

INTANGIBLE QUALITIES OF RARE BOOKS: TOWARD A DECISION-MAKING
FRAMEWORK FOR PRESERVATION MANAGEMENT IN
RARE BOOK COLLECTIONS, BASED UPON THE
CONCEPT OF THE BOOK AS OBJECT

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For rare book collections, a considerable challenge is involved in evaluating collection materials in terms of their inherent value, which includes the textual and intangible information the materials provide for the collection's users. Preservation management in rare book collections is a complex and costly process. As digitization and other technological advances in surrogate technology have provided new forms representation, new dilemmas in weighing the rare book's inherently valuable characteristics against the possibly lesser financial costs of surrogates have arisen.

No model has been in wide use to guide preservation management decisions. An initial iteration of such a model is developed, based on a Delphi-like iterative questioning of a group of experts in the field of rare books. The results are used to synthesize a preservation management framework for rare book collections, and a small-scale test of the framework has been completed through two independent analyses of five rare books in a functioning collection.

Utilizing a standardized template for making preservation decisions offers a variety of benefits. Preservation decisions may include prioritizing action upon the authentic objects, or developing and maintaining surrogates in lieu of retaining costly original collection materials. The framework constructed in this study provides a method for reducing the subjectivity of preservation decision-making and facilitating the development of a standard of practice for preservation management within rare book collections.

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CHAPTER 1

INTRODUCTION

A key issue in libraries and archives today is whether we need to preserve just the information in a document or the physical object itself. When is the object part of the information? In the rare book and museum worlds, every object is considered unique. For the bibliographer, the art historian, or the literary scholar, a reprint of an early printed book or a poster of a painting cannot substitute for the original. In these examples, form and substance are indistinguishable. (Cloonan, 2001, p. 236)

Information science is a field which is largely concerned with bringing together “people with questions” and documents which might potentially resolve those questions. In most cases, the data of the textual material within the document are distinct from the physically-present document. However, in a small but significant set of cases, the physical document and the textual data (i.e., the “form and substance”) are indistinguishable. In the case of a rare book, a representation of the document may be inadequate for maintaining both the form and substance of the original document, which suggests that at some point, form and substance become indistinguishable.

Buckland (1991, p. 65) describes texts and objects as two distinct groups: “texts, designed to be read, are likely to be to some degree self-explanatory. Objects are simply objects; a viewer’s understanding of what they are and what significance they have depends entirely on the beliefs and expertise brought by the viewer.” However, rare books possess characteristics of both text and the

physical object, and therefore the division between the text and object becomes much less distinct. The dilemma is further complicated by features such as marginalia and signatures. Gurian (1999, p. 170-171) suggests that because signed editions of books are considered more valuable than unsigned editions, “in such cases one could say that the signature . . . becomes the object.” This suggestion implies that saving the single page upon which the signature is written and discarding the remainder of the book would still be preserving the original object. However, because it may be argued that the remainder of the book beyond the printed content possesses inherent value, and therefore merits preservation, differentiating between form and substance in rare books may be a judgment call.

The staff of rare book collections maintain and care for a variety of fragile cultural documents. The term “rare” describes an item which is “of a kind, class, or description, seldom found, met with, or occurring; unusual, uncommon, exceptional,” and more specifically, a rare book is “a book which is in demand and made valuable by its actual or prospective rarity” (Oxford English Dictionary Online, 2005). No matter what can be done with technology today, holding a book that is several hundred years old, or has margin notes from a person of note, or was illustrated and illuminated by hand, is a unique experience. The notion of losing such materials because they were improperly cared for can be a sobering one. Because rare book collections possess unique materials, rare

book facilities require utilization of preservation techniques to retain the physical and textual integrity of rare objects. The objective of preservation is:

To ensure that information survives in a usable form for as long as it is wanted. . . . In most cases, the medium will be that in which the information was originally stored and disseminated by its originator or publisher, although this is not a necessary condition for the preservation of the information. . . . The essential characteristic of preservation is that it is a large-scale operation, concerned with the effective management of the library's stock, or information resource. (Feather, 1991, p. 2)

Preservation can be divided into two categories: preventive preservation, which focuses on preventing deterioration of the collection as a whole; and remedial preservation, which attempts to correct physical or chemical deterioration (Child, 1999b, p. 1).

