Collection
Georgia Institute of Technology Library	Archives & Records Management
University of Guelph Library	Archival & Special Collections
Harvard University Libraries	Schlesinger Library
	University Archives
	Houghton Library
	Baker Library Special Collections
	Abraham Pollen Archives and Rare Book Library
	Special Collections at Andover-Harvard Theological Library
	Arnold Arboretum Horticultural Library
	Biblioteca Berenson
	Botany Libraries Archives
	Center for the History of Medicine
	Loeb Music Library
	Ernst Mayr Library of the Museum of Comparative Zoology
	Fine Arts Library
	Fung Library
	Harvard Art Museum Archives & Special Collections
	Harvard Film Archive
	Harvard Forest Archives
	Harvard Law School Historical & Special Collections
	Harvard-Yenching Library
	Loeb Design Library
	Milman Parry Collection of Oral Literature
	Monroe C. Gutman Library
	Peabody Museum Archives
Robbins Library of Philosophy	
Ruth and David Freiman Archives at Beth Israel Deaconess Medical Center	
Semitic Museum Archives	
Theodore Roosevelt Collection	
Tozzer Library	
Ukrainian Institute Reference Library	
Woodberry Poetry Room	

ARL Institution	Individual Units Contacted (if Different from Library System)
University of Hawai'i at Mānoa Library	Archives and Manuscripts Department
University of Houston Libraries	Special Collections
Howard University Libraries	Moorland Springarn Research Center
University of Illinois at Chicago Library	Special Collections & University Archives
University of Illinois at Urbana-Champaign Library	University of Illinois Archives
	Rare Book & Manuscript Library
Indiana University Libraries Bloomington	University Archives
	Archives of African American Music and Culture
	Archives of Traditional Music
	Black Film Center / Archive
	Moving Image Archive
	Kinsey Institute Library & Archives
	Jerome Hall Law Library Archive
	Lilly Library
University of Iowa Libraries	Special Collections
Iowa State University Library	Special Collections & University Archives
Johns Hopkins University Libraries	Special Collections
University of Kansas Libraries	Kenneth Spencer Research Library
Kent State University Libraries	Special Collections & Archives
University of Kentucky Libraries	Special Collections Research Center
Bibliothèque de l'Université Laval	
Louisiana State University Libraries	Special Collections
University of Louisville Libraries	Archives and Special Collections
McGill University Library	Rare Books and Special Collections
	University Archives
	Osler Library of the History of Medicine
McMaster University Libraries	Archives and Research Collections
University of Manitoba Libraries	Archives and Special Collections
University of Maryland Libraries	Special Collections and University Libraries
	Michelle Smith Performing Arts Library—Special Collections
University of Massachusetts, Amherst Libraries	Special Collections and University Libraries
Massachusetts Institute of Technology Libraries	Institute Archives and Special Collections
University of Miami Libraries	University Archives
	Cuban Heritage Collection
	Special Collections
University of Michigan Library	Bentley Library
	Special Collections Library
Michigan State University Libraries	Special Collections Library
	University Archives and Historical Collections

ARL Institution	Individual Units Contacted (if Different from Library System)
University of Minnesota Libraries	Archives and Special Collections
University of Missouri–Columbia Libraries	University Archives
University of Nebraska–Lincoln Libraries	Archives and Special Collections
University of New Mexico Libraries	Center for Southwest Research and Special Collections
New York University Libraries	Avery Fisher Center
	Fales Library & Special Collections
	Tamiment Library & Robert F. Wagner Labor Archives, Collections & Research Services
	Poly Archives and Special Collections
	University Archives
	Archives and Special Collections
University of North Carolina at Chapel Hill Libraries	Louis Round Wilson Library for Special Collections
North Carolina State University Libraries	Special Collections Research Center
Northwestern University Library	University Archives
	McCormick Library of Special Collections
University of Notre Dame, Hesburgh Libraries	Rare Books and Special Collections
	University of Notre Dame Archives
Ohio State University Libraries	Billy Ireland Cartoon Library and Museum
	Byrd Polar Archives
	Theatre Research Institute
