

Optimum Access? Processing in College and University Archives

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Abstract

Processing is at the heart of what we do as archivists but has been one of the most under-analyzed aspects of our work, particularly in its relationship to access. This article describes and analyzes the ways in which current processing techniques affect access at college and university archives. The analysis shows that paper-based processing backlogs are *not* correlated to the application of intensive processing techniques and that they are only mildly correlated to the application of complex descriptive technologies. Many institutions have not made as much descriptive information available online as might be desirable, and few institutions are actively soliciting or processing electronic records. While these problems may seem intractable, some institutions have made remarkable progress in providing effective processing and descriptive programs and in developing associated access tools. This article suggests specific ways that we can learn from their successes. The profession as a whole has a responsibility to help all institutions use proven management techniques and easy-to-implement descriptive tools, so that the universe of archival materials that is held by all repositories may be more accessible to users.

Processing is defined as “the arrangement, description, and housing of archival materials for storage and use by patrons.”¹ It is at the heart of archival work. The steps that an archivist takes or fails to take will either facilitate or impede physical and intellectual control over the entirety of a repository’s collections. Not only do our processing practices encourage or discourage the use of archival materials, but they affect our relationships to donors, resource allocators, and users.

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This article was originally published in *College and University Archives: Readings in Theory and Practice*, edited by Christopher J. Prom and Ellen D. Swain (Society of American Archivists, 2008). It has been lightly edited to conform to the *American Archivist* style.

The author would like to thank Ellen D. Swain, William Maher, Robert Burger, Dennis Meissner, Mark A. Greene, and Tom Teper, who commented upon drafts. A dataset on which portions of this chapter are based was graciously provided by Mark A. Greene and Dennis Meissner.

¹ Richard Pearce-Moses, *A Glossary of Archival and Records Terminology*, Society of American Archivists, 2005, http://www.archivists.org/glossary/term_details.asp?DefinitionKey=431.

Given its importance, processing has been among the most underanalyzed aspects of archival work. In the earlier incarnation of the Society of American Archivists' (SAA's) *College and University Archives Reader*, Maynard Brichford argued that "the archivist should be out of his office two-thirds of the time" and that "[p]rocessing is an extension of appraisal."² The sentiment was not unique. The authors of other essays in the volume covered arrangement, description, and preservation as an afterthought. No chapter was dedicated to description, and most of Brichford's essay on appraisal and processing concerned the former.³

Has this situation changed in the intervening twenty-five years? Admittedly, archivists have spilt much ink on one element of processing: description. Articles about it are a mainstay in our professional literature. An analysis of *American Archivist* articles published between 1993 and 2002 shows that 31 of 240 (12.9%) are primarily about description and cataloging. Only one category, the amorphous "writings about archives," receives greater attention.⁴ The proliferation of articles about description suggests a need to examine overall processing practices vis-à-vis institutional needs and priorities. Until such an analysis has been completed, institutions that implement specific descriptive practices may be putting the proverbial cart before the horse.

This article describes and analyzes the ways in which current processing techniques (that is, the ways archivists arrange, describe, and house archival materials) affect access at college and university archives.⁵ The research draws upon two sources of information: a subset of data from a prior study of processing practices in U.S. archives and a new survey of descriptive practices in

² Maynard Brichford, "Appraisal and Processing," in *College and University Archives: Selected Readings* (Chicago: Society of American Archivists, 1979), 8, 14.

³ Claudia Thompson has also noted that relatively little has been written about processing. D. Claudia Thompson, "What Is Processed," *ICA Section on University and Research Institution Archives 2005 Seminar Proceedings* (East Lansing: Michigan State University Archives), 119.

⁴ Teresa Brinati, "Readin', Writin' and Archivin': The State of Archival Literature," handout provided at Midwest Archives Conference Fall Meeting Session, 24 October 2003. Her review of *Archival Issues* showed a similar pattern, with 8 of 79 articles over the same period covering description and cataloging, second only to advocacy and public programs. (Arrangement itself is treated like a poor stepchild; Brinati found no need to list it as a category in her analysis of either journal.) An informal survey of *American Archivist* and *Archival Issues* articles published between 2003 and 2005 shows that 10% (3 of 30) and 6.3% (1 of 16), respectively, of articles cover the topic of description. (For *American Archivist*, this survey included vol. 66, no. 1, through vol. 68, no. 2. For *Archival Issues* it covered vol. 26, no. 1, through vol. 28, no. 1 (although dated 2001–03, the volumes actually appeared in 2003 through 2005). In addition, the topic dominates the newly formed *Journal of Archival Organization*. Sixty-seven percent (38 of 57) of articles published in the journal through May 2006 treat issues closely related to description. (Specific issues include 1:1–3:4.) None of these articles discuss either arrangement or processing. Most treat highly technical topics, with implementation or analysis of EAD being the most common.

⁵ For the purposes of this study, a college or university archives is defined as an archival repository holding the official records of a parent academic institution. A college or university archives may include manuscripts, student records, or other historical research collections among its holdings. Its primary responsibility is to document and provide verifiable information about its parent institution. William Maher, *The Management of College and University Archives* (Metuchen, N.J.: Scarecrow Press, 1992), 7–10.

college and university archives. Information from both sources is correlated to repository characteristics and analyzed in the light of recent literature on processing and description. A better understanding of current processing and descriptive programs will help college and university archivists design processing workflows and descriptive systems that provide optimum access to paper-based and digital collections at the lowest possible cost.

Literature Review

College and university archivists who are engaged in arranging and describing archival materials face many challenges. Recent writings about arrangement and description provide a framework for asking the right questions about those problems and ultimately for building an effective strategy to address them.

Arrangement and Processing

Arrangement was recently defined as the “the process of organizing materials with respect to their provenance and original order, to protect their context and to achieve physical or intellectual control over the materials.”⁶ Relatively little has been done to study it during the past several decades, even as writings about its cousin, description, have multiplied.⁷ Perhaps archivists assume there is little to say about so plain a topic. As Oliver Wendell Holmes noted at the start of his now-classic article on levels of description, “Archives are already arranged—supposedly.”⁸

If one accepts the ideas of provenance and original order as the *sine qua non* of archival theory—and most archivists do—arrangement is an inherently conservative but potentially time-consuming activity.⁹ Wherever possible, archivists strive to retain or re-create original order, lest the evidential value of records be obliterated. Two essential primers on arrangement and processing direct

⁶ Pearce-Moses, *Glossary*, http://www.archivists.org/glossary/term_details.asp?DefinitionKey=294.

⁷ Jean Dryden, “Standardizing Archival Arrangement: Are You Serious?,” *Journal of Archival Organization* 3, no. 1 (2005): 81. Others who have analyzed the literature on processing make similar points. As Mark A. Greene and Dennis Meissner point out, “There has . . . been no controversy over processing, with the important exceptions of communications standards for catalog records (MARC) and finding aids (EAD).” See Mark A. Greene and Dennis Meissner, “More Product, Less Process: Revamping Traditional Archival Processing,” *American Archivist* 68 (Fall/Winter 2005): 213. Pam Hackbart-Dean and Christine de Cantanzaro have also weighed in: “The existing archival literature rarely addresses issues specifically relating to the management of processing.” See Pam Hackbart-Dean and Christine de Cantanzaro, “The Strongest Link: The Management and Processing of Archival Collections,” *Archival Issues* 27, no. 2 (2002): 126.

⁸ Oliver Wendell Holmes, “Archival Arrangement—Five Different Operations at Five Different Levels,” *American Archivist* 27 (January 1964): 21–43.

