Archival Representation

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Abstract. This paper defines and discusses archival representation and its role in archival practice. Archival representation refers to both the processes of arrangement and description and is viewed as a fluid, evolving, and socially constructed practice. The paper analyzes organizational and descriptive schemas, tools, and systems as a means of uncovering representational practices. In conclusion the paper argues that the term 'archival representation' more precisely captures the actual work of archivists in (re)ordering, interpreting, creating surrogates, and designing architectures for representational systems.

Keywords: archival arrangement and description, archival cataloging, archival practice, archival processing, finding aids

A man hath perished and his corpse has become dirt. All his kindred have crumbled to dust. But writings cause him to be remembered in the mouth of the reciter.¹

In *The Design of Everyday Things* Donald Norman argues for a user-centered approach to the design of the daily artifacts we take for granted.² While archives and archival collections are not everyday things for most people, they are embedded in everyday archival practice. Furthermore, archival representations and representational systems must characterize these everyday things for potential researchers.

The term 'representation' is used to refer both to the process or activity of representing and to the object(s) produced by an instance of that activity. The process of representing seeks to establish systematic correspondence between the target domain and the modeling domain and to capture or 're-present,' through the medium of the modeling domain, the object, the data, or information in the target domain ... To the extent that this re-presentation corresponds to, or models, the object,

¹ Egyptian author, unknown (Invocation at the beginning of the University of Michigan Kelsey Museum of Ancient and Mediaeval Archaeology Archives Finding Aid).

² Donald Norman, *The Design of Everyday Things* (New York: Doubleday, 1990).

data, or information in the target domain the two can be thought of as representationally equivalent.³

This article focuses on archival representation as a fluid, evolving, and socially constructed practice. Representation refers to both the processes of arrangement (respecting or disrespecting order) and description, such as the creation of access tools (guides, inventories, finding aids, bibliographic records) or systems (card catalogs, bibliographic databases, EAD databases) resulting from those activities. It is clear how the creation of surrogates relates to representation. Yet, archival arrangement is also a representational act. Even in cases where an arrangement is simply transferred from a file cabinet to a box, rearrangement has occurred and context is lost. Brien Brothman argues that maintaining original order is impossible. Original order, he contends, "caters to institutional requirements for a serviceable, idealized archival intellectual order rather than original order". As such, arrangement is a representation of an intended and well-tended order that probably never existed in the originating context.

Throughout this paper the term archival representation will be used for the archival function commonly and variously identified as arrangement and description, processing, and occasionally archival cataloging. The term 'archival representation' more precisely captures the actual work of the archivist in (re)ordering, interpreting, creating surrogates, and designing architectures for representational systems that contain those surrogates to stand in for or represent actual archival materials.

The very act of archival representation, designed to order and provide access to collections through finding aids, can also create barriers to use. Researchers must know the schemas and codes and understand the underlying systems of privileging, classifying, and selecting that comprise both arrangement and description. Many archivists focus on the creation of representations as the ultimate function of the archivist. As a result, the inventories and finding aids have either been the much maligned or much venerated objects of archivists either promoting or attacking archival theory. This paper stands this argument on its head and studies archival representation and the representational systems themselves in an effort to theorize about these processes and their resulting artifacts, determine how meaning is imbued in them, and discuss the centrality of these activities to archival work in order to lead to a

³ Elin K. Jacob and Debora Shaw, "Sociocognitive Perspectives on Representation." *ARIST* 33 (1998), p. 146.

⁴ Brien Brothman, "Orders of Value: Probing the Theoretical Terms of Archival Practice." *Archivaria* 32 (Summer 1991), p. 85.

⁵ John Roberts, "Archival Theory: Much Ado About Shelving." *American Archivist* 50/1 (Winter 1987), pp. 66–74.

deeper understanding of archival representation. This more empirical deconstruction of archival representation owes much to the theoretical writings of Terry Cook and others who have aptly applied post-modern theories to various aspects of the archival endeavor.

Archivists actually need a deconstruction of the contexts they are trying to describe, remembering that "it is in the nature of deconstruction not just to see the wider context (those traces, or specters, stretching back into the past in an infinite regress), but also the fluidity, the flexibility, the ultimately uncontrollable nature of the context".⁶

To accomplish this goal, this paper examines the representation of records by records creators, archivists, and systems. It focuses on the representational practices, the artifacts of representation, and the evolutionary nature of both the primary sources that the artifacts are trying to represent and of the artifacts themselves.

An examination of the activities, systems, and products of archival representation is long overdue. The past decisions by archivists have already been scrutinized in several other archival functions and these studies have revealed assumptions and biases in archival practice. For example, the need to reexamine old appraisal decisions has been discussed frequently since Leonard Rapport's article "No grandfather clause". The collection assessment studies reported by archivists, such as Judith Endelman, found that archivists' long-term perceptions of their collections were at times flawed, if not erroneous. However, the archival function of archival representation has not experienced such public scrutiny even though retrospective conversion projects have uncovered discrepancies and highly misleading descriptions. Despite the documented need to revisit previous collection descriptions, there have been few analyses of the nature of the original categorizations, descriptions,

⁶ Terry Cook, "Fashionable Nonsense or Professional Rebirth: Postmodernism and the Practice of Archives." *Archivaria* 51, p. 32. Cook is quoting Stuart Sim's *Derrida and the End of History in this Passage*. Other articles who have questioned archival narratives and texts, although not particularly in the area of archival representation are: Brien Brothman, "The Pasts that Archives Keep: Memory, History, and the Preservation of Archival Records." *Archivaria* 51 (Spring 2001), pp. 48–80 and Eric Ketelaar, "Archivalisation and Archiving." *Archives and Manuscripts* 27/2 (May 1999), pp. 54–61.

⁷ Leonard Rapport, "No Grandfather Clause: Reappraising Accessioned Records." *American Archivist* 44/2 (Spring 1981), pp. 143–150.

⁸ Judith Endelman, "Looking Backward to Plan for the Future: Collection Analysis for Manuscript Repositories." *American Archivist* 50/3 (Summer 1987), pp. 340–355.

⁹ Dennis Meissner, "First Things First: Reengineering Finding Aids for Implementation of EAD." *American Archivist* 60/4 (Fall 1997), pp. 372–387. See also: Patricia Cloud, "RLIN, AMC, and Retrospective Conversion: A Case Study", pp. 125–134.

the revisions, or the evolution of descriptive practices. 10 Recently, there have been two articles that have critically examined archival descriptive practices. 11 This trend is good as descriptive practices are definitely one of the narratives, although arguably not so tacit, that Eric Ketelaar identifies in the archives. 12 The present paper is an effort to understand the salient dimensions in an analysis of archival representations. Findings indicate that the function of archival representation is ongoing. In fact, one collection studied even warns users that "the content will change over time". 13 Ketelaar goes even further by arguing that the meaning will change over time as records are put to different uses. In this latter scenario, archivists should not only be reorganizing collections and revisiting poor descriptions, but completing periodic redescriptions of entire archives to accommodate these changing meanings.¹⁴ With this in mind, archivists should begin to think less in terms of a single, definitive, static arrangement and description process, but rather in terms of continuous, relative, fluid arrangements and descriptions as on-going representational processes. In fact, electronic records description begins at creation and continues throughout the records continuum as metadata is added to document such events as versions, access, and redaction.¹⁵

The idea of developing representational tools as a continuous process is evidenced by the fact that archivists increasingly replace analog representational systems (such as the card catalog or finding aids in the United States) with computer-based systems (such as Machine Readable Cataloging (MARC) or Encoded Archival Description (EAD). This is also important because the artifacts of archival representation are more than access tools.