	Ohio Congressional Archives
	Rare Books and Manuscripts Library
	Albrecht Library
	Hilandar Research Library
	Charvat Collection of American Literature
	University Archives
Ohio University Libraries	Archives and Special Collections
University of Oklahoma Libraries	Western History Collections
	History of Science Collections
	John and Mary Nichols Collection
Oklahoma State University Library	Oklahoma Oral History Research Program
	William E. Brock Memorial Center for Veterinary Health Sciences Library
	University Archives
University of Oregon Libraries	Special Collections and University Archives
University of Ottawa Library	Archives and Special Collections
University of Pennsylvania Libraries	Kislak Center for Special Collections, Rare Books and Manuscripts
	University Archives and Record Center
Pennsylvania State University Libraries	Special Collections Library
University of Pittsburgh Libraries	Archives and Special Collections
Princeton University Library	Rare Books and Special Collections

ARL Institution	Individual Units Contacted (if Different from Library System)
Purdue University Libraries	The Virginia Kelly Karnes Archives and Special Collections Research Center Black Cultural Center Library
Queen's University Library	W. D. Jordan Rare Books and Special Collections University Archives
Rice University Library	Woodson Research Center Special Collections and Archives
University of Rochester Libraries	Rare Books, Special Collections, and Preservation
Rutgers University Libraries	Special Collections and University Archives
University of Saskatchewan Library	University Archives and Special Collections
University of South Carolina Libraries	South Caroliniana Library Rare Books and Special Collections
University of Southern California Libraries	Special Collections ONE Archives
Southern Illinois University, Carbondale Library	Special Collections Research Center
Stony Brook University, SUNY, Libraries	Special Collections and University Archives
Syracuse University Libraries	Special Collections
Temple University Libraries	Special Collections Research Center Charles L. Blockson Afro-American Collection
University of Tennessee, Knoxville, Libraries	Special Collections
University of Texas Libraries	Briscoe Center for American History The H. J. Lutzer Stark Center Henry Ransom Center Distinctive Collections
Texas A&M University Libraries	Cushing Memorial Library and Archives
Texas Tech University Libraries	Southwest Collections/Special Collections Library
University of Toronto Libraries	University Archives (UTARMS) Special Collections
Tulane University Library	Hogan Jazz Archive The Latin American Library Louisiana Research Collection (LaRC) Rare Books & Special Collections
University of Utah Library	Special Collections Aileen H. Clyde 20th Century Women's Legacy Archive Katherine W. Dumke Fine Arts & Architecture Library
Vanderbilt University Library	Jean and Alexander Heard Library Special Collections & University Archives Television News Archive
University of Virginia Library	Albert and Shirley Small Special Collections
Virginia Tech Libraries	Special Collections
University of Washington Libraries	Special Collections

ARL Institution	Individual Units Contacted (if Different from Library System)
Washington State University Libraries	Manuscripts, Archives, & Special Collections
Washington University in St. Louis Libraries	Special Collections
University of Waterloo Library	Special Collections and Archives
	Musagetes Architecture Library
Wayne State University Libraries	Reuther Library
	Special Collections
Western University Libraries	Archives and Research Collections Centre
	Music Library
University of Wisconsin–Madison Libraries	Department of Special Collections
	Curator/History of Health Sciences Librarian
	Art Library
	Mills Music Library
	University Archives and Management Services
Yale University Library	Manuscripts and Archives
	Beinecke Rare Book and Manuscripts
York University Libraries	Clara Thomas Archives and Special Collections

NOTES

¹ The MARC AMC format was scheduled to fully integrate into USMARC on March 3, 1996, as explained by Kathryn P. Glennan, “Format Integration: The Final Phase,” *MC Journal: The Journal of Academic Media Librarianship* 3 (1995): 1–31. Throughout this article, we primarily use “MARC,” which encompasses both MARC and MARC AMC. We use “MARC AMC” for clarity when exclusively referring to *only* the MARC AMC format.

