

Medium Rare: Exploring Archives and Their Conversion from Original to Digital Part Two— The Holistic Knowledge Arsenal of Paper-based Archives

by

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Abstract

This paper is the second installment in a two-part series on the physicality of archival material in the context of the digital age. The first part reviewed key lessons in the history of new technologies that have affected archival practice. Part two will explore a holistic understanding of paper-based knowledge transmission in the context of the digital access movement. The intent is to provide a more expansive context to the shift from a physically, place-based activity to one of ubiquitous access to secondary materials. The investigation emphasizes two notions: *archives as thing* and *archives as experience*. Issues of authenticity, evidence, and sensory engagement are seen as potential knowledge elements of original material. Furthermore, physical archives are considered in their environmental context, through physical processes in the embodied act of using, and through their meaning to the user. The purpose of this article is to highlight the tacit, assumed and taken-for-granted aspects of using original archival material to better understand the conversion from physical to digital.

The Holistic Knowledge Arsenal Of Archives

The quest for knowledge rather than mere information is the crux of the study of archives...All the key words applied to archival records...imply a sense of understanding, of “knowledge,” rather than the merely efficient retrieval of names, dates, subjects, or whatever, all devoid of context, that is “information”...Quite simply, archivists must transcend mere information, and mere information management, if they wish to search for, and lead others to seek, “knowledge” and meaning among the records in their care (Cook, 1984-5, p. 49).

This quote from Terry Cook profoundly and succinctly sums up a very important issue in the archive and manuscript profession. It forces us to ask the question: Are we interested in the “information” or the “knowledge” associated with archival material? Although it may seem inconsequential to some, it is an important distinction to make, for many reasons. One of these reasons has to do with successful retrieval, access and preservation of original material by users of the world’s archives and manuscript collections. It also relates to what we define as “knowledge” in that context.

Cook points out that “Knowledge...comes from the free mind foraging in the rich pastures of the everywhere-past, finding order and meaning in the whole human experience,” (Boorstin, cited in Cook, 1984-5, p. 48). Knowledge is defined as the “sum of what is known” (Oxford Dictionary, 2001) and *knowing* is achieved through multiple forms of communication, including affective and sensory modes. To aid in this discussion, knowledge can be roughly divided into two forms: explicit and implicit. Explicit communication is more direct, generally referring to things we say

or write. Implicit communication is typically understood as tacit knowledge that cannot be explicitly represented (Linde, 2001). Archives, like museum objects, are material expressions of human communication (Foote, 1988) and potentially contain both explicit and implicit forms of knowledge. Traditionally, archivists have been concerned with the “information” found in collections where the focus has fallen more heavily on explicit knowledge. But to what extent do archivists, particularly those with active digitization programs, consider implicit forms of knowledge in the realm of archival research?

In the midst of this great conversion process from the physical to the digital in paper-based archives, it is important to understand what happens—from a holistic perspective—when physical paper-based media are converted to a digital form. An understanding of the relationship between humans and physical objects is at the heart of this inquiry. Paper-based knowledge always has a physical form—a three-dimensional, textural quality—and this aspect of what occurs in the process of using the material must be considered. Archives in their original form are physical representations of knowledge and are endowed with many layers of physical elements, from the paper, the ink, handwriting versus type, stains, doodles, binding style, and so on. They are also unique in that their order and relationship within the sets of other papers and files have meaning as does the environment in which they are used.

The human-object relationship is rich as well as complex and involves issues of value, meaning, experience and process. The act of researching original archives may result in two unique elements that may not be available with a digital archive. The first is the physical nature of the material, available only with the original documents. The second involves the experience of doing archival research: patterns formed during this act, the interaction of the user with the actual physical materials and environment in which archives are housed, and the meaning that may be produced for the user. Based on the lessons learned from using codex books, preservation of newspapers, reader response research, museum studies, and digital library user studies, it appears that there are two broad areas, both of an implicit nature, that make using original archival material different from using digital material. First, the *physicality* of the material—its actual material properties, authenticity, evidence, and tacit content—and second, the *experience* of using that material—its place in relationship with other material, personal meaning during the research process. Both of these areas are explored below, in a discussion of archives as thing and archives as experience.

Archives As Things

Archives: More than just Information?

As mentioned in part one of this series, the current trend in archives management involves massive digitization and posting of this material for public online access. While this accomplishes profound improvements in access to unpublished and unique materials, the question looms whether doing so will cause an unintended loss of important aspects of the material. Hugh Taylor, who was known as a sort of philosopher/archivist (Eastwood, 2005), brought many archival issues to the forefront in his 1982-83 article, “The Collective Memory: Archives and Libraries as Heritage.” Of importance was his recognition of archival material as:

...precious artifacts in their own right, not individually in an antiquarian sense but *sui generis* as a powerful medium of communication to the reader, providing a sense of immediacy with the past and possessing their own aesthetic and emotive qualities (p. 123).