¹⁰ Richard Berner's, *Archival Theory and Practice in the United States* (Seattle: University of Washington Press, 1983) is the closest thing there is to a history of archival representation in the United States. His work presents a very detailed factual account that is invaluable in understanding the variety of access tools employed. However, Berner's work lacks a sociological or anthropological dimension although the elements of such an analysis are mentioned by Berner.

¹¹ Wendy M. Duff and Verne Harris, "Stories and Names: Archival Description as Narrating Records and Constructing Meanings." *Archival Science* 2/3–4 (2002), pp. 263–285 and Michelle Light and Tom Hyry, "Colophons and Annotations: New Directions for the Finding Aid." *American Archivist* 65/2 (Fall/Winter 2002), pp. 216–230.

¹² Eric Ketelaar, "Tacit Narratives: The Meaning of Archives." Archival Science 1, pp. 131–141.

¹³ Henry James Collection, Houghton Library Harvard University. URL: http://hcl.harvard.edu/houghton/ [Accessed January 2001]. This reference is no longer on-line.

¹⁴ Ketelaar, "Tacit Narratives", p. 139.

¹⁵ See Margaret Hedstrom, "Descriptive Practices for Electronic Records: Deciding What is Essential and Imaging What is Possible." *Archivaria* 36 (Autumn 1993), pp. 53–63 and Wendy Duff, "Will Metadata Replace Archival Description? A Commentary." *Archivaria* 39 (Spring 1995), pp. 33–38.

For better or worse, they have also been collection management tools for archivists. As such, archival representations and the technologies archivists rely on to create, view, and communicate information about primary sources are occasions for structuring. Structuring is the on-going processes of actions, interactions, decision-making, behavior, and cognition that form the basis of organizational life. In this case, archival representational practices are structuring elements. The creation of each inventory or guide negates, reinforces, extends, or transcends previous artifacts. Thus, each new representational artifact contributes to the knowledge base of the repository at the same time it changes it. These processes are iterative, dynamic, and interrelated.

Extending this line of inquiry to the classification or organizational and representational systems in archives, archival representations present a creator's, an archivist's, and potentially even a user's view of the collection as well as how the archivist frames the underlying papers or records to the world. Hanne Albrechtsen and Elin K. Jacob argue that these schemes need not communicate solely internally, but be links between collections and users.

The notion of the classification scheme as a transitional element or "boundary object" offers an alternative to the more traditional approach that views classification as an organizational structure imposed upon a body of knowledge to facilitate access within a universal and frequently static framework. Recognition of the underlying relationship between user access and the collective knowledge structures that are the basis for knowledge production indicates the dynamic role of classification in supporting coherence and articulation across heterogeneous contexts.¹⁸

Archivists are not yet at this dynamic point where archival arrangements and categorizations for access and collection management are transparent, flexible, and effective tools for both users and archivists. Furthermore, archivists must transcend boundaries at each end of the archival spectrum, not only between users and primary sources, but also between creators and creating

¹⁶ This idea is derived from Stephen R. Barley, "Technology as an occasion for structuring: evidence from observations of CT scanners and the social order of radiology Departments." *Administrative Science Quarterly* 31 (1986), pp. 78–108.

¹⁷ Anthony Giddens, *The Constitution of Society: Outline of the Theory of Structuration* (Cambridge, UK: Polity Press, 1984). The ideas of structuring or structuration originated with Giddens. The idea is that community members (in this case archivists) create processes and artifacts (practice) that contain embedded meanings within and for that community. Change in practice can be deliberate or inadvertent as members work to maintain both the processes and artifacts as well as the community in which these are embedded.

¹⁸ Hanne Albrechtsen and Elin K. Jacob, "The Dynamics of Classification Systems as Boundary Objects for Cooperation in the Electronic Library." *Library Trends* 47/2 (Fall 1998), p. 293.

organisms and the archives. The discussion in Australia has primarily focused on the archival boundary through which records may pass when moving from office of origin to the archives. In a successful transition, the boundary object or records, must maintain coherence in both communities (office and archives). Emerging metadata models for digital object management, description, and preservation also view metadata as fulfilling this boundary spanning function. Recordkeeping metadata has even been defined as the "structured or semi-structured information that enables the creation, management, and use of records through time and within and across domains in which they are created". Therefore, a discussion of representational coherence across this boundary between the creator and the archives and then through technological systems in the archives follows.

Representations by Creators

The representation or organization of knowledge has been a concern for creators of that knowledge as well as archivists and librarians since the Middle Ages. Rosalind McKittrick identifies a functional arrangement of manuscripts and codices in Carolingian monasteries.²¹ Peter Burke argues that larger cultural ideas about the order of the universe were reified in the organization of libraries during the Renaissance.²² McKittrick and Burke's findings support Eviatar Zerubavel's contention that categorization is not an individual cognitive process, but rather the result of a complex dynamic of cultural and social forces. At the same time, the categorization process seeks to divide and isolate by "drawing fine lines" among meaning and representations "as if they were discrete, totally detached from their surroundings".²³

Representational systems are both manifestations of a culture as well as the infrastructure to support that culture. These representations structure later descriptive processes by creating acceptable boundaries of thought and discourse around the practice of archival representation. At the same time, successful representational schemes must support a degree of ambiguity.

¹⁹ Chris Hurley, "The Making and the Keeping of Records: (1) What are Finding Aids For?" *Archives and Manuscripts* 26/1 (May 1998), pp. 71–72.

²⁰ David A. Wallace, "Archiving Metadata Forum: Report from the Recordkeeping Metadata Working Meeting, June 2000." *Archival Science* 1/3 (2001), p. 255.

²¹ Rosalind McKittrick, *Carolingians and the Written Word* (Cambridge; New York: Cambridge University Press, 1989).

²² Peter Burke, *A Social History of Knowledge: From Gutenberg to Diderot* (Malden, MA: Polity Press, 2000), pp. 81–115.

²³ Eviatar Zerubavel, *The Fine Line: Making Distinctions in Everyday Life* (Chicago: University of Chicago Press, 1991), p. 5.

As Bowker and Star note, categorizations also need to allow for change, permeability, and different levels of adherence by separate entities in the culture. ²⁴ Both the malleability and intransigence of culture and identity that form boundaries and borders and both bring together and pull apart, are seen in the representations by creators that follow.