² Several sources point toward ongoing and increased use of MARC (initially MARC AMC) in the archives profession. For example, in her 1994 article, Lyn Martin states that “MARC AMC has indeed come of age and has entered the mainstream of archival and cataloging thinking, theory, and practice.” But she also notes that in her survey, 57.1% of respondents (80 of 140) reported using MARC, so the format still had untapped potential. Lyn M. Martin, “Viewing the Field: A Literature Review and Survey of the Use of U.S. MARC AMC in U.S. Academic Archives,” *American Archivist* 57, no. 3 (1994): 495, <https://doi.org/10.17723/aarc.57.3.xu5345u722614jm8>. In their 1995 article, Stielow, Hankins, and Jones pronounced, “with more than 500,000 records already logged MARC has emerged as a standard for modern archival description.” Frederic Stielow, Rebecca Hankins, and Venola Jones, “From Managerial Theory and Worksheets to Practical MARC AMC; Or, Dancing with the Dinosaur at the Amistad,” *American Archivist* 58, no. 4 (1995): 466–67, <https://doi.org/10.17723/aarc.58.4.2h24853221046411>. In their case study, Brown and Harvey explain their rationale behind converting EAD to MARC21 records: to increase accessibility using their existing systems. Geoff Brown and Kathryn Harvey, “Adding Archival Finding Aids to the Library Catalogue: Simple Crosswalk or Data Traffic Jam?,” *Partnership: The Canadian Journal of Library and Information Practice and Research* 2, no. 2 (2007): 5, <https://doi.org/10.21083/partnership.v2i2.298>. Nimer and Daines note that ArchiveGrid, OCLC’s international union catalog for archival material, is populated using both EAD and MARC records. Cory L. Nimer and J. Gordon Daines III, “The Development and Application of U.S. Descriptive Standards for Archives, Historical Manuscripts, and Rare Books,” *Cataloging & Classification Quarterly* 51, no. 5 (2013): 540, <https://doi.org/10.1080/01639374.2013.764373>. In their study, Gracy and Lambert note, “The development and widespread adoption of APPM and MARC AMC showed that the right combination of incentives could overcome predilections

- for local practices and propel the archival profession toward acceptance of standardized methods for such work.” Karen F. Gracy and Frank Lambert, “Who’s Ready to Surf the Next Wave? A Study of Perceived Challenges to Implementing New and Revised Standards for Archival Description,” *American Archivist* 77, no. 1 (2014): 100, <https://doi.org/10.17723/aarc.77.1.b241071w5r252612>. Finally, ArchivesSpace exports resource records in MARC XML format, proving its continued necessity; for a discussion, see Carol Ou, Katherine L. Rankin, and Cyndi Shein, “Repurposing ArchivesSpace Metadata for Original MARC Cataloging,” *Journal of Library Metadata* 17, no. 1 (2017): 19–36, <https://doi.org/10.1080/19386389.2017.1285143>.
- ³ Throughout this paper, we use the term “archival collections” to represent both definitions in *A Glossary of Archival and Records Terminology*: “a group of materials with some unifying characteristic” and “materials assembled by a person, organization, or repository from a variety of sources; an artificial collection.” Richard Pearce-Moses, s.v. “Collection,” *Glossary of Archival and Records Terminology* (Chicago: Society of American Archivists, 2005), <https://www2.archivists.org/glossary/terms/c/collection>.
- ⁴ Lesley L. Parilla, Rebecca Morgan, and Christina Fidler, “Excavating Archival Description: From Collection to Data Level,” *Digital Library Perspectives* 33, no. 3 (2017): 197–98, <https://doi.org/10.1108/DLP-11-2016-0043>.