Although the materials in a given collection may be collectively acknowledged as "rare," identifying an isolated book as "rare" can be subjective. The Canadian Library Association (1996, p. 26) acknowledges that many libraries have tried to formulate a list of rules regarding what makes a book "rare," but that doing so "can often create more problems than [sic] it was intended to solve." According to the Rare Book and Manuscripts Section of the American Library Association (ALA), the process of recognizing the rarity of a book is based on a demand for a given book which is greater than the supply, as well as an acknowledged intrinsic importance for the book which creates market value (Van Wingen, 1994). However, the ALA does not indicate who makes decisions regarding rarity, or who is given the authority to determine demand for a given work.

Rare Books as Information-Bearing Objects

Information, as defined by Krippendorff (Principia Cybernetica Web, 2005), is “the difference between two forms of organization or between two states of uncertainty before and after a message has been received.”

Krippendorff’s definition suggests that information is a process, and that a change of uncertainty before and after a user engages with a rare book would be considered information. Buckland (1991, p. 43) similarly defines information-as-knowledge as the knowledge which is gained in the process of becoming informed. In the case of rare books, information-as-knowledge may consist of the information derived by the user from reading the text or viewing the illustrations (i.e., the “substance” of the work). However, information-as-knowledge also may include information regarding the context in which the book has existed, or evidence associated with events (Buckland, 1991, p. 48), such as the production of the book itself.

Information can be derived from a variety of characteristics relating to the book. Although Buckland argues that information-as-knowledge is intangible, he acknowledges that it can be represented in a tangible format. “Knowledge, however, can be represented or recorded. This representation is not itself knowledge but an information-as-thing, which can be used to derive new knowledge” (Buckland, 1991, p. 42). In the case of a rare book, the information-as-thing, or medium through which information-as-knowledge is conveyed, is the “form” of the physical object.

Preservation issues for rare book collections would be less complex if the users of the collections merely required preservation of the textual information contained in a given object; this is often the case in circulating libraries. However, the physical context in which textual information exists, in addition to the emotional and psychosocial impact of a given object, are frequently of importance for users of rare book collections. In the case of rare books, the form and substance of the work may be indistinguishable, and therefore difficult to isolate for preservation purposes. As a result, rare book collections require the establishment of priorities for preserving the relevant information, including both the physical form and textual substance of the document, which may not be necessary for circulating collections.

History of Rare Book Collections and Similar Institutions

The development of rare book collections is a 20th century phenomenon, and one which requires a blending of museology and traditional librarianship when approaching preservation decisions. For museums, the focus in collections management often is placed on the “real thing” or “authentic” artifacts with intrinsic value, because the patrons of these institutions often are interested in viewing the original objects. In contrast, libraries address a different set of user needs, including increased access to research material. The needs of library users often are satisfied with various surrogate representations of the physical object, because representations can provide textual information. Surrogates may

range from multiple published copies and editions of a given work to photocopies and digital reproductions.

Rare book collections, which may exist in museums, libraries, or independently, house and provide access to physical objects of intrinsic and textual value. Here, the theories and practices of museums and libraries collide. Museums strive to guard and protect objects, while libraries attempt to provide increased access to their collections. As an independent, yet similar, combination of museums and libraries, “special collections libraries derive their unique identity from their collections, and the primary duties of these libraries are the safeguarding and development of and the provision of access to these essential elements” (Association of College and Research Libraries, 1992, p. 5).

Any rare book may be regarded as either an inherently valuable information-bearing object or as a container of information, and has the potential for providing more relevant information in one form or the other. Some items may easily be classified into one of the two groups. For example, a modern paperback may be categorized as a container of textual information, and therefore might easily be substituted by a surrogate. On the opposite end of the spectrum might be a Gutenberg Bible with marginalia from an important historical figure. These two examples require no elaborate decision-making processes. The modern paperback could be substituted with a surrogate, while the Gutenberg Bible would undoubtedly be preserved in its original form. However, the staff members of rare book collections often are faced with addressing items which fall into the

“grey” areas between the two extremes. The challenge is making the most cost-effective preservation decisions for collection materials which require a subjective analysis of object characteristics.