⁹ David Gracy II notes that archivists “lean toward ‘restoration’ work, toward maintaining, or reestablishing, the files as closely as possible to the order in which they were kept by the creator.” See David B. Gracy II, *Archives and Manuscripts: Arrangement and Description* (Chicago: Society of American Archivists Press, 1977), 8. Cited in Frank Boles, “Disrespecting Original Order,” *American Archivist* 45 (Spring 1982): 26–27.

archivists to use levels of control, series-level arrangement, intellectual order (hierarchy), filing structure, and physical reorganization to preserve or reassemble the original order of records or manuscripts.¹⁰ Archivists have found little to debate about such admonitions. For example, Frank Boles's suggestion of "utility" as a more comprehensive arrangement principle (but one that still encompassed original order) occasioned little follow-up research, even though (or perhaps because) he poked a sharp stick in the direction of professional pieties.¹¹

Questions regarding the specific ways in which arrangement practices have been applied have emerged over the last several years. Speakers at a 2004 SAA session entitled "Facilitating Description: Developing Standard Series" urged archivists to use "standard series" and present them in a common order across manuscript collections.¹² They argued that using the same categories would simplify and speed processing as well as make collections more comprehensible to users.¹³ Other suggestions emerged from Mark Greene and Dennis Meissner's study on processing practices. Based on a literature review, an analysis of grant applications, and surveys of users and archivists, they argue that archivists are applying traditional preservation and processing techniques in extremely unproductive ways.¹⁴ The processing rates they uncovered were very low—in the range of 50 to 150 cubic

¹⁰ See Frederic M. Miller, *Arranging and Describing Archives and Manuscripts* (Chicago: Society of American Archivists, 1990) and Kathleen Roe, *Arranging and Describing Archives and Manuscripts* (Chicago: Society of American Archivists, 2005). Both Miller and Roe stress the importance of a straightforward and practical approach. It is also worth noting that the publications catalog available through the SAA website lacks a section for either arrangement or description. Within the context of broader studies, a few articles have discussed processing issues regarding faculty papers, but not at any depth. For example, see Tara Zachary Laver, "In a Class by Themselves: Faculty Papers at Research University Archives and Manuscript Collections," *American Archivist* 66 (Spring 2003): 181–83. Laver's survey of processing practices shows that all but 8.3% of institutions produced finding aids at the same level of description for faculty papers as that provided for institutional records (i.e., what Laver calls "record groups"). For at least 58.3% of institutions, this was a "full" finding aid (i.e., biographical notes, scope/content note, container list, series descriptions, and index).

¹¹ Boles argued that "[r]ecords in an archival institution should be maintained in a state of usability, their exact arrangement being the simplest possible which assures access to the documentation." "Disrespecting Original Order," 31. In the following issues of *American Archivist*, several letter writers questioned his characterization of "original order" as a normative concept and noted that archivists and manuscript curators have used alternate organization schemes when warranted. Nevertheless, "original order" is still widely held to be the ideal principle around which many archives, particularly administrative records, should be organized.

¹² Dryden, "Standardizing Archival Arrangement," 82–83.

¹³ This characterization is based on my session notes. To my knowledge, no published articles based on the session papers exist. The speakers were Waverly Lowell (Environmental Design Archives, UC Berkeley), Julie Demeter (Bancroft Library, UC Berkeley), and John Rees (National Library of Medicine).

¹⁴ Greene and Meissner, "More Product, Less Process," 208–63. For example, they question the need for arrangement at the file level and for standard preservation steps such as refoldering and the removal of metal. They conclusively show that such techniques have been used routinely in spite of the numerous prior admonitions against blindly applying them and in spite of growing backlogs at all types of institutions. Archivists have seen item-level conservation and detailed arrangement as more important than our responsibility to "maximize the repository's holdings available for use." Pam Hackbart-Dean and Christine de Cantanzaro make similar points in "The Strongest Link," 125–36. Citing processing manuals and prior studies, they outline a method for decision-making workflow design and project management to facilitate efficient processing.

feet per full-time processor per year. They argue that the profession has become complacent and set very low expectations, to its long-term detriment,¹⁵ and they conclude with a set of recommendations to speed processing while providing reasonable access to collections. Their recommendations should be of particular interest to college and university archives because 64 of the 100 respondents were from a category they identify as “college and university archives” in the text of their methodology footnote.¹⁶

Greene and Meissner’s article should be required reading for every college or university archivist, but it leaves some unanswered questions. For example, it is unclear whether processing practices vary between different types of institutions (for example, small vs. large repositories). For that matter, one cannot safely say whether the processing/preservation practices and policies they exco-riate (for example, removing paper clips and replacing folders) actually correlate to low processing rates. Although the point seems self-evident, it is never statistically proven. Their analysis does not tease out much information about differences in processing productivity between institutions, explain why they exist, or provide recommendations that might be suitable to different types of archives. They say nothing about how archives are processing electronic records, and they touch only tangentially upon an issue of particular relevance: how the use of particular descriptive practices and standards (such as Encoded Archival Description, or EAD) affects processing efficiency.

Description

Over the past fifteen years, the literature on description has evidenced an increasing focus on technical topics, such as the development and implementation of standardized descriptive formats. MARC (Machine-Readable Cataloging) and, in particular, EAD typically are seen as having many salutary effects, such as allowing for interoperability, encouraging good descriptive habits, and standardizing presentation.¹⁷ Richard Szary argues persuasively that EAD can facilitate

¹⁵ On average, respondents thought that 14 hours per cubic foot was a reasonable processing benchmark for twentieth-century collections. Sixty-six percent of respondents indicated that they would not change processing practices even if they “knew for a fact that your researchers would be willing to trade processing thoroughness for gaining access to more collections.” See Greene and Meissner, “More Product, Less Process,” 261.

¹⁶ Greene and Meissner, “More Product, Less Process,” 210, footnote 5. An anonymous version of their dataset is available at <http://ahc.uwo.edu/nhprcresearch>.

¹⁷ Kris Kiesling, “The Influence of American and European Practices on the Evolution of EAD,” *Journal of Archival Organization* 3, no. 2/3 (2005): 207–15. Certainly positive effects are made possible by MARC and especially by EAD. EAD accommodates traditional archival notions such as provenance, *respect des fonds*, and multilevel description, and MARC allows us to aggregate descriptive records with related materials in the library catalog. See Janice Ruth, “EAD: A Structural Overview,” *American Archivist* 60 (Summer 1997): 315; Kent M. Haworth, “Archival Description: Content and Context in Search of Structure,” *Encoded Archival Description on the Internet*, ed. Daniel V. Pitti and Wendy M. Duff (New York: Haworth Information Press, 2001), 7–25.

more efficient reference interactions.¹⁸ *Archives, Personal Papers, and Manuscripts (APPM)*¹⁹ and *Describing Archives: A Content Standard (DACS)*²⁰ are seen to play similarly positive roles because they help us standardize the content of the descriptive records we create. Surely these benefits are real and should not be minimized.

But describing materials effectively requires many skills that these standards do not cover. Not only must archivists master the basics of description, they must effectively manage projects, train and supervise subordinates, and use complicated technologies. In addition, the twenty-first-century archivist must understand electronic records and know how to integrate them into online access systems.

How well is the profession juggling these balls? Greene and Meissner argue that archivists have evidenced a “strong tendency” to describe all collections with complex, multilayered finding aids and that they too often eschew simplification—an approach recommended by Schellenberg and many others.²¹ Some evidence corroborating their findings in a college and university archives setting does exist, although it is dated.²² Greene and Meissner recommend that archivists focus upon repository-, collection-, and series-level description. They advocate brevity. It is better to provide some information about *all* collections (including those deemed “unprocessed”) rather than detailed information about some collections.

EAD and other standards can accommodate such brevity, but little evidence in the literature suggests that archivists are actually using them in this way. In addition, archivists have spent a large amount of time either learning about or implementing descriptive standards and associated content standards such as *APPM* and *DACS*. Even more time has gone into studying and implementing systems that utilize such standards. For example, many articles address the topic of EAD implementation,²³ and interest in EAD training continues to climb. According to SAA, the EAD workshop has been offered fifty-eight times through the summer of 2006, with an estimated attendance of 1,276.²⁴ Many library schools now offer courses

¹⁸ Richard V. Szary, “Encoded Finding Aids as a Transforming Technology in Archival Reference Service,” *College and University Archives*, 245–59.

¹⁹ Steven L. Hensen, comp., *Archives, Personal Papers, and Manuscripts: A Cataloging Manual for Archival Repositories, Historical Societies, and Manuscript Libraries*, 2nd ed. (Chicago: Society of American Archivists, 1989).

²⁰ *Describing Archives: A Content Standard* (Chicago: Society of American Archivists, 2004).