- ⁵ As quoted in the “Report of the Working Group on Standards for Archival Description,” the definition of “description” in *A Basic Glossary or Archivists, Manuscript Curators, and Records Managers* (July 1974) was limited to “the process of establishing intellectual control over holdings through the preparation of finding aids.” Working Group on Standards for Archival Description, “Archival Description Standards: Establishing a Process for Their Development and Implementation. Report of the Working Group on Standards for Archival Description,” *American Archivist* 52, no. 4 (1989): 440, <https://doi.org/10.17723/aarc.52.4.qn551513671v1517>.
- ⁶ Working Group on Standards for Archival Description, “Archival Description Standards,” 442.
- ⁷ We use “cataloger” also in its broadest form, “a librarian primarily responsible for preparing bibliographic records to represent the items acquired by a library, including bibliographic description, subject analysis, and classification. Also refers to the librarian responsible for supervising a cataloging department.” American Library Association, s.v. “Cataloger,” “Glossary of Technical Services Terms” (2013), <http://www.ala.org/alcts/about/advocacy/glossary>. For the purposes of this article, published materials such as books and serials are the common types of “items acquired by a library,” whereas archival materials may be included, but are not the norm.
- ⁸ Susan E. Davis, “How Twenty-Five People Shook the Archival World: The Case of Descriptive Standards,” *Journal of Archival Organization* 4, nos. 3–4 (2007): 43–62, https://doi.org/10.1300/J201v04n03_04.
- ⁹ The Society of American Archivists established the National Information Systems Task Force (NISTF) in 1977.
- ¹⁰ Susan E. Davis, “Descriptive Standards and the Archival Profession,” *Cataloging & Classification Quarterly* 35, nos. 3–4 (2003): 300, https://doi.org/10.1300/J104v35n03_02.
- ¹¹ Katherine M. Wisser, “Archival Cataloging and the Archival Sensibility,” *RBM: A Journal of Rare Books, Manuscripts, and Cultural Heritage* 12, no. 1 (2011): 36, <https://doi.org/10.5860/rbm.12.1.345>.
- ¹² Here we use the term “archivist” in its broadest form, “an individual responsible for appraising, acquiring, arranging, describing, preserving, and providing access to records of enduring value, according to the principles of provenance, original order, and collective control to protect the materials’ authenticity and context.” Pearce-Moses, s.v. “Archivist,” *Glossary of Archival and Records Terminology*, <https://www2.archivists.org/glossary/terms/a/archivist>. While individual repositories and institutions represent this work with a range of job titles—including “curator,” “manuscript curator,” “special collections librarian,” “manuscripts librarian,” “archives technician,” and others—this article uses the term “archivist” as a broad umbrella encapsulating these individual categories.
- ¹³ Davis, “Twenty-Five People Shook,” 48–49. The two publications are Nancy A. Sahli, *MARC for Archives and Manuscripts: The AMC Format* (Chicago: Society of American Archivists, 1985), and Max J. Evans and Lisa B. Weber, *MARC for Archives and Manuscripts: A Compendium of Practice* (Madison, WI: State Historical Society of Wisconsin, 1985).
- ¹⁴ Working Group on Standards for Archival Description, “Archival Description Standards,” 432.

- ¹⁵ Martin, "Viewing the Field," 489–90.
- ¹⁶ Martin, "Viewing the Field," 492.
- ¹⁷ Mark A. Vargas and Janet Padway, "Catalog Them Again for the First Time," *Archival Issues* 17, no. 1 (1992): 58.
- ¹⁸ Vargas and Padway, "Catalog Them Again," 51; Susan Hamburger, "Life with Grant: Administering Manuscripts Cataloging Grant Projects," *American Archivist* 62, no. 1 (1999): 144–45, <https://doi.org/10.17723/aarc.62.1.3456p7nj20106u42>.
- ¹⁹ Hamburger, "Life with Grant," 133.
- ²⁰ See Hamburger, "Life with Grant," 135; Vargas and Padway, "Catalog Them Again," 58; Margaret F. Nichols, "The Cataloger and the Archivist Should Be Friends: or, Herding vs. Milking Special Collections," *RBM: A Journal of Rare Books, Manuscripts, and Cultural Heritage* 12, no. 1 (2011): 29, <https://doi.org/10.5860/rbm.12.1.344>.