Taylor pointed out, even at a time before the modern digitization movement, that archivists must decide what should be retained as original rather than as reformatted copies. He felt it was important to allow the public the opportunity to have an “authentic experience” with documents. Does the creation of greater access to archival material through digitization allow for an “authentic experience” by the user? Does access trump all?

According to Blair (1990), the central problem for information retrieval in archives is how translation of materials by archivists affects representations in information retrieval systems. The problem, he says, is one of language and meaning in context, seen through a late Wittgensteinian lens:

...meaning in language can only be understood by looking at the activities in which it is used, the use of the document representations must be similarly grounded in the activities in which Information Retrieval is embedded and serves. Consequently, to understand Information Retrieval, we must work to understand these activities better, and we must also relate document representations to these underlying activities by expanding the usage of contextual information to represent documents (p. viii).

Blair (1990) defines two types of access when retrieving information: physical and logical. Physical access “is concerned with the techniques of retrieving and presenting information,” whereas logical access “is concerned with determining which information (or kind of information) is relevant to a particular question” (Blair, 1990, p. 70). Blair claims that often, physical access is dealt with before logical access but should be the other way around.

Although to some degree, Blair’s “physical” access is important to this discussion, it is on logical access that the emphasis is placed. What information do archivists consider important, especially with reference to the digitization movement? Are certain kinds of “information” emphasized over others? Archivists and archival theorists have been interested in these questions for many years. Cook (2000) claims that along with more practical changes in the purpose of archives, postmodern trends are the driving force behind these kinds of questions. There has been a shift in viewing archives as passive documents that hold the “truth” to archives as active, processual, agents of human activity (Cook, 2000). He says that “the principal justification for archives to most users...rests on archives being able to offer citizens a sense of identity, locality, history, culture, and personal and collective memory” and further, that “archives are a sacred public trust of preserving society’s memories that must be widely shared” (Cook, 2000, p.8). Greene (2002) points out that the “archival mission is about meaning...that transcends the immediate purpose for which the material was created and suggests the appropriateness of making it accessible for the long term” (p. 50). Taylor felt that part of his duty as an archivist was “to explore the mysterious power which the media of record exerted on archivists and users alike...” (Cook & Dodds, 2003, p. 245).

Menne-Haritz (2001) believes we are now in a type of “access paradigm,” where archives are not just storage facilities, but providers of *access to the past* so that everybody can investigate it for his own questions” (p. 59, my emphasis). To her, archives are not repositories of memory, but the service that provides the “raw material for memory” that allows us to understand present problems through the construction of memory (2001, p.59). Further, she states:

Archives cannot be read. They have to be understood. Archives provide information potentials, not the information itself. And they enable the investigation. This is the main target of the access paradigm (p. 61).

Access here means that archivists accept the user as the interpreter of archival material. The archivist’s job is to provide a “full range of instruments” that will allow them to access what they need from the material, information, knowledge, experience and beyond.

What these authors agree upon is that archives are more than just “information,” more than just content. They are describing material manifestations of human communication with the element of user experience at the forefront. The simple fact that people experience the material is an underlying theme; they experience the physicality of it and the process of going through it. While agreed-upon principles of the archival profession—respect du fonds, provenance, original order—are all about physical aspects of collections, the actual three-dimensional, physical material and our relationship with it often go ignored. If we are concerned about “knowledge” rather than “just information,” we should look at (and include) all aspects of archival material, all aspects of knowledge—and this includes their very materiality.

Over twenty years ago, Taylor (1982-83) predicted that archivists would need to go beyond managing collections and “must become experts in how clients learn, clarify, plan, and decide” (p.125-6). As Archivist of the United States, James B. Rhoades (1969) said, with the computer comes the liberation of the individual researcher and “by giving each researcher the opportunity to ask for information in the form and to the extent that suits his personal needs best. That is freedom” (p. 213). To attain this freedom, then, archivists need to provide access to all forms of “knowledge” available from original archives, including those of an implicit nature, such as physicality and materiality.

The Physicality of Archival Material: Evidence, Authenticity, and Sensory Engagement

Archivists love to talk about value, and rightly so. Archival materials are inextricably linked to their value, need and purpose in society. There are many meanings of the word *value* in the English language. For instance, the Merriam-Webster online dictionary (2007) has eight different meanings. Only two, however, are important to this discussion. First, value can mean relative worth, utility, or importance, as in “he had nothing of value to say” (Merriam-Webster, 2007). Second, value can be something (as a principle or quality) intrinsically desirable, as in “he sought material values rather than human values” (Merriam-Webster, 2007). The Society of American Archivists (SAA) *Glossary of Archival and Records Terminology* (2005) contains 25 types of value (see Table1).