Problem Statement

A review of preservation literature indicates that the field of document preservation currently exhibits two areas in which further study would be beneficial. The first issue is the lack of literature relating specifically to preservation within rare book collections. Study has been pursued regarding preservation in libraries with circulating collections, as well as the preservation needs of objects housed in museum collections. In many ways, rare book collections exemplify characteristics of both libraries and museums. However, although rare books incorporate elements of both, they possess unique preservation requirements based on their textual and artifactual content, and the requirements have been largely overlooked in the literature.

The second area of study which remains absent in the literature is an important, although rarely utilized, step in the process of preservation management. Experts in the field agree that a need for management and prioritization of preservation activities exists (Ferguson, 1989; Kamel, 1999), but the literature makes a leap directly from this acknowledgement to technical information for performing preservation activities. The intermediate, decision-making step rarely is discussed, and only under recommendations to preserve items which are subjectively “important” or “suitable” for doing so. Although

experts suggest that “value and importance are key criteria for selecting items for long-term preservation,” definitions for such ambiguous terms “also are among the most difficult to establish” (Eden et al, 1999, p. 33).

A need exists to develop a rational, decision-making framework for establishing preservation priorities in rare book collections. In such collections, the form and substance of collection materials can be indistinguishable. Therefore, preservation decisions require considerations of both form and substance for a given object. The preservation framework presents opportunities for objective, consistent decision-making, rather than relying upon subjective analyses of collection materials.

Purpose

The intent of this study is to establish a framework for preservation management in rare book collections. A framework is a preliminary composition, which can be generally defined as “a structure composed of parts framed together, esp. one designed for inclosing or supporting anything” (Oxford English Dictionary Online, 2005). This study investigates the value of rare books as both containers of textual information and as physical objects with inherent value. Furthermore, the study differentiates between an authentic object, which is defined as “original, first-hand, prototypical; as opposed to copied” (Oxford English Dictionary Online, 2005), and a representation, which is “an image, likeness, or reproduction in some manner of a thing” (Oxford English Dictionary Online, 2005). The study explores the appropriateness of the maintenance and

use of representations in rare book facilities. Because it may demonstrate some instances in which maintaining a surrogate is more appropriate than the original object, the framework also may reduce the need for costly preservation of physical materials. Representations are placed in contrast to the unique and “authentic” objects that exist in rare book collections to evaluate whether some surrogates retain sufficient informational value, or whether vital information is lost in the process of constructing a representation.

Ultimately, the framework possesses the potential for expanding into a model, or “an object or process which shares crucial properties of an original, modeled object or process, but is easier to manipulate or understand” in future research (Principia Cybernetica Web, 2005). The framework is based on the unique information content of the form and substance of rare books, and the need for rare book collections to meet a variety of user-determined requirements. For this study, the management framework may operate under the assumption that facilities can be limited in the scope of preservation activities by a lack of resources. Furthermore, this framework may address authenticity and representation in rare book collections to ensure that preservation decisions reflect the needs of users of institutions with diverse holdings.

It is possible that one or more collections may currently exist in which no further preservation action is necessary. However, a majority of the institutions which are responsible for preserving fragile materials, such as rare book rooms and museums, possess small budgets (Rare Book and Texana Collections,

2003, p. 4), and “not even the richest institutions are able or willing to preserve everything they have collected for all time” (Child, 1999a, p. 2). Therefore, an assumption of the study is that those individuals who are already engaged in preservation activities are, or will eventually be, faced with limited resources.

Research Questions

The following questions frame this research study:

1. What criteria could be used to establish the inherent value of materials in rare book collections?
2. By what method can staff members form a decision about which objects to preserve?
3. What is an objective process for evaluating collection materials and establishing preservation priorities?

Research Design

A set of object characteristics which might contribute to the inherent value of a rare book is presented to a panel of experts for consideration. Their responses are then utilized in conjunction with an exploration of the “intangible” qualities of authentic objects to construct a theoretical framework which establishes preservation priorities. Because a theoretical framework is being constructed, although the research questions hold, there are no hypotheses to be evaluated.

Some limitations that might be expected include obtaining participation from a sufficient number of individuals, as well as maintaining their involvement throughout the duration of the study. Furthermore, the subjectivity of the experts in terms of personal biases and experiences could cause some challenges, and the required consensus may be difficult to obtain. Other limitations may include the effects of each facility's characteristics, such as the size of the institution, varying budgets and missions, and reporting lines for decision-making, upon a given expert's responses. If the characteristics vary among the facilities of the study participants, their responses may reflect the variations.