Colin Mackenzie served as a cartographer and surveyor for the East India Company in colonial India in the late eighteenth and early nineteenth centuries. During the course of his 38-year career in India, he amassed a collection of historical records and artifacts through the employ of other British officials as well as native Indian assistants. Mackenzie's collection of accounts, records, and artifacts is as much a reflection of his own culture as it a history of the Indian subcontinent he sought to document. Mackenzie's "arrangement of the collection" was passive, although even this affected the records.

The collection of information meant the appropriation of knowledge in more than just a revenue-related sense. When local documents were collected, authority and authorship were transferred from local to colonial contexts. The different voices, agencies, and modes of authorization that were implicated in the production of the archive got lost once they inhabited the archive.²⁵

Later organizers of the collection, and there have been several, have further obscured the culture and identity, authority and authorship. Transfer of coherence of the records from the local to the colonial and later to a more historical context resulted in a loss of meaning for the original local creators of the records. Ironically, while the records have been reorganized for repurposing, historians have been trying to reconstruct their original context since Mackenzie's time.

Representation schemes can also reflect recoveries of identity. After Vatican II, all religious orders were ordered to revise their constitutions and rules. This process required that religious communities examine their "charism" or the original spirit or vision of the group. As a result, communities rushed to the archives for information, often finding their records in chaos.²⁶ This connection is explicitly stated in the policies and procedures manual for the Salem Heights Archives

²⁴ Geoffrey Bowker and Susan Leigh Star, *Sorting Things Out: Classification and its Consequences* (Cambridge, MA: MIT Press, 1999), p. 266.

²⁵ Nicholas B. Dirks, "Colonial Histories and Native Informants: Biography of an Archive", in Carol A. Breckenridge and Peter van der Veer (eds.), *Orientalism and the Postcolonial Predicament: Perspectives on South Asia* (Philadelphia, POA: University of Pennsylvania Press, 1993).

²⁶ The *Catholic Archives Newsletter* ran stories in January and July 1982 documenting the use of archives in the redrafting of constitutions.

Importance: Archives have become particularly important in the post-Vatican II period of history as a source for the process of renewal, enabling Sisters to keep in touch with their roots – historically and spiritually – and ensuring renewal and adaptation with in the context of the spirit and history of the Congregation.²⁷

In order to recover their roots, order was needed in the archives. Although presented as following provenance, a common schema promoted by early instructors of religious archives workshops is more accurately identified as functional in nature. Furthermore, these functions supported the redrafting of religious constitutions and rules. While there are local adaptations in the names of the divisions, the overall structure of the schema mirrors the Dewey decimal system and features nine "record groups" classifications: 1. Founder(s) and Foundation, 2. Chapters, 3. General Superiors, 4. Administration, 5. Treasury/Finance, 6. Provinces, 7. Houses/Missions/Parishes, 8. Formation / Spirituality, and 9. Publications. This is one example of the assertion by James M. O'Toole that religious archives are different in that external non-archival beliefs influence the archives.²⁸ I would go further than O'Toole who noted that religious archives are different because they are based on denominational identities. In the case of women religious, the archives both helped form or reform a particular religious identity and were then in turn reformed by that new identity. One might theorize also that the development and implementation of this schema, which is pervasive in the archives of religious communities in the United States, formed a way for religious communities to be in the archival world (avowing to adhere to provenance) but not quite be of that world (developing a more functional interpretation of provenance).

Creators also evolve representational systems for more mundane reasons and make use of systems that are convenient. The Henry Ford Office records and the Edsel Ford Office records from the Ford Motor Company Archives, 1914–1952 (now housed at Henry Ford Museum and Greenfield Village) have been organized in several ways over the years. Initially (c.1914–1921), the inhouse system, every folder reflected a personal or corporate name or a subject heading. In 1919, general folders labeled "A", "B", "C", etc. began to appear. These files contain both subjects, personal and corporate names. This early system was apparently derived from Winthrop Sears (of the Sears library cataloging fame). In July 1921 through 1929, the Library Bureau Automatic Index System was imposed on the files. This was a numerical filing system based on

²⁷ Sr. Mary Clarita Hudson, C.PP.S. and Sr. Mary Linus Bax, C.PP.S., [Salem Heights Archives] *Archival Policies and Procedures*, 8th printing (Dayton, OH: Sisters of the Precious Blood, 1992, pages unnumbered).

²⁸ James M. O'Toole, "What's Different about Religious Archives?" *Midwestern Archivist* IX/2 (1984), pp. 94–95.

the names of individual correspondents and companies. This was expanded in July 1923 as a result of an expanding amount of incoming mail by adding more precise subdivisions of personal and corporate names. As the Ford Motor Company records became more complex, yet another expansion of the system occurred in January 1927. Documents were alphabetized according to person or company, although the exact part of the name of a company used for filing is often inconsistent. In this latter system, each alphabetized item is assigned a code: the first part of the code comes from the first letter of the last name of an individual or the first letter of the principal word of the company; the second part of the code comes from the first letter of the first name of the individual or the first letter of the secondary word of the company name. In 1930 the filing system again changed to the Amberg – Numerical system. This again created a more complex yet detailed approach to the organization of office records. The Amberg system had greater depth than the Library Bureau system. For example, in the Library Bureau system the letter A had 5 subdivisions while in the Amberg the letter A had 43. In the Amberg system, the names of the correspondent, company or subject were alphabetized using the initial letters, assigned a code number, and filed in the folder of the same number. Thus, relatively unskilled clerks were able to identify the correct files and work swiftly. To foster greater efficiency, the Amberg Company even sold either pre-labeled folders or adhesive labels for file folders. With all its detail, though, even the Amberg system was abandoned in 1950 for another in-house system based primarily on the names of correspondents and businesses with limited subject access.²⁹

In studies of creators of records (historians and office workers respectively), Tom Malone and Barbara Kwasnik have examined the representations and categorizations of these individuals.³⁰ The articles by Malone and Kwasnik demonstrate that functionality as well as temporality (such as an approaching deadline) and spatial orientation (the function of reminding) are key factors in personal representational models of records management. To a certain extent, original order assumes an underlying, coherent filing system. Translating the models of original order, identified by Malone and Kwansik,

Finding Aid for the Ford Motor Company Archives, n.d, Henry Ford Museum and Greenfield Village Research Center, Dearborn, Michigan. For more information on the adoption of Library Bureau technologies by American businesses and the intricacies of the filing system itself see Gerri Lynn Flanzraich, *The Role of the Library Bureau and Gaylord Brothers in the Development of Library Technology, 1876–1930*, Ph.D. Dissertation, Columbia University 1990, pp. 364–375. Dissertation Abstracts International DAI, 52, no. 02A (1990): 0330.