- ²¹ Hamburger, "Life with Grant," 147.
- ²² Vargas and Padway, "Catalog Them Again," 51.
- ²³ Stielow, Hankins, and Jones, "Dancing with the Dinosaur," 467.
- ²⁴ Hamburger, "Life with Grant," 145.
- ²⁵ Stielow, Hankins, and Jones, "Dancing with the Dinosaur," 469.
- ²⁶ Hamburger, "Life with Grant," 137.
- ²⁷ Vargas and Padway, "Catalog Them Again," 50–53.
- ²⁸ The bibliographic description of rare books is sometimes referred to "as a bridge" between archival and bibliographic description. Wisser, "Archival Cataloging," 38. While rare book bibliographic description remains at the item level, like archival materials, rare books have a degree of uniqueness, making their description difficult to standardize and causing the cataloger to turn to external sources to provide additional context. Wisser, "Archival Cataloging," 34–40. This results in rare book bibliographic records that are unique but less reusable—recalling archival description. Technical services archivists and rare books catalogers have been compared to the farmer and the cowman, who "do their work using almost opposite mental processes, based on fundamental differences in the nature of the materials they work with and the standards for processing those materials." Nichols, "The Cataloger and the Archivist Should Be Friends," 25. These differences stem from archival and bibliographic description evolving from separate traditions and theoretical underpinnings.
- ²⁹ Brown and Harvey, "Adding Archival Finding Aids," 1.
- ³⁰ Ou, Rankin, and Shein. "Repurposing ArchivesSpace Metadata," 19–36.
- ³¹ Lois Mai Chan, *Cataloging and Classification: An Introduction* (Lanham, MD: The Scarecrow Press, Inc., 2007), 57–59.
- ³² Steven L. Hensen, "Squaring the Circle: The Reformation of Archival Description in AACR2," *Library Trends* 36, no. 3 (1988): 543.
- ³³ Hensen, "Squaring the Circle," 547–49.
- ³⁴ Katherine M. Wisser and Jennifer O'Brien Roper, "Maximizing Metadata: Exploring the EAD-MARC Relationship," *Library Resources & Technical Services* 47, no. 2 (2003): 72.
- ³⁵ "Finding aid" here is meant to be any "tool that facilitates discovery of information within a collection of records," including calendars, guides, inventories, registers, and lists (Pearce-Moses, s.v. "Finding Aid," *Glossary of Archival and Records Terminology*, <https://www2.archivists.org/glossary/terms/f/finding-aid>).
- ³⁶ Julia Skinner, "Metadata in Archival and Cultural Heritage Settings: A Review of the Literature," *Journal of Library Metadata* 14, no. 1 (2014): 54, <https://doi.org/10.1080/19386389.2014.891892>.
- ³⁷ As Alexander Thurman points out, while union access to archival materials had been attempted since the early 1960s through print resources like the *National Union Catalog of Manuscript Collections* (NUCMC) and Chadwyck-Healy's microfiche publication of the *National Inventory of Documentary Sources in the United States* in the 1980s, neither delivered all of the descriptive content of the finding aid or the power of full-text search. Alexander C. Thurman, "Metadata Standards for Archival Control: An Introduction to EAD and EAC," *Cataloging & Classification Quarterly* 40, nos. 3–4 (2005): 187, https://doi.org/10.1300/J104v40n03_09.