CHAPTER 2

REVIEW OF THE LITERATURE

Library and Museum Influences on Rare Book Collections

Museums and libraries have maintained a close relationship for millennia. Although they exist as discrete institutions in the 21st century, their development stems from a shared history (Bierbaum, 1994, p. 6). The ancient Greek *museion*, from which the word “museum” is derived, was established approximately 300 B.C. in Alexandria, and “was a library and not a museum in the sense in which the word is used today” (Dana, 1999, p. 167). According to Sagan (1980, p. 19), “The Alexandrian Library is where we humans first collected, seriously and systematically, the knowledge of the world.” Both libraries and museums are responsible for the care of collections, and both institutions additionally provide educational services to their respective users. The objects that comprise library and museum collections serve a variety of functions, depending upon the missions of the institutions which are responsible for their custody.

Libraries and museums have shared common histories, and new permutations of these fields have made the divisions between the two professions increasingly less distinct. The pairing of libraries and museums culminated in 1996, with the Museum and Library Services Act (Institute of Museum and Library Services, 2001). With the development of rare book

collections (Archer, 1965, p. 13), influences of practice from museums and libraries merge into a single discipline. Within the discipline of rare book “librarianship,” books are maintained for their intrinsic value as well as their textual content, (i.e., their “form” and “substance”). “Like an artifact, a document has a unique physical character that speaks of its historical context, and, like a library item, it generally contains words or images that, of themselves, have meaning” (Eisloeffel and Gavin, 1992, p. 2). The conflict that arises is whether to treat a given book as an object with inherent value or as a container of textual information. Because of this conflict, rare book collections require the expertise of an individual familiar with methods of artifact preservation in addition to library training. For example, rather than labeling rare book professionals as “rare book librarians,” and placing them in the domain of librarianship, Storm (1965, p. 74) suggests that these individuals should be referred to as “curators,” which is a term often associated with a museum professional.

The museological influence on rare book collections is not a new concept. More than two decades ago, it was noted that “the director of a distinguished rare-books collection felt that the master’s degree in library science has very little application to the needs of ‘special collections’” (Conant, 1980, p. 159). “Special collections,” as rare book collections are often described, require the expertise of an individual with training in handling and treatment of artifacts, as well as the information management skills possessed by a library professional. Rare book collections consist of a variety of materials, many of which are in fragile or

deteriorated condition. Because the administration of rare book collections requires a balance of skills from two different fields of study, the policies and procedures which govern the field of rare books may contain elements of either respective field—or unique elements all their own. Therefore, rare book collections require management in a manner which reflects their unique holdings and operations.

The Authentic Object

The concept of the “authentic” object, or the “real thing,” pertains to the museum attributes of a rare book. Museum objects are valued and of interest to visitors for characteristics other than monetary worth (Booth, 1998, p. 142), and an object may be maintained for its aesthetic or other qualities (Sachs, 2004, p. 104). A user may seek the “authentic” object in a collection for any number of attributes which give the object inherent value, rather than merely for the textual information contained within the book. The inherent attributes are characteristics of the materials which can be challenging to reproduce in a representation of the object, regardless of how high the quality of the surrogate might be. Schreyer (2000) presents several characteristics of collection materials that suggest a need for preservation of these items in their original form:

. . . some materials must be preserved in original form either because they constitute evidence of authenticity, association, textual variants, and production, or for cultural, historical, and aesthetic reasons. These criteria represent essential characteristics of materiality that cannot be captured or conveyed by surrogates, no matter how carefully prepared, technologically advanced, and thoroughly documented they are now or may be in the future. And though the concept of intrinsic value is slippery

and even suspect, it continues to serve an important function in evaluating factors for preservation decision making. (Schreyer, 2000, p. 35)

The Rare Book and Manuscripts Section of the Association of College and Research Libraries, within the American Library Association, adds “provenance,” “binding,” and “overall condition” to the list of characteristics (Van Wingen, 1994, p. 3). Lavender (2003, p. 2) includes “demand,” “availability,” and “special features” as relevant criteria in a discussion of “what makes a rare book rare.”