²¹ For example, Greene and Meissner found that relatively few archivists using different levels of description for different collections or for different series within one collection. Greene and Meissner, “More Product, Less Process” 215–17.

²² Christina J. Hostetter, “Online Finding Aids: Are They Practical?,” *Journal of Archival Organization* 2, no. 1–2 (2004): 117–45.

²³ For a recent example of EAD implementation in an academic environment, see Bill Stocking, “Time to Settle Down? EAD Encoding Principles in the Access to Archives Programme (A2A) and the Research Library Group’s Best Practice Guidelines,” *Journal of Archival Organization* 2, no. 3 (2004): 7–24.

²⁴ Solveig DeSutter, email message to author, 15 June 2006.

dedicated to it.²⁵ An analysis of ads for archival jobs shows that since the introduction of EAD in 1998, an increasing percentage have listed EAD experience as a required or preferred qualification.²⁶ Even though much anecdotal evidence exists, we know little about the rates at which institutions are adopting MARC, EAD, or other standards.

More to the point, we know even less about what effect, if any, adopting them has on archival workflows and, more importantly, what impact they have on user access. Regarding processing, one can easily make an argument that descriptive technologies cause additional burdens and costs by layering on additional responsibilities to already overtaxed programs, although in the absence of statistical or quantitative evidence, such arguments are not any more persuasive than their inverse (the idea that descriptive technologies and standards facilitate better processing workflows and therefore improve access).²⁷ In any case, little hard evidence supports either argument. In 2001, few of seventeen academic archives surveyed had more than a smattering of finding aids available on their repository's website, and only a small majority believed all of their finding aids would be online in ten years, unless they received grant funding.²⁸

Archival processing and descriptive practices must prove their worth to us and to our users. This study provides concrete evidence regarding who uses particular techniques and standards, how they use them, and how they affect both processing workflows and end-user access.

Current Processing Practices

Mark Greene and Dennis Meissner have already gathered much of the data that can help us understand current processing practices in college and university archives. The following section of this article ("processing and arrangement") analyzes a subset of data from their survey, correlating it to repository characteristics. It includes data from 61 institutions that have identified themselves as "College or University Libraries."²⁹ The succeeding

²⁵ EAD Archives, May 2006, item 4, "EAD Courses Offered at Library Schools," at <http://listserv.loc.gov/cgi-bin/wa?A1=ind0605&L=ead>.

²⁶ Michele Riggs, "The Correlation of Archival Education and Job Requirements Since the Advent of Encoded Archival Description," *Journal of Archival Organization* 3, no. 1 (2005): 73.

²⁷ For example, one could argue that staff need to be trained and undertake additional tasks as part of a processing routine, that significant amounts of time need to be spent encoding finding aids (or writing scripts to do it and then correcting errors), preparing the files for transformation to HTML, or designing and customizing a digital library system or database system. See Greene and Meissner, "More Product, Less Process" 249–50.

²⁸ Hostetter, "Online Finding Aids," 125.

²⁹ See note 16. It is unclear how many of the 61 have responsibility for the official records of their parent institutions, but the Greene/Meissner category was the closest match, since all are affiliated with a college or university and did not select themselves as special collections libraries.

section on description reports and analyzes the responses from an online survey administered by the author in the spring of 2006.³⁰

Processing and Arrangement

The 61 institutions in the Greene/Meissner subsample hold an average of 11,311 cubic feet of material (processed and unprocessed) and receive on average 344 cubic feet of annual accessions. For statistical analysis, these institutions are grouped into three categories: small (less than 4,000 cubic feet), medium (4,000 to 19,999 cubic feet), and large (more than 20,000 cubic feet). By these criteria, 26 were considered small, 24 medium, and 11 large.³¹

The institutions in the sample—regardless of holdings size—share some common characteristics. All but 6 of the 57 respondents for whom data were available accession less than 6% of their current holdings size each year.³² Similarly, total staff size and budget seem roughly comparable relative to overall collection size, although a precise calculation is not possible since Greene and Meissner collected ranges, not precise figures, for each institution's staff size and since not all institutions submitted budget information.³³ Backlogs are growing at most institutions (69% of small, 79% of medium, and 82% of large archives).

But the similarities stop when one probes beyond these basics. Small and medium-sized archives have relatively larger backlogs; 69% of small archives (18 of 26) and 67% (16 of 24) of medium-sized archives consider 30% or more of their collection unprocessed; while only 45% (5 of 11) of large archives do.³⁴ Similarly, small archives process fewer cubic feet per full-time staff member. One full-time equivalency (FTE) processor in a small archives

³⁰ Summary results of the survey are included in the appendix. In February 2006, a link to an online survey was sent to 816 email addresses on file with the Society of American Archivists as either individual or institutional members of the College and University Archives Section as of 2 February 2006. Fifty of these addresses returned errors, and 60 were outside the United States or directed to an obviously nonacademic recipient. Only 1 response per institution was requested, and 383 unique institutions were represented. (The population of possible respondents was likely higher, since some addresses may have represented distinct college or university archives whose personnel had registered under personal email addresses.) From this group, 91 usable responses were collected, a response rate of approximately 20% to 25%. I am extremely grateful to those who responded to the survey.

³¹ Four did not provide a cubic footage figure for holdings, but based on other submitted data, such as staff and budget size, it is clear they are relatively small institutions, so they were grouped in that category.

³² Most take in far less: 47 accession less than 5% of their current volume per year; 27 less than 3%.

³³ Almost every "large" archives has a staff size of 6 or more professionals, a complement of paraprofessionals, and a bevy of students. Not surprisingly, "small" archives have an often tiny professional staff and few, if any, student helpers.

³⁴ For many of the small and medium institutions, the problems were worse; 20 of the 50 archives in these groups considered more than 50% of their collection unprocessed; only 1 of these holds more than 7,000 cubic feet.

typically processes 36.6 cubic feet of material per year.³⁵ On average, those in a medium-sized archives process 61.1 cubic feet and those in a large repository manage 66.6 cubic feet.³⁶ While none of these averages are impressive (66 cubic feet per year is the equivalent of 27 hours per cubic foot for a person working 230 days per year), the data shown in Table 1 illustrate quite a bit of variability between institutions.

While larger archives generally process materials more quickly, there are exceptions. An institution that reports processing materials at the rate of 6 cubic feet per person per year holds 35,000 cubic feet of materials.³⁷ On the other hand, one of the small archives has only one professional dedicated to processing, but that person is reported as processing 300 cubic feet per year. The size of a repository's collection, staff, or budget do not determine its processing rates, but smaller archives, where a few staff share many duties, are more likely to have slower processing rates and larger backlogs. Both impede access to the entirety of their collections.

To what extent are low processing rates and backlogs the result of deliberate policy choices and processing practices? It is difficult to say based on the Greene/Meissner dataset, since respondents only indicated which collection characteristics they *believe* to have the greatest effect on processing productivity. As shown in Table 2, they almost uniformly blame the same factors—size of collection, physical condition, lack of organization, and structural complexity—for slowing down processing.³⁸

Table 1. Processing Productivity in Academic Archives (*n* = 47)

Cubic Feet Processed Annually per FTE	Repository Size*		
	Small	Medium	Large
6–25	7	4	2
26–50	8	5	0
51–100	1	9	2
101–200	–	3	1
201–300	1	–	1
545	–	–	1

*small = less than 4,000 cf, medium = 4,001–19,999 cf, large = more than 20,000 cubic feet (total holdings)

³⁵ This calculation includes professional, paraprofessional, student, and volunteer FTEs. Eleven institutions did not supply enough information to be included so the sample size was reduced from 61 to 50 (for this calculation only). The figure was calculated by dividing the average processed per year for each institution by the number of FTEs dedicated to processing work.

³⁶ The figures are medians. There is quite a bit of variability within each of the three categories, so median is a more representative figure than the pure averages (small, 29.5 cubic feet; medium, 52.3 cubic feet; and large, 72.5 cubic feet).

³⁷ It accessions 2,000 cubic feet per year and has 4 FTE professionals, 11 FTE students, and 3 FTE volunteers dedicated to processing. It provides access to its unprocessed collections, each of which has an inventory or accession sheet.