- ³⁸ See, for example, Elizabeth Dow, "EAD and the Small Repository," *American Archivist* 60, no. 4 (1997): 446–55, <https://doi.org/10.17723/aarc.60.4.83n2005k00n27411>; Jill Tatem, "EAD: Obstacles to Implementation, Opportunities for Understanding," *Archival Issues* 23, no. 2 (1998): 155–69; James M. Roth, "Serving Up EAD: An Exploratory Study on the Development and Utilization of Encoded Archival Description Finding Aids," *American Archivist* 64, no. 2 (2001): 214–37, <https://doi.org/10.17723/aarc.64.2.e687471v304k0u66>; Elizabeth Yakel and Jihyun Kim, "Adoption and Diffusion of Encoded Archival Description," *Journal of the American Society for Information Science and Technology* 56, no. 13 (2005): 1427–37, <https://doi.org/10.1002/asi.20236>; Sonia Yaco, "It's Complicated: Barriers to EAD Implementation," *American Archivist* 71, no. 2 (2008): 456–75, <https://doi.org/10.17723/aarc.71.2.678t26623402p552>; Michele Combs, Mark A. Matienzo, Merrilee Proffitt, and Lisa Spiro, *Over, Under, Around, and Through: Getting Around Barriers to EAD Implementation* (Dublin, OH: OCLC Research, 2010), <https://www.oclc.org/content/dam/research/publications/library/2010/2010-04.pdf>.
- ³⁹ For examples of EAD workflows with both archivists and catalogers, see Wisser and O'Brien Roper, "Maximizing Metadata," 71–76; Amy McCrory and Beth M. Russell, "Crosswalking EAD: Collaboration in Archival Description," *Information Technology & Libraries* 24, no. 3 (2005): 99–106, <https://doi.org/10.6017/ital.v24i3.3371>. Examples of EAD workflows without catalogers include Peter Carini and Kely Shepherd, "The MARC Standard and Encoded Archival Description," *Library Hi Tech* 22, no. 1 (2004): 18–27, <http://doi.org/10.1108/07378830410524468>; Plato L. Smith II, "Preparing Locally Encoded Electronic Finding Aid Inventories for Union Environments: A Publishing Model for Encoded Archival Description," *Information Technology and Libraries* 27, no. 2 (2008): 26–30, <https://doi.org/10.6017/ital.v27i2.3255>.
- ⁴⁰ The Library of Congress is currently in the process of transitioning from MARC to Bibframe 2.0; see Library of Congress, "Bibframe Frequently Asked Questions," <http://www.loc.gov/bibframe/faqs>.
- ⁴¹ Cory Nimer, "RDA and Archives," *Journal of Archival Organization* 8, nos. 3–4 (2010): 227–43, <https://doi.org/10.1080/15332748.2010.550799>.
- ⁴² See Brigham Young University's method for archival/manuscript collections: Nimer and Daines, "U.S. Descriptive Standards," 541–43.
- ⁴³ Gracy and Lambert, "Surf the Next Wave?," 108.
- ⁴⁴ Gracy and Lambert, "Surf the Next Wave?," 113.
- ⁴⁵ Lisa B. Weber, "The 'Other' USMARC Formats: Authorities and Holdings. Do We Care to Be Partners in this Dance, too?," *American Archivist* 53, no. 1 (1990): 44–51, <https://doi.org/10.17723/aarc.53.1.e6p2l8vk66053095>.
- ⁴⁶ David Bearman, "Authority Control Issues and Prospects," *American Archivist* 52, no. 3 (1989): 291, <https://doi.org/10.17723/aarc.52.3.g562600um1063123>.
- ⁴⁷ Thurman, "Introduction to EAD and EAC," 194.
- ⁴⁸ Thurman, "Introduction to EAD and EAC," 194–95.
- ⁴⁹ Jinfang Niu, "Evolving Landscape in Name Authority Control," *Cataloging & Classification Quarterly* 51 (2013): 404, <https://doi.org/10.1080/01639374.2012.756843>.
- ⁵⁰ Katherine Crowe and Kevin Clair, "Developing a Tool for Publishing Linked Local Authority Data," *Journal of Library Metadata* 15, nos. 3–4 (2015): 232, <https://doi.org/10.1080/19386389.2015.1099993>.
- ⁵¹ Gracy and Lambert, "Surf the Next Wave?," 111.
- ⁵² Nimer and Daines, "U.S. Descriptive Standards," 547.
- ⁵³ ArchivesSpace, "Who's Using ArchivesSpace?" (July 09, 2019), <https://archivesspace.org/community/whos-using-archivesspace>.