Table 1. SAA's Glossary Headings containing *value*

administrative value	indefinite value
archival value	informational value
artifactual value	intrinsic value
associational value	legal value
continuing value	monetary value
data value	operational value
data value standard	permanent value
enduring value	primary value
ephemeral value	reference value
evidential value	research value
fair market value	secondary value
fiscal value	value
historical value	

Four of the SAA terms are of interest here: evidential, intrinsic, historical, and artifactual value. According to the SAA (2007), the definitions are as follows:

Evidential value—1) The quality of records that provides information about the origins, functions, and activities of their creator; 2) (Law) The importance or usefulness of something to prove or disprove a fact.

Intrinsic value—The usefulness or significance of an item derived from its physical or associational qualities, inherent in its original form and generally independent of its content, that are integral to its material nature and would be lost in reproduction.

Historical value—1) The usefulness or significance of records for understanding the past; 2) The importance or usefulness of records that justifies their continued preservation because of the enduring administrative, legal, fiscal, or evidential information they contain; archival value.

Artifactual value—The usefulness or significance of an object based on its physical or aesthetic characteristics, rather than its intellectual content.

From these definitions, we see that original archives and manuscripts provide more than information (content) about a subject such as clues, insights, evidence about origins, evidence about the creator, history, and aesthetics. These elements often play a role in human communication, telling stories about the producer's processes or temporal clues from the time a piece is produced.

Perhaps a better way to discuss these important physical aspects (all four of the values above) of archival material is to use the term "external formal features¹." In 1997, Menne-Haritz and Brubach produced a report based on a German project at the Marburn Archive School. The aim of the project was to define the qualities and characteristics of archives' intrinsic value in an

¹ The term is a bit confusing because both "external" and "formal" seem to be the opposite of what we are referring to in this context. However, this is what Menne-Haritz and Brubach use and therefore it is used here.

environment that had become much more digitally oriented. What they call “external formal features” or “testimony” of archival (and library) material describes ways in which this material expresses messages by non-textual means. Menne-Haritz & Brubach (1997) reviewed the literature on intrinsic and evidential value of archives, pointing out that:

As soon as an oral, written or electronic message formulates contents in order to convey them, it obtains through its expression, in a specific medium, additional features that are inherent to the medium used. The intention of the message is thus supplemented by the necessarily linked motive in the selection of the medium used and the form of the communication (p. 6).

External formal features often play an important role in human communication. Archives and manuscripts stabilize the contents of these activities at a certain place and time. In this fixed form, the content, or information, is bound to a material object. In addition, the physical object-like nature of the original document provide additional forms of information produced by the creator such as ticks and underlining, cross-outs, different color inks, over-writing, and marginal notes and doodles. These things, Menne-Haritz and Brubach claim, help externalize memory, allowing something to be “permanently” embedded in the material world and provide the ability for one to refer to them again and again, without change. External formal features have a visual, and sometimes tactile, quality bringing the importance of other senses to the forefront. All together, these features are a type of physical context that aid in the interpretation of the contents and, as such, are important to the interpretation of that material:

The definition of intrinsic value is based in the first place on the presence of such features whose appearance offers clues as to particular intentions or circumstances concerning their origin or transmission. This evidential value conveys information about an item to the user or reader. Both the content and the formal features of the written form offer new insights (Menne-Haritz & Brubach, 1997, p. 7).

External formal features, therefore, should be considered equally important as the content during the conversion process. The authors fear the loss of this testimony through the “unconscious destruction” during conversion and call for explicit attention and previous analysis of their intrinsic value (Menne-Haritz & Brubach, 1997).

From this discussion, I have delineated three subsets related to physicality in archives: evidence, authenticity, and sensory engagement associated with materiality of the piece(s). The following is an examination of each unique component of the physicality of archival material.

Evidence. The concepts of *evidence* and *evidentiarieness* have been a part of archival practice for years but only recently have been a singled out as a focused topic (Brothman, 2002; Furner, 2004). As a result, there is a large and complex literature about the subject but a full review of the debate is not necessary here. This paper will focus on the archival understanding of evidence as another source of uniqueness for original material.