³⁸ Six respondents ranked the factors instead of checking them as requested.

Table 2. Factors Named by Repositories as Affecting Processing Productivity (n = 55)

Size of Repository	Collection Size	Era of Creation	Type of Creator	Richness of Collection	Heterogeneity of Collection	Physical Condition	Existing Level of Organization	Structural Complexity	Condition of Folders	Legibility of Items
Small	84%	28%	32%	48%	56%	80%	72%	72%	28%	48%
Medium	68%	36%	64%	68%	77%	86%	86%	77%	55%	59%
Large	89%	33%	11%	44%	78%	89%	89%	56%	56%	22%

Table 3 shows that the reported application of particular processing practices is not strongly correlated to the size of the archives, although it does seem clear that smaller archives are more prone to using particularly time-consuming practices, such as arranging documents within a folder and removing fasteners.³⁹ (Both practices are likely preludes to an even bigger time drain: extensively reading the documents being processed.) Nor are processing and access policies strongly correlated to repository size (see Table 4), although large archives seem to have slightly more disciplined appraisal regimens and better access to outside funding.

If processing rates were not also dismal for most large archives, one would be tempted to chide smaller archives for their supposed failures. But smaller academic archives face the same stresses and demands that their larger cohorts do, and they have smaller budgets, less processing space, and few if any professional staff dedicated to processing. Unfortunately, Greene and Meissner did not collect much information that would allow us to generalize directly about how factors other than collection characteristics might impinge on processing efficiency. Further work to understand processing problems would certainly take external factors into account.⁴⁰

Table 3. Mean Use of Selected Processing Practices (*n* = 61)*

Size of Repository	Refolder	Weed Duplicates	Remove Fasteners	Photocopy Clippings	Mend Tears	Arrange at Series Level	Arrange within Folders
Small	4.9	4.3	4.1	3.4	2.0	4.4	3.9
Medium	4.8	4.4	3.8	3.5	2.1	4.7	3.7
Large	4.8	4.1	3.6	3.3	2.2	4.3	3.1

*1 = never, 2 = seldom, 3 = sometimes, 4 = usually, 5 = always; for twentieth-century collections.

Table 4. Repositories' Use of Certain Processing Policies (*n* = 61)

Size of Repository	Allow Access to Unprocessed Materials	Appraisal Occurs before Processing	Appraisal Occurs during Processing	Outside Funding for 20th-Century Collections
Small	31%	44%	24%	38%
Medium	42%	67%	25%	75%
Large	64%	64%	45%	100%

³⁹ The examples are representative. Other practices tested in the survey were similarly common or uncommon across the range of small, medium, and large institutions.

⁴⁰ In addition, each institution defines processing and processed differently. For some, a collection is processed when it has completed a MARC record and an inventory of the boxes made as they arrived. For others, it is processed only when completely weeded, rehoused into acid-free folders, and arranged according to a logical series layout. Some provide access to their "unprocessed" collections while others do not. Furthermore, we do not know whether a more intensive level of processing actually makes a difference in user access. What we do know is that many repositories are not able to process collections to whatever level they have defined as complete.

Table 5. Correlation of Intensive Processing Practices to Processing Productivity ($n = 43$)*

	R	r^2
Aggregate of 35 intensive techniques	-0.2	4%
Refolder	-0.25	6%
Weed Duplicates	-0.13	2%
Remove Fasteners	-0.20	4%
Photocopy Clippings	0.1	1%
Mend Tears	0.05	0%
Arrange at Series Level	0	0%
Arrange within Folders	-0.25	6%

* A negative correlation coefficient (r) of zero or less indicates that the listed practice is not related to processing productivity (measured as cubic feet processed per FTE per year). Higher percentage values indicate a stronger relationship.

Few of the possible external factors affecting processing speed can be studied from the available data, but we can make some generalizations in one area: whether processing intensity is correlated to processing productivity. It is tempting to think that the use of certain practices might explain why some repositories process archives more quickly than others. That assumption lies implicit in the Greene/Meissner dictum of “more product, less process.” But to what extent do intensive practices such as removing metal, reordering the contents of folders, and photocopying newspaper clippings actually correspond to increased processing rates?

Statistical analysis provides some help in answering this question. Using data from the Greene/Meissner dataset, a correlation coefficient (r) was calculated for each of the numerical ranking values that the respondents used to self-report the rates at which their repositories use intensive processing and preservation techniques such as refolding, removing metal, interleaving, mending, and separating photos.⁴¹ Within each institution, higher values indicate a more aggressive processing and preservation program; one would expect high reported uses of these techniques to correlate with lower processing efficiency (fewer cubic feet processed per FTE).

This hypothesis cannot be supported. For a subsample of 43 institutions, there is no statistically significant correlation between use of intensive processing

⁴¹ Respondents provided values indicating how often each of 35 arrangement, processing, and preservation practices are used (1 = never, 2 = seldom, 3 = sometimes, 4 = usually, 5 = always) for pre-twentieth-century and twentieth-century collections. For 43 of the respondents in my subsample of 61 academic archives, enough information was available to correlate the self-reported rankings to the mean processing rates that had previously been calculated while developing Table 1. For each of the rankings as well as the mean of all rankings in each institution, correlation coefficients (r) were calculated and squared to provide an indication of the relationship between application of the techniques and productivity. The closer r lies to +1 or -1, the more closely application of the techniques correlates to processing speed. (A negative value indicates an inverse correlation.) The square of r tells us how much of the variation in use of processing techniques is related to processing efficiency. Given the relatively small sample size of 43, the null hypothesis that the true correlation is 0 can be rejected with 80% certainty ($t = 1.308$ for 42 degrees of freedom).

techniques and slower processing speed. A very weak relationship does exist, but only 4% to 6% of the difference in processing speed is related to the differences in the reported uses of processing techniques.

This relationship is graphically represented in Figure 1. One institution processes 100 cubic feet per year even though its mean ranking for the 35 techniques was 3.88 (indicating that it “usually” applied most of the techniques tested). Another reported a processing intensity of 2.52, indicating less usage of the techniques, yet it processes only 13 cubic feet per processor per year. A third reported an intensity of 2.59, yet manages 283 cubic feet per processor per year.

The fact that productivity must be plotted on a logarithmic scale is sadly telling. Some archives out-process others by a factor of 10 or more. But the lack of a strong correlation between the use of intensive processing techniques and slower processing speed is even more significant. It means we must examine the whole range of archival activities, management techniques, and outside factors if we wish to improve productivity and collection access.

This data should serve as a wakeup call: Many of our institutions have management problems that go far beyond the specific symptom of overprocessing. Any archivist attempting to eliminate his or her processing backlog by deciding to leave documents paper-clipped or stapled together in their original folders will be quickly disappointed. A repository’s entire range of archival activities needs to be constantly audited and adjusted. In many cases, it will make more sense to change appraisal and reference practices, address personnel issues, or

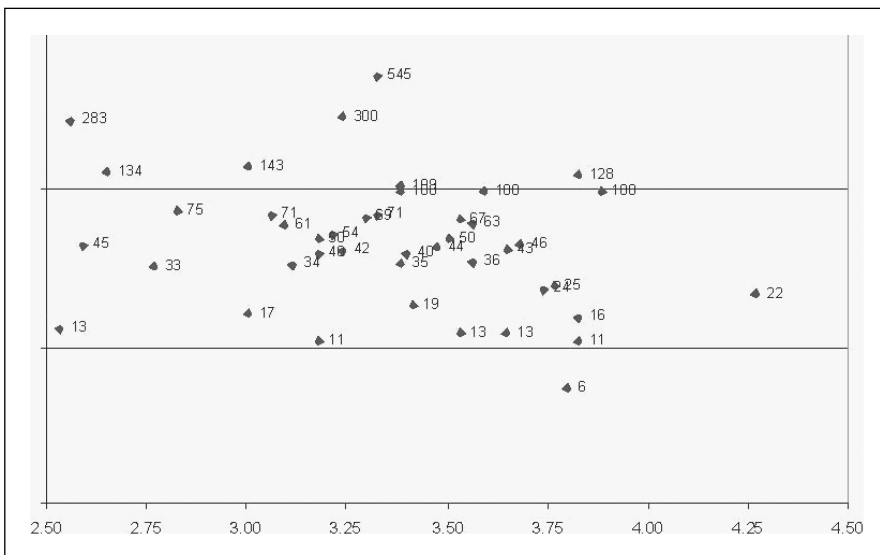


FIGURE 1. Productivity scatter diagram (logarithmic scale).

improve descriptive workflows before implementing “processing lite.” The Greene/Meissner techniques will likely have a significant effect in eliminating backlogs only in institutions that are well managed in other respects.