Preliminary lists of concepts related to form and substance, with respect to rare books, are provided in Appendix A for enhanced understanding of the manner in which the terminology suggested by Schreyer (2000), Van Wingen (1994), and Lavender (2003) would be applied to a given object. The first list defines technical terms in a capacity specifically pertaining to rare books. The second list defines concepts associated with the determination of value for rare books. Both lists of definitions provide guidance regarding the characteristics that may be present in an “authentic” object, and which are difficult to replicate in a surrogate. Many of these characteristics relate to the physical nature of the rare book or its inherent value as an artifact (Hirtle, 2002, p. 50). However, like museum objects, engaging in a personal way with a rare book may evoke emotional reactions which are more difficult to quantify. “Real objects ‘speak’ in ways that representations of those objects do not. Objects evoke personal reactions as well as a shared knowledge and history” (Evans, Mull, & Poling, 2002, p. 55). Gurian (1999, p. 180-181) and Benjamin (2005, part II, paragraph

IV) also refer to the certain intangible experiences that authentic objects evoke, which can be difficult to manufacture and re-create through a representation.

Intangible Qualities of Rare Books

An exploration of the characteristics of rare books which merit the physical preservation of the authentic objects necessitates some investigation into the intangible qualities of rare books. Like museum objects, rare books offer a certain experience that occurs when one is presented with the “real thing” or the “authentic” object, rather than a reproduction. “Central to museum lore is the belief that it is the authenticity and uniqueness of the museum-based object that summons the most powerful reactions” (Evans, Mull, and Poling, 2002, p. 55). Much of this intangible experience of awe when engaging with the object seems to stem from the viewer’s personal connection to the object, which may vary widely depending on the user. According to the American Institute for Conservation of Historic and Artistic Works (1994, p. 3), cultural property, which includes objects and aggregate collections, has invaluable significance that may be artistic, historical, scientific, religious, or social. Gurian (1999, p. 164) suggests that objects as evidence of history are central to the spirit, will, pride, and identity of people. Gurian (1999, p. 171) further acknowledges that in some cases, “objects lose their meaning without the viewer’s knowledge and acceptance of underlying aesthetic or cultural values.” In such cases, the intangible value is assigned to the object by the viewer, and therefore is subject

to change. Gurian (1999, p. 180-181) suggests that some initial exploration of the intangible experiences is beginning in a variety of disciplines:

I would be remiss if I did not also acknowledge the power of some objects to speak directly to the visitor, for example, in the sensual pleasure brought about by viewing unique original objects of spectacular beauty. . . . The academicians of material culture, anthropology, history, and other fields are engaged in parsing the ways in which humans decode objects in order to figure out what information is intrinsic to the object itself, what requires associated knowledge gleaned from another source, and what is embedded in cultural tradition.

Benjamin (2005, part IV, paragraph I) agrees that tradition becomes an integral part of the appreciation of the authentic object: “The uniqueness of a work of art is inseparable from its being imbedded in the fabric of tradition. . . . In other words, the unique value of the ‘authentic’ work of art has its basis in ritual, the location of its original use value.” This pertains to the context in which the book was created, and in which it has existed in the time since its creation. However, there remains another, more intangible quality of the object, which is more difficult to name or quantify. Benjamin (2005, part II, paragraph IV) suggests that the intangible quality is the “aura” of the work, which “withers in the age of mechanical reproduction,” and that mechanical reproduction detaches an object from tradition. Such a statement seems to imply that the intangible qualities of an object cannot be adequately reproduced in a surrogate of the original. If one argues that the object can be considered information-as-thing (Buckland, 1991), then if significant characteristics of the object cannot be retained in the surrogate, it becomes possible for this information to be lost. Furthermore, if the form and

substance of the rare book are indistinguishable, it may be argued that one element cannot be reproduced or represented without affecting the other.

Use of Representations

Some collection materials may be more useful as containers of textual or illustrative information than as inherently valuable objects. In some cases, the staff of an institution may determine that maintaining the original work is not a viable preservation decision. Such instances may require development of a surrogate item to maintain as much information regarding the original work as possible. Representations can be used as a preservation strategy. They allow a facility to provide access to objects for interpretive or educational purposes when the original objects are too fragile to permit such access (National Park Service, 1998, p. 8:3). Reproductions, in the case of rare books, can be viable options for continuing to provide access to the content of a given collection material.