Again, turning to the SAA’s Glossary, *evidence* is defined as: “1) Something that is used to support an understanding or argument; 2) A record, an object, testimony, or other material that is

used to prove or disprove a fact” (SAA, 2007). Equally as important is *evidential value*, as mentioned above: “1) The quality of records that provides information about the origins, functions, and activities of their creator; 2) The importance or usefulness of something to prove or disprove a fact” (SAA, 2007). In both definitions, there is clearly a forensic element to archives as evidence. They are meant to support or provide *proof* of some event, idea, content, or form (Furner, 2004). An excellent example of this concept came up fairly recently in the news. The National Archives “unveiled” a handwritten note from President Abraham Lincoln urging his generals to fiercely pursue Lee’s army after the battle at Gettysburg, revealing Lincoln’s desperation to put an end to the Civil War (Yost, 2007). His general did not achieve this goal and the war went on for two more years. Apparently, since the writing of this note, scholars have known that it had been written, but it *only* existed in secondary form, until this recent discovery. From the Washington Post (Yost, 2007):

An archives Civil War specialist discovered the July 7, 1863, note three weeks ago in a batch of military papers stored among the billions of pages of historical documents at the mammoth building on Pennsylvania Avenue... The text of Lincoln's note has been publicly known because the general to whom Lincoln addressed it telegraphed the contents verbatim to the front lines at Gettysburg (Yost, 2007).

But, now, with the discovery of the “real” note in Lincoln’s own handwriting, scholars had *evidence* that the story was “true”:

The importance of the newly discovered document is that it is in Lincoln's own handwriting, pinning down in time what he was thinking... The accuracy of the long-known telegram communicating Lincoln's thoughts was not in doubt. At the same time, there are always risks relying on documents by a third party for what Lincoln was saying or writing... (Yost, 2007).

The idea of the “real” and the original is again at the forefront of importance. Evidence is closely tied with reliability, trustworthiness, and authenticity. The notions of fixity and stability are also at the heart of archives as evidence.

Schellenberg, one of the fathers of American archival science—and the one who put the term *evidentiary value* into the vocabulary of archivists—separated out kinds of evidence in archival studies. He differentiated evidence-as-trace (physical thing) from evidence-as-testimony (idea, documentary) (Furner, 2004; Schellenberg, 1956). In other words, he did not necessarily link the content with the medium. But the lessons from newspapers and books presented in part one demonstrate that the situation is not so simple—the two are inextricably linked. As the Lincoln example shows, the information was not totally “trusted” until the evidence to prove it was found.

To the field of Diplomats, evidence is a central concept. Diplomats was originally the study of mediaeval "diplomata" or legal instruments, but now includes the study of all archival documentsⁱ, and for some, includes all documents of any kind. Evidence here is the archival material and its medium, form, and content (Duranti, 1998). More than that, evidence in archival documents can imply a fact, the will to manifest that fact, or a purpose, consequences or process surrounding that fact. Duranti’s (1998) definition of Diplomats explains it best, stating,

“...diplomatics is the discipline which studies the genesis, forms, and transmission of documents, and their relationship with the facts represented in them and with their creator, in order to identify, evaluate, and communicate their true nature” (p. 45). In other words, the entire “genetic process” surrounding the creation of a document constitutes evidence (Duranti, 1998).

The concept of evidence also plays a pivotal role in Michael Buckland’s notion of “information-as-thing.” In trying to sort out the various meanings of the term “information,” Buckland explores and defines the physical manifestations of information as ‘information-as-thing. In this scenario, Buckland (1991) believes information-as-thing is tantamount to evidence, with evidence denoting something related to understanding, something that could potentially alter one’s knowledge or beliefs. He states that evidence implies passiveness, that the thing is acted upon by humans and remains only potentially informative until then. In any case, evidence and information-as-thing are both physical manifestations of things that can potentially inform, and this leads us to conclude that the two are one and the same. At the same time, Buckland argues that information-as-thing can be seen as a document. As the documentalist Suzanne Briet (Briet, 1951) defined it, documents are “all concrete or symbolic indexical signs, preserved or recorded, towards the ends of representing, of reconstituting, or of proving a physical or intellectual phenomenon” (p.10). Briet gave four conditions for a document: 1) materiality: physical objects and physical signs only; 2) intentionality: it is intended that the object be treated as evidence; 3) the objects have to be processed: they have to be made into documents; and, 4) phenomenological position: the object is perceived to be a document (Buckland, 1998; 217). Important features of evidence for Briet and Buckland include fixity, consensus, physicality, and the notion that the document must be evidence OF something.

Authenticity. Authenticity is another term that is as interesting as it is complicated. The concept has been framed in a variety of ways, from proof of originality to an existential, experience to a notion of identity (Harvey, 2004). Current conceptions of the term may be different than those from even a generation ago, with our society’s focus on the experience economy and our striving for the ‘real’ (Gilmore & Pine, 2007; Goulding, 1998; Kelner, 2001; & Harvey, 2004;). The term is used often and loosely in dialogues about archives, objects, sites, tourism, as well as in the realm of virtual versus the real, but its meaning is different depending on the topic, and its definition is hotly debated (Harvey, 2004; Smith 2004). Simply stated, authenticity refers to the verifiable claim that an object is what it claims to be (Harvey, 2004; Smith, 2004). The SAA defines authenticity as, “the quality of being genuine, not a counterfeit, and free from tampering, and is typically inferred from internal and external evidence, including its physical characteristics, structure, content, and context”; and authentic is, “perceived of as genuine, rather than as counterfeit or specious; bona fide” (SAA, 2007). The idea of authenticity, as in an authentic experience, will not be explored here (although it is of interest); our focus will be on the authentic object.