- ⁵⁴ Wisser and O'Brien Roper, "Maximizing Metadata," 74.
- ⁵⁵ Wisser and O'Brien Roper, "Maximizing Metadata," 75.
- ⁵⁶ Wisser and O'Brien Roper, "Maximizing Metadata," 75.
- ⁵⁷ Brown and Harvey, "Adding Archival Finding Aids," 6.
- ⁵⁸ Ou, Rankin, and Shein, "Repurposing ArchivesSpace Metadata," 26–27.
- ⁵⁹ Wisser and O'Brien Roper, "Maximizing Metadata," 71–76; McCrory and Russell, "Crosswalking EAD," 99–106.
- ⁶⁰ McCrory and Russell, "Crosswalking EAD," 105.

- ⁶¹ Marielle Veve and Melanie Feltner-Reichert, "Integrating Non-MARC Metadata Duties into the Workflow of Traditional Catalogers: A Survey of Trends and Perceptions among Catalogers in Four Discussion Lists," *Technical Services Quarterly* 27, no. 2 (2010): 206–7, <https://doi.org/10.1080/07317130903585477>.
- ⁶² Veve and Feltner-Reichert, "Integrating Non-MARC Metadata Duties into the Workflow of Traditional Catalogers," 207.
- ⁶³ Gracy and Lambert, "Surf the Next Wave?," 103.
- ⁶⁴ Gracy and Lambert, "Surf the Next Wave?," 116.
- ⁶⁵ Examples listed in the survey instrument were Sierra, Voyager, Millenium, Horizon, and Alma.
- ⁶⁶ While DCRM was not included in the list of prepopulated survey responses, 2 respondents noted use of DCRM when selecting "other" in response to the survey question.
- ⁶⁷ We created these categories based on the survey responses.
- ⁶⁸ An additional response of "Sorry, I do not understand this question" is not included in the *n*, because it is not a tool or system.
- ⁶⁹ Workflow 1, with 2 respondents: 1. Archivist adds (or oversees student adding) embedded item-level metadata to each individual record; 2. Archivist QCs embedded metadata in each individual record. Workflow 2, with 4 respondents: 1. Archivist bulk adds (or oversees student adding) higher-level (i.e., collection-level, series-level, etc.) embedded metadata to multiple records; 2. Archivist adds (or oversees student adding) embedded item-level metadata to each individual record; 3. Archivist QCs embedded metadata in each individual record.
- ⁷⁰ All respondents were directed to this question, regardless of whether their institutions create embedded metadata records, but only those respondents whose institutions do so responded.
- ⁷¹ Institutions were included in this number if they responded affirmatively to both Q38 and Q61. Q19 and Q23, which ask about the types of archival description created within the department versus external to it, do not specify a particular type of item-level metadata. Some respondents indicated their institutions create item-level metadata description in response to these broader options in Q19 and Q23, but did not report their institutions as creating embedded or linked metadata in the more specific Q38 and Q61.
- ⁷² An additional response of "I forget what the system is called" is not included in the *n*, because it is not a tool or system.
- ⁷³ The specific steps are "Archivist creates (or oversees student creating) a linked (via same unique ID) metadata file and adds item-level metadata for each record" and "Cataloger creates (or oversees student creating) a linked (via same unique ID) metadata file and adds item-level metadata for each record."
- ⁷⁴ All respondents were directed to this question, regardless of whether their institutions create linked metadata records, but only those respondents whose institutions do so responded.
- ⁷⁵ Question 47.
- ⁷⁶ The specific tasks are "Archivist checks appropriate thesauri/controlled vocabulary to see if authority record already exists" and "Cataloger checks appropriate thesauri/controlled vocabulary to see if authority record already exists."
- ⁷⁷ The specific tasks are "Archivist checks appropriate thesauri/controlled vocabulary to see if authority record already exists" and "Cataloger checks appropriate thesauri/controlled vocabulary to see if authority record already exists."

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