The preservation of the information content of a book or document, as opposed to the original physical format, is sometimes the only solution to preserving it at all. In practice, this means the creation of so-called 'surrogates', in which the information is recorded in another medium, but in its original visual form. (Feather, 1991, p. 6)

The type of surrogate utilized depends greatly upon the needs of a given collections' users, and different versions of the same materials may be appropriate for meeting the needs of a diverse audience (Schreyer, 2000). Surrogates may range from simple black and white photocopies to high-resolution digital images. Advances in information technology, particularly digitization, have dramatically changed the issues of access to, and use of,

information in libraries. In a digital environment, multiple viewers may utilize a document at any given time.

Digital technologies make it possible for learners, and users in general, to have relatively easy access to an almost limitless number of objects. These technologies also make it possible to surround the objects with rich sets of contextual information that can inform the appreciation of the object, suggest analogies from other experiences and objects, and stimulate thinking on related topics. (Frost, 2002, p. 80)

One advantage to digital surrogates is that they are easily searchable and may be manipulated in ways that traditional printed texts cannot (Tanselle, 1995, p. 30). For example, images can be rearranged and reformatted to facilitate comparisons, and can be printed or downloaded for easy access. Many of the limitations associated with print material, such as checkout time, are eliminated (Parkes, 1999, p. 13 of 21). According to Buckland (1992, Ch. 1, p. 5) and Hirtle (2002, p. 43-44), the advantages to electronic media include the ability for items to be utilized from a distance, by more than one person at a time, and in different ways from traditional paper media. One might therefore suggest that in some cases, the representation may be more useful than the original.

For rare books and other unique materials, “digitization alone is not considered a preservation option because life expectancy, technological obsolescence, and longevity come into question” (Croft, 2003, p. 13). If a book serves as a container of textual information, the information can easily be digitized without loss of information. However, if the book is regarded as an intrinsically valuable object, there is potential for some of its inherent information to be lost as it is transferred into a digital medium. According to Frost (2002, p.

81) key informational value is lost when a surrogate for a three-dimensional object is created in print or digital form. Benjamin (2005, part II, paragraph I) suggests that “even the most perfect reproduction of a work of art is lacking in one element: its presence in time and space, its unique existence at the place where it happens to be. . . . This includes the changes which it may have suffered in physical condition over the years as well as the various changes in its ownership.” A surrogate which does not reflect these changes over time can cause a loss of information. Furthermore, scale and environment can be compromised when an original work is reproduced (Thompson, 1980, p. 29).

Another challenge exists because technological advances can contribute to neglect. Smith (2003, p. 176) suggests that although information technology allows libraries to be more effective in delivering services to patrons, such advances in technology divert libraries’ attention from preservation to access. In addition, not only may the original objects become neglected, but the same media that are intended to retain the digitized information can be neglected as well.

The development of new media of information storage to supplement the traditional written or printed documents has been a significant element in the growth of this neglect. The new storage media are, for the most part, comparatively easy to replicate so that their physical preservation seems of little importance. (Feather, 1991, p. 1)

In addition to information loss stemming from physical neglect of electronic media, the longevity of many new media is unknown because they have not been in existence long enough to establish such data. Current data suggest that

digitally stored media have an estimated lifetime of only 20 years, and present the added challenge of reformatting to accommodate changing technologies (Kamel, 1999, p. 111-112). Huxley (2005), Parkes (1999, p. 360), and Schreyer (2000, p. 37-38) argue that although digitization is a good strategy for providing access, electronic files can be unstable and potentially unreliable. Furthermore, maintaining the equipment necessary for accessing electronic media over time can be difficult. Therefore, in some cases, paper is viewed as a more stable medium in comparison with electronic formats (Parkes, 1999, p. 361). Although technology provides many exciting possibilities for expanding the use of special collections, the potential instability of electronic media can create a variety of preservation challenges.

Ironically, although electronic surrogates may be intended to minimize the potential damage to collection materials, the inverse may actually occur. Although digital reproductions may be utilized to protect, represent, and “transcend” the original objects, “to digitize a collection does not necessarily lessen the demand for the original materials. Sometimes quite the contrary occurs: a digital item has more visibility in the world, so since more people will know of its existence, there may be an increased demand on the original” (Cloonan, 2001, p. 240). Eden et al (1999, p. 31) acknowledge that publicizing the presence of a certain item can increase preservation issues related to security and mechanical damage resulting from use.