Authenticity is a central concept for Diplomatics. According to this field, there are three kinds of authenticity: diplomatic, legal, and historical. Diplomatically authentic documents are those that match in materials, writing, and content the time in which they were produced and signed with the name(s) of the person(s) who created them. Legally authentic documents are those that “bear witness on their own because of the intervention, during or after their creation, of a representative of a public authority guaranteeing their genuineness” (Duranti, 1998, p. 45).

Historical authenticity includes documents that attest to events that actually took place or to information that is true (Duranti, 1998). In archival research, most issues about authenticity, then, are going to be about diplomatic and historical authenticity. Researchers may ask: Are these documents what they claim to be? Are they *really* from the time, place or person that is given on/in this document? Does this document (if it is diplomatically authentic) really support some historical event or concept? In other words, are they “real”?

In all, the central focus of these definitions is the “real” thing. The authentic object is the item that somehow truly had the contact with the event, person, or time. *Real* is not a reproduction, facsimile, or copy of some document². The document itself could be a historical copy and may have historical authenticity, but to have diplomatic authenticity, the item must be the real thing.

In reference to digital materials, an *authentic document*, or “real thing” is one that is faithful to the original (CLIR, 2000). Authenticity refers to a record’s reliability over time and is linked to the record’s status, mode, and form of transmission and the manner of its preservation and custody (SAA, 2007). In the digital library, authenticity is as important, but it has a different set of meanings, such as integrity, reliability, trustworthiness, credibility, identification (CLIR, 2000). Authenticity in this context, then, is the antithesis to the one for original archives where a copy *cannot* be the original.

There is however, yet another meaning of authenticity, a more subjective, user-oriented usage. Smith (2004) has provided this meaning, which is equally as valid as the structural notions defined by SAA and the field of Diplomatics, but less frequently discussed. This kind of authenticity is rooted in subjective experience and, through physicality, can help create a meaningful and affective response in the user (Smith, 2004). She emphasizes authenticity as a subjective experience and explores the meaning of this experience to users of traditional special collections as well as digital representations of material. Using Benjamin’s concept of “aura,” Smith (2004) explains the “uncanny ability” of an object to “carry, through its very materiality, intangible effects,” (p.173); its ability to hold more meaning than what the creator intended. In other words, authenticity can elicit experiential or affective responses from users.

The question remains, which definition is correct? Or more specifically, which definition is the one *users* mean when discussing authenticity of material? That question cannot be answered here but the question itself is interesting and brings up issues about what exactly is being transferred when it comes to authenticity in archival use. There is evidence from recent research that the question of user-perceived authenticity is far more complex than instrumental practices address (e.g. Evans & Po, 2007; Joy & Sherry, 2003; Mangen, 2008; Yakel, 2002). Most certainly, many of those interviewed in the digital library studies (see part one) were referring to the physical, original, “real” thing and sometimes to the affective authenticity as described by Smith (2004). In addition, many of the sensory elements (discussed below) contribute to the user’s notion of authentic. From this we can conclude that authenticity is at risk in the translation from original to digital, we just do not know how much and of what kind.

² The European definition of “archival” is specific, it refers to documents “created or received by a physical or juridical person in the course of a practical activity” (Duranti, 1998, p. 42).

Sensory Engagement.

We are surrounded by objects. Our lives are spent identifying, classifying, using, and judging objects...they are things precious, beautiful, boring, frightening, lovable. We are so used to objects...but objects have their existence largely unknown to the senses (Gregory, 1970, p. 11).

Gregory is partially correct. We do indeed take objects for granted in our world. However, I do not think they are “largely unknown” to our senses, as studies revealed in part one illustrate. Recall that paper-based archives are physical manifestations of human communication (Foote, 1988). As discussed earlier—in reference to books, newspapers, and digital libraries—the content is linked to the container and there are serious residual effects of separating them. Birkerts (1994) talked of the “sensory engagement” one may experience with a physical book including touching, feeling, smelling, and seeing all the elements of the total book when reading. Intermixed with these physical sensations are emotional reactions connected and inseparable from the body (and mind) that feels them. In their *Statement on the Significance of Primary Records*, the Modern Language Association (MLA) (1995) devotes one section to the sensory elements important to preserving physical originals, that “the shape, feel, designs, and illustrations of books have affected, and continue to affect, readers' responses,” and that “access to the physical forms in which texts from the past have appeared is a fundamental part of informed reading and effective classroom teaching” (MLA, 1995). In both studies presented on digital libraries in part one, respondents mentioned the importance of “feeling” and “handling” the real document (Cherry and Duff, 2002; Duff and Cherry, 2000) and that “tactile experience” was important and enjoyable (Liu, 2008; Spencer, 2006).