Description

Description is a key part of processing, since undescribed records are largely inaccessible. According to Richard Pearce-Moses’s *A Glossary of Archival and Records Terminology*, description is “[t]he process of creating a finding aid or other access tools that allow individuals to browse a surrogate of the collection to facilitate access and that improve security by creating a record of the collection and by minimizing the amount of handling of the original materials.”⁴²

To better understand how descriptive techniques affect processing, I examined the Greene/Meissner data subset and conducted my own survey. If we believe that archivists have a responsibility to provide access to all of the records in their custody, my analysis of the Greene/Meissner dataset is discouraging. The results of my own survey are mixed, but clearly the profession has as much soul searching to do in this area as it has in processing techniques.⁴³

The 63 academic archives included in the Greene/Meissner subsample apply descriptive practices and standards to their current processing projects in very different ways and at different levels of intensity. Table 6 provides summary data.

Regardless of size, most institutions “usually” or “always” use certain descriptive practices. They create finding aids with a scope/content note, series descriptions, and folder lists. They develop a MARC or other collection-level record describing the collection as a whole. However, small and medium-sized archives are more likely to engage in time-consuming practices such as creating item lists. Furthermore, they are less likely to use advanced descriptive standards such as EAD.⁴⁴

Are these differences related to processing efficiency? The correlation analysis in Table 7 shows that practices such as creating item lists and HTML

⁴² Pearce-Moses, *Glossary*, at http://www.archivists.org/glossary/term_details.asp?DefinitionKey=337. In the glossary, *archival description* is defined as “[t]he process of analyzing, organizing, and recording details about the formal elements of a record or collection of records, such as creator, title, dates, extent, and contents, to facilitate the work’s identification, management, and understanding.”

⁴³ Greene and Meissner asked several questions relating to the rates at which certain types of descriptive information and encoded descriptive records are prepared for collections during their processing routines. My own survey looked more fully at description for all materials across the repository, not just current practices.

⁴⁴ It is impossible to say how many institutions in the Greene/Meissner sample provide Internet access to their finding aids in another format, since they only queried for EAD and HTML use. Similarly, it is possible that institutions that are not using MARC to catalog their collections provide access in some other way, such as a relational database or HTML.

Table 6. Use of Specific Descriptive Practices ($n = 61$)*

	Create Finding Aid with Scope Note	Create Finding Aid with Series Descriptions	Create Finding Aid with Folder List	List Items in Finding Aid	Enter MARC Record	Create EAD Finding Aid	Create HTML Finding Aid
Small	66%	65%	65%	12%	57%	23%	16%
Medium	71%	71%	88%	12%	79%	34%	34%
Large	82%	73%	72%	0%	64%	73%	9%
All	70%	69%	75%	10%	67%	36%	21%

* Percentage of institutions “usually” or “always” applying selected practices to twentieth-century collections.

Table 7. Correlation of Descriptive Practices to Processing Productivity ($n = 43$)*

	R	r^2
Create Scope Note	-0.05	0%
Create Series Descriptions	0.13	2%
Create Folder Lists	0.04	0%
List Items in Finding Aid	-0.27	7%
Enter MARC Record	-0.16	2%
Create EAD Finding Aid	-0.09	1%
Create HTML Finding Aid	-0.30	9%

* For twentieth-century collections. A negative correlation coefficient r indicates that the listed practice is associated with lower processing productivity (cubic feet processed per FTE per year). Higher percentage values indicate a stronger relationship.

finding aids are slightly related to slower processing rates. The correlation is hardly significant from a statistical point of view. In the Greene/Meissner data, the use of EAD and MARC appear to have no statistically significant relationship to reported processing rates.

The Greene/Meissner data suggest some questions for further analysis. For example, a slight majority of institutions create MARC records, but most (especially smaller archives) do not use EAD. Do the others provide different methods of online access? Does the use of certain descriptive techniques, standards, and tools vary based on institutional characteristics? How do they relate to processing productivity?

Results from the survey I conducted in February 2006 provide insight into these questions. The 91 institutions included in the final sample were grouped into categories of small (less than 4,000 cubic feet: 49 institutions), medium (4,000–19,999 cubic feet: 33 institutions), and large (more than 19,999 cubic feet: 9 institutions).⁴⁵

Across the entire sample, the median institution has 1 professional staff member, 1 paraprofessional, 1 clerical worker, and 1 FTE of student help.

⁴⁵ In cases where volume was not supplied, staff size was used as a criterion on for sorting the repositories into the appropriate category.

However, many have far more; the average figures were 2.8 professionals, 1.8 paraprofessionals, 1.3 clerical, and 2.1 FTE students, respectively. The sample seems fairly representative of the range of college and university archives, although large archives seem somewhat underrepresented. Almost all of the repositories manage both official records and related manuscript collections such as faculty, alumni, and student papers.

On average, the institutions employ 1 professional or paraprofessional staff member for each 1,994 cubic feet of processed and unprocessed records and papers; if all FTE—including clerical, students, volunteers, and others—are included, the figure drops to 1,299 cubic feet per FTE.⁴⁶ Although the median institution has 1 professional/paraprofessional per 1,462 cubic feet of processed and unprocessed collections, the figures vary widely between repositories. Five institutions hold 5,000 cubic feet or more per professional/paraprofessional FTE; 1 has 12,640 cubic feet for each professional staff member. Smaller institutions tend to hold less material per professional FTE (829 cubic feet on average as opposed to 3,025 cubic feet per FTE in medium-sized and 4,093 in large), but they have fewer student helpers. Among small archives, 75% have less than 1 FTE of student help and 45% have none, while medium and large archives nearly always have more than 2 and as many as 17 FTE of student help.

Most of the archives in the sample face a significant backlog of unprocessed, undescribed, and inaccessible materials. Sixty-eight supplied estimated volumes; in aggregate 43% of the holdings are currently unprocessed—212,990 of the total 496,388 cubic feet.⁴⁷ Again, the amounts vary widely (the standard deviation is 30%). For more than half of the archives, over 40% of the collection is unprocessed, while for 12 of the repositories, 10% or less is in that state. For 12 other institutions, 80% or more of the collection is unprocessed.⁴⁸ Across the entire sample, there is no correlation between the percentage of holdings unprocessed and the ratio of collection size to FTE ($r = 0.02$). Archives expecting to cure their backlog problem simply by hiring more staff may be following a counterproductive strategy.

Several factors related to description correlate to larger backlogs. For example, institutions that use students to create descriptive records have smaller backlogs (39% of their total holdings, on average) than those that do not (50% of total holdings on average). Archivists use a variety of tools to create descriptive records

⁴⁶ These estimates are based on a subsample of 67 institutions that supplied enough information to calculate the estimate.

⁴⁷ This is not to say that 43% of all holdings across all institutions are unprocessed, but that the average archives has 43% of its holdings unprocessed—two different things since collection sizes vary.

⁴⁸ Every institution defines unprocessed a bit differently, so, for some institutions, this includes materials that are unarranged but have a basic inventory and are accessible to users.

but seem to prefer the simpler tools to the more complex. In this sample, 82% use word processors; 55%, library catalog software; 34%, custom databases; 31%, text or HTML editors; 22%, XML editors; and 14%, digital library software. Institutions that use library catalog software to describe collections have an average backlog size of 50%, but those not using catalog software have an average backlog of 37%. Institutions that rely on printed or word processed container lists have relatively smaller backlogs—37%—but those using XML editors (needed to create and edit EAD finding aids) report on average 58% of the collection as unprocessed. At least some of our backlog problems seem attributable to the adoption of complex tools and methodologies.