³⁰ Barbara Kwasnik, "How a personal document's intended use of purpose affects its classification in an office." *ACM SIGIR Forum* 23/1–2 (Fall 1988/Winter 1989), pp. 207–210. Tom Malone, "How do People Organize their Desks: Implications for the Design of Office Information Systems." *ACM Transactions on Office Information Systems* 1/1 (January 1983), pp. 99–112.

into the archives where temporality does not lend itself to organization is difficult. Any transfer to into boxes automatically includes a loss of context and provides a substantial obstacle to maintaining provenance and re(presenting) an original order.

As Brothman has noted, when records cross the boundary form office to archives, complexities are muted and an idealized version of original order is often adopted. At times, archivists impose socially constructed schemas on records to provide intellectual coherence.³¹ Whether these schemas are the record groups cited by Brothman, subject based, functional, or temporal approaches, they often reflect an imposed information organization that would be alien to the creators and is in no way organic to the originator. With that, let us change our perspective and examine some of these representations by archivists.

Representations by Archivists

Within the broad dictum of archival principles and practices, there appears to be substantial variation in the organizational and classification schemes. Furthermore, the social, cultural, political, and economic factors influencing the development of these schemes are very diverse. Recent efforts to define and design more collective representational schemes, such as MARC and EAD in the United States, have tried to both establish minimal standards and accommodate some differences. Geoffrey Bowker and Susan Leigh Star refer to this process as convergence. Convergence is the double process by which information artifacts and social worlds interact and come together. Understanding this convergence, both in terms of overall archival organizational schemes as well as in terms of the information artifacts (e.g., MARC records, EAD finding aids) represented within these schemas is essential for the creation of surrogates that have meaning in other social systems and transcend time and space. Mediating between original artifacts and archival representations can be difficult, particularly over time.

³¹ Brothman, "Orders of Value", p. 84.

³² Geoffrey C. Bowker and Susan Leigh Star, *Sorting things Out: Classification and its Consequences* (Cambridge, MA, 1999), p. 82.

³³ The difficulty of transcending time and space in reference mediations is also treated in Elizabeth Yakel, "Thinking inside and outside the boxes: Archival Reference Services at the Millennium." *Archivaria* 49 (2000). Brien Brothman, "Memory, History, and the Preservation of Records" (p. 79) also makes this point when he discusses the difference between simple access and access over time and the need for archivists to transcend both physical and intellectual barriers to accomplish this.

³⁴ Expert archival researchers are able to understand this critical link between artifact and surrogate. For a more detailed discussion of the importance of this ability see, Elizabeth Yakel

In the United States, the theory and practice of representation focused initially on what were considered historical manuscripts. Historical manuscripts covered both personal papers and organizational records since the organizational records under consideration had often been alienated from their originating body. One early attempt to standardize the representation was by J.C. Fitzpatrick at the Library of Congress. His *Notes on the Care*, *Cataloging, Calendaring and Arranging of Manuscripts* was first published in 1913. By the third edition in 1928, he had developed representational guidelines and assumptions. One implicit assumption is that rearrangement is usually necessary to counter not only the "derangement" of documents but also the repurposing (or changing functionality) of records as they move from administrative to historical use.

Official papers under the control of the archivist come to him usually with an arrangement and indexing born of administrative necessity, and in no wise competent to answer the needs of the historical investigator. Useless and faulty as such an arrangement may be for students of history and economics, it is well to allow it to stand until such time as the rearrangement scheme has been thoroughly worked out.³⁵

A tension in Fitzpatrick's treatise is the inability to reconcile the representation of the broader arrangement scheme and the very detailed description of items. Fitzpatrick argues for the use of an itemized listing (calendar) or card catalog to describe the contents, whereas the overall arrangement that is seen by the researcher as he or she peers into the box is meant to explicate context and establish the relationships among the materials. However, it appears that the necessities of arrangement and future location of the papers were paramount.

The impetus for expediency in the creation of early representational systems can be illustrated through the manuscript collections in the Houghton Library at Harvard. Collections are categorized by "shelf marks" primarily according to language or country, but also by subject, collectors, or library department. This classification scheme is further elaborated for convenience:

Manuscripts are classed as MS, generally a manuscript that stands independently on the shelf as a codex; fMS, a MS taller than 12inches; pfMS, an oversized MS; or bMS, boxed manuscripts generally loose papers in folders. For example, bMS AM 1704 (945) no. 6 is a letter from James Walker to John Gorham Palfrey, the sixth chronologically of twenty grouped as the 945th item or group in American boxed manuscripts

and Deborah A. Torres, "AI: Archival Intelligence and User Expertise." *American Archivist* (forthcoming).

³⁵ J.C. Fitzpatrick, *Notes on the Care, Cataloging, Calendaring and Arranging of Manuscripts* (Washington, D.C.: Government Printing Office, 1928), p. 4.

1704th American manuscript or collection of manuscripts to have been catalogued in this series (italics original).³⁶

Also of note here is the construction of the "shelf marks". While these serve the researcher by creating unique identifiable call numbers to use when requesting a collection, they also contain essential information for the archivist to use in managing and locating the collection. Continuing on one finds that in one case the categorization has persisted long after the original reason for the designation has ended:

Earlier in this century it was the practice of Harvard's manuscript cataloguers to reserve the shelf numbers MS 800.1 etc., for small collections kept in manuscript boxes of a certain size. Many of these "800" numbers still survive, although the reason for them disappeared when the collection was rehoused in boxes of uniform size.³⁷

Archival codes are ubiquitous. In addition to the manuscript numbers at Harvard, there are several other designations that serve as a location device as well as provide collection management information. Accession numbers record the yearly growth of an entire archives or manuscript collection. Storage numbers connote incompletely processed collections. Call numbers reflect an attempt to incorporate the materials in a larger library classification scheme. And finally, some collections are simply called by their name.³⁸

As demonstrated above, archival representational systems do evolve and their meanings change over time. When, if, and how that evolution is presented has always created a problem for archivists. The maintenance of older inventories can also be seen as a form of archival pentimento, the (re)discovery of a overdrawn representation under a newer one. Archival accountability and ability to reverse the archivist's judgment and arrangement is perhaps behind Fitzpatrick's directive to maintain older representational tools.

The official indexes and finding-list catalogues of such collections should always be preserved no matter how useless they may seem after the rearrangement of the papers. If these indexes are bulky and space consuming, they may be condensed by a group classification or outline record, for archival consultation, before being sent to the storage base-

³⁶ The Houghton Library, *Manuscripts and Drawings: A Handlist of Finding Aids with a List of Published Guides* (Cambridge, MA: Harvard University, 1985), p. 5. Hereafter cited as the *Handlist*. Also available on-line at URL: http://hcl.harvard.edu/houghton/departments/msdept/handlist.html#list

³⁷ The Houghton Library, *Handlist*, p. 5.