Clearly, what is associated with the “real” thing is the human need to use our senses, and ensuing emotions, to investigate it. From the fields of museum studies and material culture studies, views on our sensory exploration of objects can be informative to this inquiry (e.g. Chatterjee, 2008; Howes, 2005). Hooper-Greenhill (2000) believes there has been a transformation of the sensory order that came with the switch from reliance on hearing (oral culture) to reliance on sight (print culture). In this process, she says, “[e]motions and the more intimate sensations of touch and smell were eradicated as far as possible” as a result of the contemporary scientific values at that time (p.112). Tuan (1980) believes physical things become important to us in the urge to reify experience. He says,

Experience is fleeting, elusive, and chaotic. We use words, gestures, and artifacts to give it a semblance of duration and coherence. Experience is captured in a thing; an inner sense of harmony might appear as a thing in a world of tangible things (1980, p. 466).

Marcia Bates, in her 2002 talk, *Conceptions of Information as Evidence*, argues for the validity of senses as mechanisms for acquiring information. Detection of patterns, through our senses, is something we as humans have done for millennia, she points out. It is built-in to use our senses to access all forms of information. And while our sensory perceptions are variable amongst individuals, they are nevertheless important to our understanding of human experience and should be counted as elements to consider in the information process.

Archives As Experience

Context, Process and Meaning in Archival Research

Overall, there is a dearth of work on human *experience* in Library and Information Science User Studies (Budd, 1995; Bruce, 1999; Limberg, 2000; Toms, Dufour & Hesemeier, 2004), as well as in Archival Studies (Smith, 2004). The word experience used here is used in the Deweyian (1937) sense of *an experience* or that which refers to the undivided continuous transaction between human beings and their environment. Experience is the organic intertwining of living human beings and their natural and artificial environment. It is not static, involves both the past and the future, and is always historically situated. It includes not only thought, but also feeling, doing, perceiving, suffering and other aspects of living in the world; in other words, it is holistic.

By taking into account a person's experience with an object (in this case, archival materials), we add another layer to what it may be like for a user to use archives. Each person brings their own arsenal of background, knowledge, mood, etc. Each collection brings with it its own unique organization and history. And each archival repository imbues a certain sense of environment to the transaction of searching within its confines.

There are three elements of experience that relate to the uniqueness of original archival material: the importance of context and relationship of material, the process (the act) of researching original collections, and meaning that may be invoked by interaction with the material. Each of these three areas is discussed below.

The Importance of Context. Core principles of archival theory relate to context: 1) the order in which items are received and kept, 2) the acknowledgement of their original creator's decisions about placement and importance in their collection, 3) the overall treatment of a collection as a whole, rather than as separate parts (Miller, 1990). There is no argument here about the importance of these methods and philosophies surrounding context. And issues of how to retain these contexts in the transfer to a digital environment seem to be of high importance to the archival community (see for example, Gilliland-Swetland, 2000) as products continue to improve with each passing year. This kind of context has been, and hopefully, will remain, of utmost importance in the transfer from original to the digital. The only concern here is whether it is indeed possible to represent this contextual nature of archives and whether or not it will affect the researcher's results.

Blair (2003) reports that Wittgenstein said that meaning is, at least in part, an external notion. The ideas and thoughts in our minds are not sufficient alone to determine what is meant or what something means (Blair, 2003). An essential determinant of meaning is context. Regarding informational material, Blair (2003) claims that:

... paper-based information can remain close to the activities that produce or use it, and these activities can provide an interpretive context for that information. But when that information is computerized, the very act of computerization may have the effect of removing the information from the activity context that provides much of its meaning and interpretation (p.37).

Blair (2003) further suggests that since information retrieval systems cannot physically be near these activities, that they should bring some of this context into the descriptions of the contents themselves.

These contextual activities concern two important concepts: *process* (going through things, you find stuff) and *pattern* (see it in its holistic context, you gain more than by the isolated piece); a different person may detect a different pattern than previous viewers. Context is intimately bound up with process and the act of *doing* archival research. In a traditional, physical archival repository, one often comes in with a question in mind and in the process of looking through collections that were previously unknown to the individual, discoveries are made that were not anticipated. This passive discovery of information may be what is referred to in information behavior studies as information encountering (Erdelez, 1996), serendipitous information retrieval (Toms, 2000), or accidental discovery of information (Williamson, 1998). Although each of the above have differences, they all point out the importance of finding information one had not originally intended to find. Ultimately, the question remains: how does the format, structure or physicality in the act of information retrieval affect user results?