If backlogs are a problem, how are archives doing at providing access to processed collections? Across the entire sample, the “average” institution makes descriptive information at any level of completeness available on the Internet for a paltry 50% of its processed collections and 15% of its unprocessed collections.⁴⁹ This result is both better and worse than it sounds—worse because the average repository provides descriptive information in the search room for only 67% of its processed collections, meaning that collection descriptions are essentially unavailable for many processed collections;⁵⁰ better because the gap between on-site and Internet access is smaller than it seems at first glance. Of course, no such thing as an “average” archives actually exists. The figure masks much variation among the actual respondents. Twenty-eight (31%) of the institutions provide some descriptive information on the Internet for 90% or more of their processed collections, while 27 (30%) provide information on the Internet for 10% or less.

What might explain the differences? Staff size has little or no bearing on whether an institution has developed online access tools. Surprisingly, institutions with more cubic feet per staff member are actually more likely to have descriptive information online.⁵¹ Two examples: The institution with 12,640 cubic feet of records per professional staff member provides online access to a MARC record for 85% of its processed collections. It reports that 38% of its collection is unprocessed—a very understandable figure given its miniscule staff size. On the other hand, an institution with 1,400 cubic feet per professional staff member provides online access to descriptive records for only 35% of its collections and considers 71% of its 3,500-cubic-foot collection unprocessed. It has no collection-level descriptions online, but it is providing EAD-encoded

⁴⁹ This does not mean that 50% of all collections have no online access because each institution has a different number of “collections” and the survey did not solicit data to allow an aggregate calculation.

⁵⁰ Whether descriptions even exist for these “processed” collections cannot be extrapolated from the data; they may be available only to repository staff.

⁵¹ As indicated by a slight positive correlation ($r = .15$) between volume/staff size and the amount of descriptive information provided on the Internet.

inventories for its faculty papers and is exporting lists from a standalone database into HTML files.

One variable that does correlate to the level of online access is overall repository size, although the correlation is weak. Twenty-five of the medium-sized and large archives (60%) have online information for 50% or more of their collections. Twenty-one (43%) of the small institutions provide information for 50% or more of their collections. Eight of them provide no online access to descriptive information, while only 3 of the medium-sized and large archives fall into that category. However, 8 of the small repositories have some information online for all of their collections, while only 4 of the medium-sized and large institutions do. While smaller institutions are somewhat less likely to provide online descriptive information, some have clearly made great strides in this area.

How are college and university archives using descriptive standards? Content standards such as *APPM* and *DACS* are widely used,⁵² but structural standards for encoding descriptive information (i.e., MARC and EAD) have been applied to a relatively small number of collections. Across the entire sample, repositories provide access to an average of 37% of their collections via MARC records and 13% of their collections via EAD.⁵³ As with online access in general, medium-sized and larger institutions are more likely to adopt MARC and EAD, although neither standard is as widespread as might be expected. For example, only 6 institutions across the entire sample have created a MARC record for all of their processed collections and 68 (40 of them small archives) have MARC records for 50% or less of their collections, making up 75% of the sample as a whole and 82% of the small archives.

The survey asked archivists to indicate their “principal” finding aid format. At the collection level, only 14 (15%) archivists regard the MARC record as primary, while 25% see printed materials as primary.⁵⁴ Eight (9%) see EAD as the principal format at the folder level, while 51% see printed finding aids as the primary folder-level finding aid format.

⁵² Most archives are using arrangement and content standards to help formulate the content of the information in descriptive records they create. Seventy-four (81%) use provenance to group college/university records by creating office within their descriptive system. Sixty-two (68%) use *Describing Archives: A Content Standard* (DACS) or *Archives, Personal Papers, and Manuscripts* (APPM) when creating descriptive records. Seventy-one (78%) use Library of Congress Subject Headings (LCSH) and 37 (40%) use the Library of Congress Name Authority File (LCNAF). Most of the others are using locally developed control files.

⁵³ The actual percentages may be lower, because some institutions left the field blank. If the institutions that left the field blank are included in the calculation provided in the text, the average percentage of collections described in MARC falls to 29%. Sixty-four percent of collections are described in printed or word-processed inventories, 39% in databases, 35% in static HTML pages, 24% in manual card catalogs, and 7% in collections management or digital library software.

⁵⁴ Thirty repositories (33%) use a combination of formats as their principal system. Thirteen of these indicated that MARC is part of the mix.

Given the intense emphasis the profession has placed on adopting MARC and EAD, the low adoption rates for data standards should give us pause. Perhaps archivists are judging the standards as deficient. Maybe they don't have access to the software to implement them or see them as too complicated. Perhaps they just haven't found time to convert "legacy" finding aids into the current formats.

But regardless of the reasons MARC and EAD have been applied so infrequently, we can be certain that they have had contradictory effects on access. Data collected during my survey show a strong correlation between the use of MARC and the percentage of holdings that an institution has described in Internet-accessible format ($r = .6$, for a 36% level of relationship). But Internet access to descriptive records correlates nearly as strongly for those institutions that use HTML ($r = .55$, 30% level of relationship), and there is a substantially weaker but still evident relationship between EAD adoption and Internet access ($r = .35$, 12% level of relationship). The level of online access an archives provides probably has more to do with the technical facility of the staff than any inherent value of MARC or EAD.

The results from my description survey demonstrate an extreme and difficult-to-explain bifurcation between successful and failing programs. Most institutions try to use archival content standards and describe collections at an appropriate level. Nevertheless, a relatively small minority have succeeded in converting all or most of their archival descriptions to a Web-accessible format. MARC and EAD have not been as widely adopted as might be expected, and some institutions adopted them before getting the rest of their processing and descriptive houses in order. Success in making collections available does not seem to be related to staff size, nor to the extent to which an institution adopts descriptive standards such as MARC and EAD. While smaller archives have a somewhat harder time making descriptive information available online and use descriptive standards such as MARC and EAD less often than larger archives, the differences are not significant. Surely we as a profession can find ways to increase the amount of descriptive information available online.

It would be easy but unhelpful to argue that those who resist adopting EAD and MARC as being too "complex" or "time-consuming" are simply evidencing a technical phobia. Many archivists who responded to my survey described their greatest needs. Their comments provide some insight into the real issues we need to address in improving processing, description, and ultimately, access.

Fifty-seven said their biggest need was time, staff, money, or all three: "Staff"⁵⁵ and "Time and help"⁵⁶ were pithy but representative responses.

⁵⁵ Respondent ID 64.

⁵⁶ Respondent ID 77.

Some, particularly those at smaller archives, seem desperate in their pleas: “Simply enough staff time to create descriptions of any type, whether it be traditional word-processed, MARC, or EAD”;⁵⁷ “Trained staff with no other demands on their time”;⁵⁸ “With staff of one (just me), reference seems to trump description.”⁵⁹

While one can understand why archivists would like more colleagues, such hopes are often unrealistic. Even worse, they are unlikely to substantially affect backlogs or to make collections more accessible, because many of those crying for more staff have manageable problems. One respondent wrote: “Staff. Our backlog is immense, not only in terms of un-arranged collections but also in terms of collections that are described inadequately (e.g., non-electronic descriptions only, descriptions not revised to reflect additions to collections, etc.). Simply put, we need staff (professional, para-professional, students, volunteers, etc.) to describe our holdings.”⁶⁰ Ironically, this institution holds only 872 cubic feet per professional staff member and has 95% of its collection descriptions online. Its backlog of 865 cubic feet is one-third of its overall holdings but appears manageable. Its overall descriptive program has a solid technical base. Other institutions without an adequate technical infrastructure or staff size are likely to be facing more significant problems.

Many respondents asked for better tools to do their descriptive work: “A streamlined process for creating finding aids in an open source format that can be viewed on the web”;⁶¹ “I would prefer to use a more user friendly web based format than just posting PDF files on our intranet”;⁶² “We need a comprehensive database to manage collections. We are a partner in the development of Archivist Toolkit, which will meet all of our needs, we hope.”⁶³ The high usage rates for word processors, catalog software, and databases implies that any new tools that emulate their behavior are more likely to be adopted than exotic tools such as XML editors.