³⁸ The Houghton Library, *Handlist*, p. 5.

ment. It is the part of wisdom to leave their destruction to the next generation.³⁹

While Fitzpatrick urges the archivist to keep copies of older representational tools for his or her own consultation, some archives openly provide these to researchers. The finding aid to the Roy Dikeman Chapin Papers at the Bentley Historical Library on the University of Michigan campus is a typical example of an evolutionary finding aid. There is no pentimento here. Multiple narratives are allowed to co-exist, although their order gives some preference over others. Roy Dikeman Chapin was president of the Hudson Motor Car Company and briefly served as U.S. Secretary of Commerce, 1932–1933. His papers arrived at the Bentley in several accessions, the earliest and largest acquisition occurred in 1940. Throughout the past sixty years, the Chapin papers have been represented by a variety of representational tools: two versions of cards in the card catalog, two separate versions of the finding aid, and three versions of Machine Readable Cataloging (MARC) records. In the words of Wendy M. Duff and Verne Harris, "each story we tell about the records, each description we compile, changes the meaning of the records and re-creates them".40

The earliest finding aid for the Roy Dikeman Chapin Papers is a twenty seven-page document that begins with a half page narrative description of the contents. The remainder of the finding aid is an inventory / calendar of selected letters, reports, etc. The selection criteria used to select these items is not stated. The selections are eclectic and not all of the documents from any subject are fully identified. The descriptions of items are fairly terse, although the archivist did tarry long enough to judge a few as 'interesting.' The narrative itself also suggests the most fruitful research topics in the collection. 41

This initial finding aid appears to be the source of the first set of catalog cards. On these catalog cards, the selection of materials on the finding aid was further pared down and individual cards were typed with summary information for each item, organized by correspondent. These cards, though, also contain other information, largely coded. I say coded because although the call numbers are placed in the location on the card associated with call numbers, their format is unique. The other codes refer to donor numbers, which were not indicated on the first finding aid.

The current finding aid follows a modern form with which most archivists will be familiar. It is six pages, half of which contain contextual,

³⁹ J.C. Fitzpatrick, *Notes on the Care, Cataloging, Calendaring and Arranging of Manuscripts*, p. 4.

⁴⁰ Duff and Harris, "Stories and Names", p. 272.

⁴¹ Roy Dikeman Chapin Finding Aid, n.d., Bentley Historical Library, University of Michigan.

authority, and other descriptive data. For example, the finding aid provides more detailed acquisitions information. Also, it provides a higher-order contextualization or summary of the materials, identifying and describing the overarching series schema. The remaining three pages provide brief descriptions on the box level, noting the series and then the chronological period contained in each box. Neither finding aid has a specific authorial attribution; although the later finding aid notes that the collection was processed by the "Michigan Historical Collections staff". Other changes in the finding aid demonstrate dynamism in the collection, the inclusive dates have been changed and accordingly the physical extent or amount has increased.⁴²

This modern finding aid is also the basis for other current representations of the collection: an Encoded Archival Description (EAD) finding aid and MARC records in two separate bibliographic networks On-line Computer Library Center (OCLC) and the Research Libraries Information Network (RLIN). The MARC records in OCLC and RLIN are similar, containing identical content but the order of information elements varies. Ironically, one of the salient features of the scope note, the higher-level summarization of the papers into series is missing from the networked bibliographic descriptions. The collection summary focuses on genre terms and the identities of correspondents. Contextual information is also absent, the detailed biography in the finding aid is replaced by a two-line synopsis of Chapin's crowning achievements. This creation of MARC records has also led to the recreation of the new catalog cards. However, the original catalog cards were photocopied and inserted in the back of the finding aid. The new cards, though, lack of distinctiveness of the old cards. While correspondents are listed individually, each card is the same, with only the subject or correspondent's name changed at the top of the card.

The EAD finding aid also mirrors the paper or analog version but makes some small, but significant modifications.⁴³ The series identification is partially separated from the scope and content note and this note begins with a global summary for the first time followed by the series descriptions. The series descriptions are repeated within the actual contents list. Copyright information is also included in this representation.⁴⁴

The multiple access tools for the Chapin collection do form a coherent whole. Each contributes some piece toward a better understanding of the

⁴² Michigan Historical Collections Staff, Roy Dikeman Chapin Finding Aid, n.d., Bentley Historical Library, University of Michigan.

Available URL: http://www.hti.umich.edu/cgi/f/findaid/findaid-idx?type=simple&c=bhl&view=text&subview=outline&id=umich-bhl-851435 (Last checked 3/12/02).

⁴⁴ For other examples and illustrations of earlier access tools from the Bentley Historical Library at the University of Michigan see Ruth B. Bordin and Robert M. Warner, *The Modern Manuscript Library* (New York: Scarecrow, 1966).

Chapin papers and particularly their contexts over time. But, the representations also present different perspectives. Taken together one has the feeling of viewing something through different lenses, some providing broad aerial views, others small slices of information. What do researchers make of all this information about the Roy Dikeman Chapin collection? Do researchers appreciate the technologies and processes that resulted in those new cards in the catalog, the finding aid at the front of the binder, or the on-line EAD encoded finding aid? Do they know they are looking at over half a century of archival technology, waiting there for them to discover/recover? Are all the representations valuable? Do they realize the representations refer to the same albeit evolving artifact?

Another form of archival pentimento asserts itself when collections are rearranged in an attempt to re-present the creator's original order. One example of this is the Alexander Winchell Papers at the Bentley Historical Library. Winchell, a professor of geology and paleontology at the University of Michigan and later chancellor of Syracuse University, meticulously arranged his records into 284 numbered volumes. The meticulousness with which he arranged and categorized things is apparent today in a volume documenting his library.⁴⁵ Winchell's order of his records, though, has long since vanished. An archivist originally reorganized the Winchell papers in the 1930's or 1940's using size more than content or original order as an organizational rationale. 46 In 1940, abstracts of selected letters were completed. 47 In 1992, the collection was again reorganized with a goal of restoring the original order. Still, the collection is organized as much by form of material or genre as it is by Winchell's order. Ironically, or perhaps in a continued attempt to assert themselves, many volumes continue to bear Winchell's numerical identification. Additionally, the 1992 finding aid features a concordance between the current box numbers and the 1930's imposed volume and folder numbers. As a result, the collection is encoded in both by the creator and then recoded or decoded by successive archivists in an attempt to transcend the boundaries of time and use.⁴⁸

Rearrangement and re-presentation by the archivist may be a technological imperative. Archbishop of Cincinnati John B. Purcell's letters were appar-

⁴⁵ *Library* Catalogue, 1852, Box 15 [formerly v. 233], Alexander Winchell Papers, 1833–1891. Bentley Historical Library, University of Michigan.

⁴⁶ Leonard A. Coombs, Alexander Winchell Finding Aid, June 1992, Bentley Historical Library, University of Michigan: i.

⁴⁷ Alexander Winchell Collection Twenty-seven Sample Entries, March 22, 1940. Bentley Historical Library, University of Michigan.