The Act of Researching Archival Collections. What role does the embodied act of using physical archives in a physical facility play in the archival search process? Emerging research on knowing through embodiment with physical things (e.g. Chatterjee, 2008; Dudley, 2010; Edwards, Gosden & Phillips, 2006; Wood and Latham, in press) shows that we can no longer ignore that feeling and sensing are important components of knowing. From neurobiology, Damasio (1999) suggests a theory of consciousness that the feeling body is central to how we know what we know; shifting the Cartesian dualism to “I feel, therefore I know” (Guerts, 2005, p.164). Studies of embodiment are converging with those of materiality, the notion that emphasizes the physical, material characteristics of objects and focuses on the ways in which those characteristics are sensorially experienced by human beings (Dudley, 2010).

This research calls into question the difference between live versus digital researching of archives. If the researcher no longer goes to a physical repository to sift through physical masses of material, can they achieve the same result? Does material viewed in its holistic context provide more satisfaction than by the isolated piece retrieved digitally? Would a different person, using her own unique research techniques and having her own background of knowledge, find a different pattern, a different set of material, than previous viewers? How is the pattern pre-set by the organization of the retrieval system? Is there something additionally informative in the experience of visiting a building or a room, meant solely for the keeping of archives? And finally, how do we measure the experience of interacting with the research or reference archivist (in a facility set up for this process) who knows so many useful bits of information that may ultimately provide connections for the researcher? Before eliminating the “real thing” and the whole environment of a physical archival repository in order to create greater access, these questions need to be answered.

Meaning and Connection in the Archival Enterprise. Another important question is: Can original archival material be a source of meaning to the user? Using an object-oriented perspective may help us answer this question. Hooper-Greenhill (2000), while specifically addressing the meaning of museum objects, says that they can play many different roles, and

thereby have many different meanings to a person. Notions of the sacred, personal or social identities, feelings of nostalgia, and as symbols for issues in society are some of the many meanings an object can take on. As she states:

Objects enable reflection, and speculation. Philosophical reflection is mobilized by the artifact, and through the observation...specific histories are recalled. Objects can bring together and give material form to elusive intangible abstract ideas such as 'home,' 'nation,' 'sacrifice.' In some ways, it is only through objects that these abstract ideas can be thought at all; without the concrete material thing, the idea would remain at an abstract individual level and it would be much more difficult to share it (2000, p.110).

In addition to the viewer's "baggage," Hooper-Greenhill emphasizes the importance of materiality of the object, much as Smith (2004) did (above) with special collections. Objects are encountered as much by the body as by the mind, and she thinks, it is not possible to split the relationship between the senses and cognitive processes. In fact, both are required to interpret something:

The strategies of interpretation deployed by active agents on encountering objects involve both the senses and the body (in apprehending new information from the environment), and the mind (in processing this information through relating it to existing knowledge). These interactive and dialogic processes make up acts of interpretation. It is through embodied interpretation that objects become meaningful (Hooper-Greenhill, 2000, p. 116).

To Hooper-Greenhill, the museum object—and archival material as well, since it is material communication—elicits meaning through interpretation, involving both the mind of the viewer and the object itself. Each new user of archival material brings varied experiences and knowledge with them to their encounter. It is possible, then, that each individual, seeing the contextual representation of a set of archival material, may see a different pattern or new information that no one else has seen before.

Documents such as the Declaration of Independence or a map from the last walk on the moon's surface are of national, or even international, significance. These are obvious representatives of archives becoming symbolic and therefore potentially meaningful on a national level. But materials found in smaller, more local levels or amongst common people doing common activities can also elicit meaning. Regional, county, or city archival repositories have their own lists of important events and people; their own shared sets of meaningful things. Therefore, archival material of both national and local importance can be of equal value with regards to meaning. O'Toole (1993) also considers these "lesser records" to be potentially symbolic, or meaningful on a level beyond the instrumental. He says,

Not every archival record is the Domesday Book or the Declaration of Independence, but these extreme examples highlight nonetheless the way in which other, "lesser" records may be revered as objects. In virtually any institutional context, some documents may take on the character of a relic more for what they are than for the information they contain" (p. 253).

Many contemporary archivists would agree³ For example, Dearstyne (1993) believes that archival records are “extensions of the human memory, purposefully created to record information, document transactions, communicate thoughts, substantiate claims, advance explanations, offer justifications, and provide lasting evidence of events” (p. 1). Further, he claims that archives are produced and kept because of “a fundamental human need to create and store information, to retrieve and transmit it, and to establish tangible connections with the past” (1993, p. 1). Greene, in defending the broader role of the archival tradition against a narrowing vision of the archival enterprise, says:

Ultimately, the archival mission is about meaning—perhaps a better short-hand term than “memory.” When we speak of memory, of corporate needs, etc., we are really talking about documentary material that has meaning—meaning that transcends the immediate purpose for which the material was created and suggests the appropriateness of making it accessible for the long term (Greene, 2002, p. 50).