Some college and university archives are currently using so many tools that their descriptive workflows would make good subjects for a Rube Goldberg cartoon: “We use ALEPH by Exlibris to create accession records, collection-level MARC catalog records, and barcode lists. We use XMetal and NoteTab to create EAD finding aids, and we use Dynaweb to serve them as HTML on-the-fly. URLs for finding aids

⁵⁷ Respondent ID 236.

⁵⁸ Respondent ID 138.

⁵⁹ Respondent ID 191.

⁶⁰ Respondent ID 174.

⁶¹ Respondent ID 224.

⁶² Respondent ID 134.

⁶³ Respondent ID 173.

are included in 856 fields of MARC records.”⁶⁴ Many institutions maintain the same information in multiple formats: “We maintain an [MS-]Access database for accessioning collections. Web abstracts and MARC records are produced at accessioning. Finding aids are produced in EAD as master files then posted on the web as HTML and PDF. Web abstracts and MARC records are updated after processing.”⁶⁵ This is at least as confusing for users as it is for staff and student workers, since the records are accessed from multiple systems. Users rarely have a common interface from which to search and retrieve descriptive information held by a repository. Comments like this are typical: “We utilize an Access-based collection management database to manage information about accessions; each record unit is described in the library online catalog; inventories for most records are available in Word and a few are encoded in EAD and available online.”⁶⁶ Such systems are difficult to maintain and many institutions do not have the technical resources or know-how to develop them. This is particularly true for smaller archives.

Assessment and Recommendations

A 2002 survey of university archives and records programs shows that the most pressing project priorities for college and university archivists are basic functions, such as collecting university records, ensuring records retention compliance, and expanding electronic records management.⁶⁷ In other words, archivists seemed to indicate that arrangement and description should continue to play a subordinate role to their institutional responsibilities—just as Brichford recommended twenty-five years ago.

That is good advice, but unfortunately, the types of processing and descriptive practices that many institutions currently employ make it difficult to fulfill our institutional responsibilities in a professional fashion. The use of intensive processing techniques is widespread but appears to bear little relationship to processing productivity, which is almost uniformly low. A small portion of materials are overdescribed, while large portions remain inaccessible. New materials are accessioned and quietly deposited into unprocessed holdings areas, from which they may never emerge.

The problems we confront in processing must be solved, not only for their own sake, but because they negatively affect our ability to address core functions and meet new, pressing needs. As Helen Tibbo argues, college and

⁶⁴ Respondent ID 123.

⁶⁵ Respondent ID 124.

⁶⁶ Respondent ID 272.

⁶⁷ Bessie Schina and Garron Wells, “University Archives and Records Programs,” *Archival Issues* 27, no. 1 (2002): 41.

university archivists must find ways to effectively identify, accession, process, and provide access to electronic records if their programs are to remain relevant.⁶⁸ But in a follow-up survey I conducted to assess how archivists were processing electronic materials, 10 of 29 institutions (34%) indicated that their institutions currently hold no processed electronic records, and of the remaining 19, only 4 hold more than a token amount.⁶⁹ Similarly, only 1 of the 29 (3.4%) has an established policy to assist campus offices in managing electronic records and to facilitate their transfer to the archives, although several others are beginning to plan such documents.⁷⁰ As Rob Spindler notes, collaborations with IT departments and librarians offer the prospect of addressing electronic records,⁷¹ but to date it is hard to escape the conclusion that archival contributions to such dialogues will be extremely muted and ineffectual until we get our own houses in order.⁷²

What is to be done? College and university archivists should take several steps to ensure broader access to their collections and to prepare for the upcoming transition to electronic archives.

First, we might begin by undertaking arrangement and description audits. While this article sheds light on practices across a range of institutions, each archivist must evaluate and reform practices in light of his or her own situation. An audit might include an analysis of staff size and skills, a critique of how techniques and standards are being applied, and a study of processing rates, workflow analysis, and user satisfaction surveys.⁷³ The design, implementation, and results of such an audit at one particular institution or at several institutions would make an excellent research project, and some information about the results of attempts to use the Greene/Meissner "processing lite" recommendations is now available.⁷⁴

⁶⁸ Helen R. Tibbo, "The Impact of Information Technology on Academic Archives in the Twenty-first Century," *College and University Archives*, 25–51.

⁶⁹ Responses such as "photos only," "scanned photos only, not born digital," and "we have a few paper collections that include a small subset of electronic records" were typical responses.

⁷⁰ One respondent noted, "[o]ur Records Management Department is small and very tradition bound. The University President has unfortunately been quoted in the press as saying that email messages are not records. Certainly not a very conducive environment for a University Archives located in a University Library to begin policy or systematic administration of electronic records."

⁷¹ Robert P. Spindler, "Electronic Publishing and Institutional Memory," *College and University Archives*, 53–68.

⁷² Admittedly, a few institutions in the sample are making some progress in this area. One of the respondents recently hired two electronic records archivists, and another noted "[w]e are a member of a regional digital repository (using Fedora) and we will be testing it to provide access to the email accounts and the university policy documents, selected faculty, department, and student websites, and student blogs. At this point Dublin Core looks to be the default metadata schema."

⁷³ Elizabeth Yakel provides a comprehensive overview of recent literature regarding user needs, as well as results from her own studies of uses, "Managing Expectations, Expertise, and Effort While Extending Services to Researchers in Academic Archives," *College and University Archives*, 261–86.

⁷⁴ Donna McCrea, "Getting More for Less: Testing a New Processing Model at the University of Montana," *American Archivist* 69 (Fall/Winter 2006): 284–90.

Second, archives might pursue a strategy of “processing and describing to the clock” and completing whatever processing is necessary during collection appraisal and accessioning.⁷⁵ After analyzing the size of current backlogs, accessions rates, and staff resources, we might process each collection during an amount of time established in advance with attention to the Greene/Meissner recommendations. Realistic expectations for productivity and quality control can and must be established and enforced, resulting in a wise use of resources and better user access to the bulk of collections in the repository.

Third, we should develop arrangement and processing strategies that can be implemented more easily by lone arrangers or those in small shops. These archives tend to have the worst backlogs and the lowest processing productivity. Even though most have an acceptable level of professional staffing, they have less student help, particularly graduate students with advanced training in history or library/archival science. While it may be difficult to secure funding to add professional staff, the relatively low cost of adding students, interns, or volunteers may be persuasive.

Finally, the archival community as a whole should invest more time and resources in developing descriptive workflows and tools tailored to the need for efficient processing and description. To date, the community has put a lot of time and attention into creating descriptive standards but has paid less attention to the economics of implementing them. This study demonstrates that it is currently beyond the capacity of many institutions to implement MARC and EAD in a cost-effective fashion. Repositories that use them have larger backlogs. Smaller archives and those with less access to technical resources have a harder time using them or don’t even try. Many institutions engage in a level of perfectionism and precision in description that undermines efficient processing and repository-wide access, and it seems likely that the complexities of MARC and EAD encourage some of these tendencies among our fussier colleagues.⁷⁶

Tools such as the Archivist Toolkit or UIUC’s Archon may help somewhat, but archivists should not treat them as magic bullets.⁷⁷ They will only prove effective in encouraging processing and descriptive efficiency if they are imple-

⁷⁵ Excellent advice in this respect is provided by Christine Weideman, “Accessioning as Processing,” *American Archivist* 69 (Fall/Winter 2006): 274–83.

⁷⁶ Greene and Meissner note that the highest priority among archival users polled was “putting more resources into creating basic descriptions (the equivalent of an on-line catalog entry) for all their collections, whether processed or not,” yet all too often we forgo simple collection- or series-level description in favor of detail. Greene and Meissner, “More Product, Less Process” 263.

⁷⁷ In particular, smaller archives face a different range of processing and descriptive issues than do larger institutions. We must plainly acknowledge that the workflows, standards, and tools used in larger shops are not applicable elsewhere.

mented as part of a strategic management effort to reformulate processing policies, processes, and procedures.⁷⁸

As college and university archivists, we can make much headway in increasing the accessibility of our analog and digital collections if we are willing to confront our inner demons. We must thoughtfully implement programs to speed processing and reduce backlogs, but we should not place excessive hope in any one solution, because many factors work together to determine the overall effectiveness of an archival program. We have much work ahead of us, so let's get busy!