⁴⁸ Leonard A. Coombs, Alexander Winchell Finding Aid, June 1992, Bentley Historical Library, University of Michigan. The EAD encoded version of the finding aid is available at http://www.hti.umich.edu/cgi/f/findaid/findaid-idx?type=simple&c=bhl&view=text&subview=outline&id=umich-bhl-86321 (Last checked 3/12/02).

ently stored in an antique pigeon-holed case and arranged alphabetically. The name of the correspondent and the date were clearly marked on the back of each letter. In the process of archivalization, this original order was represented to fit into the standard, sterile, technology of the archives – the document box. While representing the records in archival boxes is of course an administrative necessity and archivists eschew becoming curators of technology museums (either of past office furniture or future digital systems), this is a reminder of how archivists can alter representational systems and at the same time claim to maintain original order (in this case alphabetical). Representational and recordkeeping systems are fragile and extend beyond order and organization and into context of the creator, their culture, and the technologies or representational systems that bind them together. Technological obsolescence of representational systems, however, is problematic, whether archivists are dealing with turn of the century cataloging practices, such as the Amberg filing rules, pigeonholed desks, or personal computers.

Representational Systems

Representational artifacts (finding aids, inventories, index cards, etc) form larger representational schemas that are implemented in archives using a variety of technologies or tools. In the evolution of these technologies, archivists have moved through a number of different genres in attempting to discover (recover) the most appropriate representational systems for archival and manuscript collections. Archivists have employed card catalogs, calendars, shelf lists, finding aids, sub-genres of finding aids encoded in Hypertext Mark-up Language (HTML) and Standardized General Mark-up Language (SGML)/Extensible Mark-up Language (XML)/Encoded Archival Description (EAD), and finally derivatives of finding aids: Machine Readable Cataloging (MARC) records to manage and to provide access to collections. Each of these represents a different technology and a different philosophical approach to privileging and encoding information and a different level of granularity of the information. Steven L. Hensen discusses these forms and their inherent differences.⁵⁰ In spite of all of these genres of access tools, over the past twenty years the finding aid has emerged as the "canonical form" of archival representation in the United States. I will explore two genres that have become increasingly interrelated: card catalogs and finding aids (and briefly touch on their associated subgenres and manifestations). These two genres of archival representational tools are both discussed because of

⁴⁹ Don H. Buske, "The Historical Archives of the Chancery of the Archdiocese of Cincinnati." *Ohio Archivist* (Spring 1997), p. 3.

⁵⁰ Steven L. Hensen, "The Evolution of Archival Description." *American Archivist* 60/3 (Summer 1997), pp. 284–296.

their interconnections and in some historical cases, dependence upon one another.⁵¹

Card catalogs

Nicholson Baker lamented the demise of card catalogs in libraries.⁵² The aura and intense nostalgic feelings for these card catalogs appears to have permeated the culture. In 1990, artist David Bunn took possession of the two million cards in the Los Angeles Central Library's catalog. In 2000, Bunn used the catalog cards to create installations that created poems by juxtaposing the cards in different ways. In the words of one reviewer

He has paid loving attention to them ever since, embracing their physicality, age, and obsolescence. He spins poems from the titles running across the tops of the cards, honors the catalog's systemic order and succinct formality, and credits the catalog with personality, history, ideology, and even an unconscious.⁵³

Richard J. Cox, Jane Greenberg, and Cynthia Porter, however, provide a broader perspective and examine card catalogs as an essential part of library history, particularly the history of the applications of technology in libraries.⁵⁴ Unlike libraries, many card catalogs in archival and manuscript repositories are still in use, although some have been totally replaced by and subsumed by cards generated through new technologies, as in the case of the Chapin Papers discussed above. Studies are needed to examine the nature of and social systems in which card catalogs for manuscript repositories and archives were created and continue to be used.

The continuing relevance of using card catalogs in archives is apparent throughout the Houghton Library's *Handlist*. Researchers are constantly directed to various card catalogs as a first step in gaining access to collections. For example, a note concerning the James Family Papers indicates that "all available aids must be used: catalogue cards, pink slips, and both new and old indexes". 55 Yet, even this card catalog has changed over the years. As with most manuscript catalogs, cards originally represented individual items. Beginning in 1984, collection level descriptions began to be prepared for

⁵¹ Richard C. Berner, "Manuscript Catalogs and Other Finding Aids: What are their Relationships?" *American Archivist* 34/4 (October 1971), pp 367–372.

⁵² Nicholson Baker, "Discards." New Yorker April 4, 1994, pp. 64–86.

⁵³ Leah Ollman, "Relics of the material age." *Art in America* 88/11 (November 2000), pp. 134–139.

⁵⁴ Richard J. Cox, Jane Greenberg, and Cynthia Porter, "Access Denied: The Discarding of Library History." *American Libraries* (April 1998), pp. 57–61.

⁵⁵ The Houghton Library, *Handlist*, p. 18.

large collections. At the same time, the practice of not assigning subject headings persisted. Cards were made for all correspondents and addressees as well as for selected genres of records (e.g., diaries). Interestingly these practices appear to have continued into the on-line public access catalog (OPAC) and its successor the integrated library system (ILS).

Richard C. Berner examined the relationship between card catalogs and finding aids in an attempt to identify archives with integrated descriptive systems. In a 1971 survey, he found little integration, only 4 out of 44 respondents consciously used the card catalogs as an entry point (index) into the finding aids. Although an additional 16 respondents noted that the card catalog could be used that way. In conclusion, Berner notes "that function [an integrated index to the finding aids] of the catalog, however, seemed to have been discovered rather than preconceived". Apparently archivists' lack interest in reflecting on their representational artifacts and systems is not new.⁵⁶

Finding aids

Finding aids are the canonical form for current archival access for researchers. At the same time, they act as collection management tools for archivists.⁵⁷ They have achieved the status of a canonical form because they are the basis for other representations, such as MARC records⁵⁸ and other various forms of networked information exchange (on-line HTML or EAD finding aids). In other words, finding aids are representations of archival records and papers that are in turn used as a basis for the creation of other second-order representations. It is significant to note that even in the digital environment (such as in EAD), archivists treat the finding aid as a document genre, rather than as a set of discrete data elements. One consequence of this focus on the finding aid as document genre has been the slow development of uniquely digital representations for archival collection information. The concentration on the finding aid as document rather than as one of many potential representations of discrete data elements has also led to problems of reusing archival data across the archival continuum⁵⁹ and the development of true collection management systems for archives.

⁵⁶ Richard C. Berner, "Manuscript Catalogs and Other Finding Aids: What are their Relationships?" *American Archivist* 34/1 (October 1971), pp. 367–372.

⁵⁷ The hypothesis that archival finding aids are both access and collection management tools will not be discussed in detail here.

⁵⁸ Steve Hensen, Archives, Personal Papers, and Manuscripts, 2nd edition (Chicago: SAA, 1992).

⁵⁹ I differentiate between the Australian records continuum and the archival continuum. By archival continuum I mean to focus on the archival administrative activities and functions vis à vis records. This does not mean only activities that occur once the records are transferred into the physical archives or even into a distributed custody arrangement.