In other words, archival material is more than information, more than materials. As Kenneth Foote describes them, they are material expression of human communication (Foote, 1988), or as Cunningham (2001) calls it, “documentary residue” (p. 167), actual material manifestations of human thought and activity. In that sense, archives are objects of material culture and subject to the same reactions, internal and external, as museum artifacts.

Cook (1984-5) believes that archivists should be finding “order and meaning in the records in their care” and that we should explore the “deeper dimensions” (p. 45) that lie behind the creation of archives. Included in these pursuits is to explore:

...the mystical, almost atavistic nature of the document itself as a talisman of truth, the symbol of authenticity, the document as a museum artifact and intrinsic relic or as disposable medium for the purveyance of information (Cook, 1984-5, p. 46).

Of course, one cannot forget that the unique nature of the archive and manuscript collection is in the relationships between items in the collection and not necessarily in isolated items. It is this multi-layered, integrated condition of archives, in addition to the potential symbolic nature of the material, and the physicality (i.e. original order and original materials) of the documents that provides for a potential meaningful experience for a person. Original archival material seems to be especially rich with potential for meaning-making since the process of discovery is always possible. New mixings, new knowledge, the physicality of the materials all create an environment ripe for having a meaningful experience.

The keeping of original archival material is a hefty responsibility not only because it may contain evidence of past behaviors or thoughts, but because it could contain the potential connection that makes it more than just a piece of paper or more than just files. In that sense, archives can be seen as sources of meaningful experience and in their rightful place as expressions of human communication and behavior (Foote, 1988, 1990).

³ Although there are certainly others who would firmly disagree. This issue, of whether archives are purely for proof of transactions or for a broader social purpose, is currently being debated. (Greene, 2002).

Conclusion

The main concern at the outset of this paper was for the potential loss of non-textual knowledge with digitization of paper-based archival material. The goal of this paper was to outline the more implicit forms of knowledge provided by original archival material in order to gain a better understanding of what is at risk. An overview of the external formal features of original archives; the value of experience in eliciting pattern and process; and the meaningful potential of “real” archival material was presented to highlight the significance of these original archival materials. In other words, there clearly are losses in the translation from original to digital.

To put it in perspective, a useful view of the archival universe can be seen using Dewey and Bentley’s (1949), mode of inquiry called the transactional view. A transaction is an ongoing process in which the elements or factors are aspects of a total situation, each conditioned by and conditioning the other. Dewey believed that when one piece is removed from the whole, it is no longer the same representation. In other words, all parts are required in order to understand something in a holistic way. With many archives, removing the physical or contextual components changes our understanding of the whole environment. One component of a transaction (in the Deweyian sense)⁴ cannot be left out to understand a scenario. If this is true, then “flat” representations, without context, that are found on the web are incomplete and may lead to imperfect conclusions. The meaning of a series of archives or even of a single document, need *all* components to tell the whole story. Connections may be made by “experiencing” the act of archival research or from touching the documents. Many of the actual physical qualities, as well as the context, process, and patterns of archival material will not be apparent in these digital environments unless a recognition of implicit—in addition to the explicit—forms of knowledge are made for this transition. In many cases, the authentic real material is needed to “retrieve” or gain access to a potential connection with archival material. Transmitting implicit forms of information, that is, non-textually related experiences, may or may not be adaptable to a digital environment. In her report on melding the traditional archival perspectives with the new digital environment in which archivists now find themselves, Gilliland-Swetland, said:

Preserving knowledge is more complex than preserving only media or content. It is about preserving the intellectual integrity of information objects, including capturing information about the various contexts within which information is created, organized, and used; organic relationships with other information objects; and characteristics that provide meaning and evidential value (Gilliland-Swetland, 2000, np).

Context and “organic relationships” are of primary and enduring value in her analysis. Dewey also considered the web of knowledge to be “organic” and to include all forms of knowledge acquisition, including those acquired through the senses and emotions.

The elements of this holistic picture are: 1) a recognition of all forms of knowledge, including implicit, 2) an understanding of what is valued by society regarding the keeping of archives, 3) an appreciation for the physical uniqueness of both the materials themselves and the processes involved in researching them, and 4) an acknowledgement of the role our senses and emotions

⁴ The term “transaction” is used very differently in today’s archival literature. It often refers to evidence of a particular statement/activity in archival material. Here it is used as Dewey and Bentley defined it, as an active, total situation that must include all factors in order to understand.

play in the usage of this material. Accepting these elements into our decision-making processes will hopefully protect and preserve important elements of original archival material that otherwise may get lost in the technological shuffle of our fast-moving and rapidly changing world.

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