⁷⁸ The Archivist Toolkit project (<http://archivisttoolkit.org/>) promises an easy collection management platform and the generation of both MARC records and EAD files, although it will not natively display descriptive information in a Web environment. The University of Illinois has developed the Archon system, which allows input of standards-compliant descriptive records via a Web interface. The system will also publish finding aids to the Web and allow output of MARC and EAD records (<http://www.archon.org>).

Appendix: Survey of Descriptive Practices in College and University Archives (n = 91)

1.-3. Name, e-mail, institution name

4. At what type of institution are you employed?

Public College: 8, 9%

Private College: 21, 23%

Public University: 32, 35%

Private University: 28, 31%

Community/Junior/Two-Year College: 1, 1%

Divinity School: 1, 1%

5. What is the size of the archives staff computed on a full-time equivalency (FTE) basis? (e.g., 2 persons each working 20 hours per week = 1 FTE)

Type	Mean	Median	Max	Min	Mode
Professional/Faculty	2.5	1.0	23.0	.25	1.0
Paraprofessional	1.8	1.0	8.0	0	1.0
Clerical	1.3	1.0	4.0	0	1.0
Students	2.1	1.0	17.0	0.1	2.0
Volunteers	1.0	1.0	4.0	0	1.0
Others	1.5	1.5	3.0	0	0.0
All types	5.4	3.5	29.0	0	1.0

6. Please describe your current descriptive system in one or two sentences: (Answers vary.)

7. What is the biggest need your institution currently faces in terms of describing and providing access to archival materials? (Answers vary.)

8. What is the size of your holdings in cubic OR linear feet? (Convert linear ft. to cubic by a factor of .79.)

	Mean	Median	Max	Min	Mode
Processed	4167.6	1536.0	57500.0	3	158
Unprocessed	3086.8	1050.0	8.0	0	790

9. What types of material does your archives include in its holdings? (Check all that apply.)

Official university records/administrative files: 89, 98%

Publications: 86, 95%

Faculty papers: 79, 87%

Student papers/student organization records: 80, 88%

Alumni papers: 65, 71%

Other: 52, 57%

10. What formats of material does your archives collect? (Check all that apply.)
- Paper: 90, 99%
 - Microfilm: 67, 74%
 - Photographs, negatives, and/or digital photos: 88, 97%
 - Moving images, films, and/or videotapes: 84, 92%
 - Records, tapes, CDs, or other sound recordings: 80, 88%
 - Electronic records: 57, 63%
 - Artifacts: 71, 78%
 - Other: 8, 9%
11. Do you use a provenance-based classification/descriptive system (e.g., record groups and/or subgroups) for administrative records of the college/university? (Check one.)
- Yes: 74, 81%
 - No: 13, 14%
 - Don't know: 2, 2%
 - No answer: 2, 2%
12. Which of the following create descriptive records at your institution? (Check all that apply.)
- Professionals/faculty: 87, 96%
 - Paraprofessionals: 47, 52%
 - Clerical: 11, 12%
 - Students: 45, 49%
 - Volunteers: 10, 11%
 - Others: 7, 8%
13. Which of the following training does your institution use to train those who prepare descriptive records? (Check all that apply.)
- In-house guides, manuals: 64, 70%
 - One-to-one sessions: 73, 80%
 - Online training/coursework: 7, 8%
 - On-site workshops: 13, 14%
 - SAA-sponsored workshops: 36, 40%
 - Regional association-sponsored workshops: 39, 43%
 - Other: 18, 20%

14. What percentage of your holdings (based on number of collections) are described in:

	Mean	Max	Min	Mode
MARC/Catalog Records	37%	100%	0%	0
EAD Files	13%	97%	0%	0
Databases (e.g., Access, SQL, custom databases)	39%	100%	0%	0
Collections mgmt or digital library software (e.g., PastPerfect, CONTENTdm)	7%	100%	0%	0
HTML/Static web pages	35%	100%	0%	0
Printed/word-processed container lists	64%	100%	0%	100
Manual/card catalog records	24%	100%	0%	0

15. What is your principal finding aid format at the "collection" level? (Check one.)

MARC/library catalog records: 14, 15%

EAD files: 5, 5% Online database/dynamic web pages (e.g., Past Perfect, CONTENT^{dm}, Access, SQL): 4, 4%

HTML/static web pages: 3, 3%

Printed/word-processed container lists (i.e., Word, WordPerfect, or PDF files): 23, 25%

Manual/card catalog records: 3, 3%

Combination/two or more of the above: 31, 33%

Other: 7, 8%

None: 1, 1%

Didn't answer: 1, 1%

16. What is your principal finding aid format at the folder level? (Check one.)

MARC/library catalog record: 0, 0%

EAD files: 8, 9% Online database/dynamic web pages (e.g., Past Perfect, CONTENT^{dm}, Access, SQL): 4, 4%

HTML/static web pages: 3, 3%

Printed/word-processed container lists (i.e., Word, WordPerfect, or PDF files): 46, 51% Manual/card catalog records: 1, 1%

Combination/two or more of the above: 20, 22%

Other: 3, 3%

None: 4, 4%

Didn't answer: 2, 2%

17. What is your principal finding aid format at the item level? (Check one.)
MARC/library catalog records: 2, 2%
EAD files: 7, 8%
Online database/dynamic web pages (e.g., Past Perfect, CONTENT^{dm}, Access, SQL): 9, 10%
HTML/static web pages: 1, 1%
Printed/word-processed container lists: 16, 18%
Manual/card catalog records: 4, 4%
Combination/two or more of the above: 7, 8%
Other: 10, 11%
None: 31, 34%
Didn't answer: 4, 4%
18. Which of the following content standards does your institution actively use when creating descriptive records? (Check all that apply.)
Describing Archives: A Content Standard (DACS): 43, 47%
Archives, Personal Papers, and Manuscripts (APPM): 44, 48%
Locally developed standard: 31, 34%
Other (please specify): 9, 10%
None: 7, 8%
19. Which of the following authority control systems does your institution use? (Check all that apply.)
Library of Congress Subject Headings (LCSH): 71, 78%
Local subject authority file: 21, 23%
Library of Congress Name Authority File (LCNAF): 37, 41%
Local Name Authority File: 37, 41%
Other: 8, 9%
None: 12, 13%
20. Which of the following tools does your institution use to create descriptive records for archival materials at the collection, folder, and/or item level? (Check all that apply.)
Library catalog software/bibliographic utility: 50, 55%
Custom (local) database (e.g., Access, MySQL): 31, 34%
Digital library software (e.g., CONTENT^{dm}, Greenstone): 13, 14%
XML editor (e.g., Xmetal, Oxygen): 20, 22%
Word processor (e.g., Word, WordPerfect, Open Office): 75, 82%
HTML or text editor (e.g., FrontPage, Notetab): 28, 32%
Other (please specify): 6, 7%

21. What percentage of your processed holdings (based on number of collections) would you say are described in Internet-accessible records of any type or level of completeness?

Mean: 50%, median: 50%, max: 100% (14 institutions),
min: 0% (12 institutions), mode: 100%

27 institutions 10% or less; 28 institutions 90% or more

22. What percentage of your unprocessed holdings (based on number of accessions) would you say are described in Internet-accessible records of any type or level of completeness?

Mean: 15%, median: 0%, max: 100% (1 institution),
min: 0% (46 institutions), mode: 0%

23. For what percentage of your holdings (based on number of collections/series) are the following levels of descriptive information available on-site in the archives search room and online via the Internet:

		Mean	Median	Max	Min	Mode
Collection level:	in search room	67%	80%	100%	0%	100
	on Internet	42%	33%	100%	0%	0
Folder level:	in search room	60%	65%	100%	0%	100
	on Internet	25%	15%	100%	0%	0
Item level:	in search room	17%	5%	100%	0%	0
	on Internet	7%	0%	100%	0%	0

24. Thinking only of descriptive information that has been converted to an electronic format, does your institution have one common interface where users can search/view all of your descriptive information, or must the user consult more than one interface? (Check one.)

Common interface: 28, 31%

Separate systems: 47, 52%

Don't know: 5, 5%

No answer: 11, 12%