In the United States, finding aids have evolved throughout the 20th century. In the past several decades, the pace of this evolution has quickened. In this evolution, the information elements within finding aids that facilitate access (historical or biographical information, scope and contents notes, series descriptions, subject analysis) as well as those that support collection management (accession information, processing attribution, call numbers) have expanded and are now becoming standardized. Still, the creation of finding aids and with it the promise or potential of access is inherently a political act. In order to better understand the underlying social systems behind finding aids, four aspects are explored: creation, construction, components, and consequences.

Creation of finding aids

Several aspects of creation appear to be the most salient. The first is authorship and with it authority. The second is that just as the finding aid as a genre is evolving, individual finding aids themselves evolve and this can be traced through their fluid authorship. Finding aids are dynamic documents. A third point is the relationship between creation and access.

The relationship between authorship and authority of finding aids is critical for both archivists and researchers. Many finding aids lack overt attribution. However, this cannot be taken to be an indication that they lack authority. Since they act as both collection management and access tools, finding aids embody several different types of authority. For archivists, the finding aid contains authority control data. For example, the biographical or organizational history note is the authoritative source for quick, summary information on institutional entities and individuals. For researchers, the presence and placement of the finding aid in the archives is an implicit sign of authority. Additionally, for researchers, the finding aid is the most (although not necessarily a good) authoritative source of knowledge about a collection. Are finding aids worthy of this vesting of authority? Exactly what is the nature of this authority?

The most immediate source of this authority is the author. Authorial influence and attribution of finding aids deserves greater attention. The need for attribution is even greater if we believe, as noted by Kenneth Duckett, that "[i]nventories vary a great deal, depending on the collection being described and the curator's intent". ⁶⁰ Duckett, writing in 1975, did not explore the element of curator's or authorial intent. More recent archival authors, however, have become intensely interested in this dimension. Richard Cox,

⁶⁰ Kenneth W. Duckett, *Modern Manuscripts: A Practical Manual for their Management, Care, and Use* (Nashville, TN: American Association for State and Local History, 1975), p. 136.

among others, has argued that appraisal decisions should be attributed.⁶¹ His arguments also apply to finding aids. Attribution and perhaps even the addition of the authors' biographies is essential contextual information for researchers in evaluating the authority and perspective of the finding aid. As Ketelaar notes, "All these stories constitute the genealogy of the record, more dynamic and more effective than the traditional provenancial and custodial history".⁶²

Through the process of selection of information for inclusion and choice of access points, archivists reveal and conceal, making finding aids political statements.

The dynamism of finding aids (and the underlying collections that they represent) can also be traced through the authors. For example, the Rensis Likert finding aid at the Bentley Historical Library indicates its authors over time: "Thomas Powers, 1975; Avra Michelson, 1982; Brian Williams, 1990; Mike Brostoff, May 1995".⁶³ In this case, the authors should not be viewed as a group of disparate individuals simply adding descriptions of materials to an existing finding aid but as an intellectual tradition. Michelle Light and Tom Hyry, in fact, argue that the impact of the processor is a critical part of the finding aid that is often omitted. They advocate the development of colophons or statements regarding the creation of a work. In their case, colophons would be added to finding aids to identify the archivist's role in representation and interpretation of a collection.⁶⁴

The distributed networked environment has also resulted in distributed authorship. Now two separate archivists can claim authorship: one for the creation of the original analog finding aid and another for the second order representation, the EAD encoded version of the finding aid. Interestingly, the second order author may be more visible. In the case of the Trotsky Collection at the Hoover Institution, the finding aids notes that the collection was generically "Processed by: Hoover Institution Staff" but "Encoded by: Hernán Cortés". Encoding finding aids is not always a routine matter. Information is moved around, assumptions are made about administrative as well as

⁶¹ Richard J. Cox, "Archvial Anchorites: Building Public Memory in the Era of the Culture Wars." *Multicultural Review* (June 1998), p. 59. See also Tom Nesmith, "Still Fuzzy, But More Accurate: Some Thoughts on the 'Ghosts' of Archival Theory." *Archivaria* 47 (Spring 1999).

⁶² Ketelaar, "Tacit Narratives", p. 140.

⁶³ Thomas Powers, Avra Michelson, Brian Williams, and Mike Brostoff, Rensis Likert, Finding Aid, Bentley Historical Library, 1975–1995.

⁶⁴ Light and Hyry, "Colophons and Annotations", forthcoming.

⁶⁵ Hoover Institution, Register of the Trotsky Collection, 1917–1980. Available URL: http://www.oac.cdlib.org:80/dynaweb/ead/hoover/reg_190/@Generic_BookView;cs=default; ts=default (Last checked 3/12/02).

descriptive information, and other liberties are taken with the original text and structure of the finding aid.⁶⁶ The encoder is often not just an encoder. The encoder is also an author who adds his or her perspective into the collection beyond the process of encoding strictly defined.

Another confounding element concerning the creation of finding aids is that although archivists like to think that they are the sole creators of finding aids, they are not. For example, the Trotsky Collection, compiled by the Socialist Workers Party, now housed at the Hoover Institution contains a guide to the letters by Leon Trotsky in the Exile Papers section of the Leon Trotsky papers at Harvard University. ⁶⁷ Interestingly, there is more information concerning this correspondence available through the Hoover Institution than through Harvard University. A number of alternative indices to records in the Vatican Archives have also been published. Some of these have met with the blessing of the Archives' staff while others have not. ⁶⁸ What drives the creation of these competing metanarratives or finding aids? Is it a desire for more detailed information? Is it the desire to liberate information?

Construction of finding aids

Finding aids did not always look the way they do today. Thirty years ago in the U.S., now familiar information, such as scope and contents notes and biographical and historical data, were much abbreviated or even absent. Proportionally, the majority of the finding aid was an extended inventory list that detailed folders, and often items. The representational goal was the explication of the arrangement.⁶⁹ Currently, entirely different information elements are emphasized. Proportionally, biographical and historical sketches and contents notes now often occupy more space than the folder listing. This addition of the historical and biographical notes signals the emerging emphasis on representing context. Both the access and the collection management data now represented in finding aids support this change. Likewise, the

⁶⁶ Meissner, "First Things First", passim. Meissner discusses the need to reengineer finding aids because encoders were spending time synthesizing and looking for information. Encoders for the Historic Pittsburgh Project at the University of Pittsburgh also did a substantial amount of data manipulation and in some cases made very far-reaching assumptions about the intent of the author of the finding aid.

⁶⁷ Hoover Institution, Register of the Trotsky Collection, 1917–1980. Available URL: http://www.oac.cdlib.org:80/dynaweb/ead/hoover/reg_190/@Generic_BookView;cs=default; ts=default

⁶⁸ One example is P. Pecchiai, "Le carte de fondo 'Corsica' nell'Archivio vaticano." *Archivio storico di Corsica* 9/4 (1933), pp. 3–7.

⁶⁹ To view examples of what was considered the 'state of the art' or best practice in the mid-1970's, see the Society of American Archivists, Committee on Finding Aids, *Inventories and Registers: A Handbook of Techniques and Examples: A Report of the Committee on Finding Aids* (Chicago: Society of American Archivists, 1976).

inclusion of scope and contents notes and series descriptions demonstrates two trends. One trend is the rise of more global or collection-level synthesis of collection contents. The second trend is characterized by decreasing granularity of the contents descriptions. Instead of item-by-item lists, the contents are represented by an inventory of boxes or folders, with a genre designation and broad dates of materials in the folder. One could argue that the granularity and specificity has moved from the contents list to the contextual information (e.g., biography, donor information, restrictions) where one may find details of the provenance of the records. This could also be interpreted as giving precedence to intellectual over physical order.

The origins of the trend toward more contextual information and less granularity are unknown. I will posit several interconnected hypothesis. First, the trend reflects a closer adherence to provenance and with this the requirement of understanding that the evidential context of the records is essential for establishing authority of the source. This may be the result of the increased professionalization of the archival community in terms of identifying a theoretical base and more organized educational opportunities. Second, archivists' have had the realization that to manage a greater volume of records, item level description was no longer feasible and that contextual or provenancial control could also be used to provide access. Finally, the historical trend of examining the "underclass" or those not often individually documented in records may have also played a role in more collection-level rather than individual descriptions and more functional and provenancial representations of records. Still this switch from an internal locus of control, through the articulation of arrangement to an external locus of control, emphasizing an intellectual context has been a major shift in descriptive practice.⁷⁰

Components of finding aids

The dynamism of finding aids is also visible in their components. Users can see changes in understanding of the collections, new interpretations of the records, and new information on papers emerging out of the finding aids. A few examples from the Bentley Library include everything from a reevaluation of provenance to the addition of both physical details and information about the records to an existing finding aid. For instance, the Udvandrerarkivet, Aalborg, Denmark becomes the Aalborg universitets-center, Danske Udvandrerarkiv. In the Russell Barnes finding aid, a death date was added, the volume increased, and a second accession required the addition of a "+Mrs". to the donors' area. These later accessions are literally penned or written in within the existing contents listing of the finding aid and appear to be "interleaved" with the earlier like materials. The William

⁷⁰ Duff and Harris, "Stories and Names", p. 267.

Lawrence Clements papers contain penciled in notes that there are "Photographs in Box 3" and at the end of the collection an additional pointer leads to further papers of Clements in the Clements Library. The Paul Lincoln Adams collection originally noted that the collection was restricted. This has been crossed out and a note "Restrictions lifted on 11-26-90" is penned below. In one case, a space for the final date of the papers to be donated has purposefully been left blank for the John D. Stevens papers. Thus, the archivist anticipates changes and almost expects to amend the finding aid. While these examples may seem inelegant in our age of word processing and obsessive formatting, enabling the researcher to view these changes is important. Developing a system of version control for finding aids would help archivists and researchers visualize the growing understanding of their collections and to see the convergences among and within collections. As we move more aggressively into the digital domain, examining identifying means of making this evolution transparent is important. Otherwise, these notes will be simply overwritten when changes are made and the evolution of the records and their surrogates will be obliterated.

Consequences of finding aids

As noted above, finding aids are the basis for second-order representations of archival collections: MARC records and HTML and SGML (EAD) encoded finding aids. The development of EAD and its relationship to finding aids is the most critical event in the evolution of finding aids to date. There are three related aspects of this convergence between the technology of the finding aid and technologies of networked information exchange that I find disturbing. First, I fear that the evolution of finding aids will slow as the costs of changing the networked archival information are weighed. Second, finding aids have now become technologically-bound [or perhaps technologically unleashed?], but their form relies on an older and some would argue obsolete analog document genre. This inhibits creative use of networked information and the emergence of new digital representational forms for the representation of primary sources. In the second case it is not only evolution that is impeded, but so is innovations in access and in the structuring of archival work. If the encoding process is seen as an add-on at the end of the descriptive process it will not lead to reenvisioning archival representation in light of new technologies. Third, the implementation of initiatives such as EAD and MARC entails the adoption of standards and best practices. While standards can promote increased consistency and create platforms for increased information exchange and easier retrieval, there are downsides to these initiatives. Formalized standards are very difficult to change and as these standards become ingrained in the education of new generations of archivists, it will become increasingly difficult for archivists to envision new ways of practice.

The information that gets stored is at best what can be stored using the currently available technology: the encyclopedia came to mirror the affordances of its technological base. In this process, people naturalize the historically contingent structuring of information; they often begin to see it as inevitable.⁷¹

Finding aids also represent the convergence of collections management and access systems. The increasing number of components that support managerial functions in the finding aid over time indicates that on some level, archivists are thinking about collections management when creating finding aids. The breaking out of an "administrative information" section in EAD encoded finding aids supports this claim. Archival access tools have always won out over collections management tools and as a result, archivists have tried to recover managerial functions within these access tools. The fit has not been good and the structures created for access are not always hospitable to administrative functions. But, until a technology that represents collections management information is created, descriptive representational systems will continue to serve these two (sometimes contradictory) purposes.

Conclusions

The structuring of representational practices by creators, archivists, and systems enables or inhibits the meanings of representations as they cross boundaries of space (creator to archives), time, and use. In terms of creators, representational artifacts contain a substantial amount of information concerning the institutional, professional, and cultural structures in which they were created. When taken out of their original milieu, however, context is lost. Transferring or translating context into the archival realm is also problematic because archivists embed records into additional macrostructures (perhaps more precisely identified as the information architectures) of overarching classification schemes as well as into the microstructures of card catalogs and finding aids. In turn, the maintenance and creation of these structures forms the basis of on-going routines, interactions, behaviors, and knowledge that comprise of archival organizational memory and practice. The archival representations, then, demonstrate not only the evolving physical collections and intellectual understandings of collections, but also changing perspectives on collection arrangement, description, and management. Each successive representation and representational system builds on its predecessors, recovering what was judged valuable in a given temporal and cultural context, incorporating or discarding what was deemed essential

⁷¹ Bowker and Star, Sorting Things Out, pp. 107–108.

or not, respectively. More recent representational systems have been built around digital technologies, such as MARC and EAD. These have hastened the process of stabilizing the forms and standardizing the data elements in archival access tools. The great benefit of these technologies has been the exchange of archival information among other archives as well as researchers. Yet, the full costs and benefits of the structural affects of these evolutionary developments are not yet known.

Archival representation processes are neither objective nor transparent. As such, archivists need to be more conscious of the activities that structure the creation of representations, their social construction, as well as their appropriate uses. Archival representations speak not only about the collections for which they act as surrogates, but also about archival practice and archivists. The Egyptian invocation at the beginning of this article, that one archivist deemed appropriate to include in a finding aid may have been as much a reflection on the archival content being described as on a particular representation being constructed. Because of their ubiquity, it is these representations that may be the most enduring evidence of the archivist and by these "writings cause him to be remembered in the mouth of the reciter".