A final challenge associated with the use of representations pertains to the issue of authenticity. The issue is particularly timely with the development of digital technologies, because images now can be manipulated to create multiple copies of the same image with slight variations (Bearman and Trant, 1998, p. 3). Furthermore, misunderstandings of the distorting effects of digitization by users or staff members can compromise the faithfulness of a representation to the original (Bearman and Trant, 1998, p. 3).

In addition to questions regarding the authenticity of the surrogate, the authenticity of the original object can be questioned. Bearman and Trant (1998, p. 1) suggest that when original artifacts, documents or works of art are studied in the surrogate, all of the questions regarding authenticity of the original are overlaid with questions about the methods of representation. Use of a surrogate material can create challenges in confirming or disputing the authenticity of the original object. Therefore, any decisions to develop surrogate materials may require additional evaluations of the possible repercussions for the original collection materials.

Decision-Making

Decision theory, which is “designed to help a decision maker choose among a set of alternatives in light of their possible consequences,” implements “a rich collection of techniques and procedures to reveal preferences and to introduce them into models of decision” (Principia Cybernetica Web, 2005). Decision-making can become a challenge for the staff of institutions that are

faced with the allocation of limited resources. The framework constructed within this study may provide guidance for staff members in establishing preservation preferences and priorities based upon concrete criteria. Wilson (1997, p. 62) suggests one of the benefits of informed decision-making in terms of the costs involved:

We are sometimes sure that a piece of information would have been crucial in the sense that without it, a decision went one way, but with it, the decision would have gone another way. When the outcome of the more informed decision would have been better from our point of view than the outcome of the less informed decision, a loss has been incurred. Sometimes this can be put in straightforward terms of money: if I had known what I now know, I would have done so and so, and saved so many dollars.

Preservation management requires development of preservation priorities, driven by the need for maintenance of the information in the most useful and cost-effective format. For rare book collections, "having been identified as rare, the material in such a collection will require treatment that repairs damage and extends its life, yet maintains as much as possible the original artifact" (Kamel, 1999, p. 108). When making preservation decisions, the staff of rare book collections must first determine if maintenance of the authentic object is necessary or if a representation is sufficient for providing the information which its potential users might seek. Driven by this determination, priorities for preservation of materials may be developed. Preservation management is a system for regulating policies and for establishing consistent decisions. "The basic objective of a preservation policy can be defined as being to ensure that

materials and information which the library's users can reasonably demand will be available when they are needed" (Feather, 1991, p. 49).

Many non-profit organizations in the 21st century, including those housing rare book collections, are faced with limited resources. Often, the lack of resources results in allocation of funds to other areas of operations. For example, "in recent years the Association of Research Libraries (ARL) has documented that spending for preservation has decreased. . . . with a large part of the funding supporting digitization programs" (Baird, 2002, p. 572), and "several major libraries have recently dismantled their preservation programs and replaced them with digital initiative departments" (Cloonan, 2001, p. 240). Insufficient monetary resources require that institutions make choices, many of which may be difficult. One choice may be between the alternatives of maintaining either an authentic object or a surrogate, but not both. The decisions can be dependent upon the characteristics of the objects in addition to user needs. By considering both the object and the potential user, a given facility reduces the risk of making arbitrary decisions that may seem inappropriate in the future. Decisions which are made without considering both elements could compromise progress that could be made in maintaining the utility of the collection. "A preservation policy is needed which will determine priorities and methods, if only to ensure that limited funds are not dissipated on work of little or no value" (Feather, 1991, p. 49). A challenge arises in decision-making when attempting to determine what makes the preservation of one original object more necessary than another, or

maintaining an original object versus developing a surrogate, and thereby establishing preservation priorities. Issues of use can be equally as important as the intangible moral, artistic, or financial contributions to an object's value. Characteristics such as fragility and durability of the physical object, rarity of a particular object or text, any historic value it may possess, or simply aesthetic value (by someone's standard) also merit consideration when establishing preservation priorities.

Current Criteria for Preservation Decisions

Staff in rare book collections may be aware of the necessary measures required to extend the life of their collection materials, but the ubiquitous lack of resources in most facilities requires careful consideration of preservation priorities (Rare Book and Texana Collections, 2003). Cloonan (2001, p. 240) states that training for preservation activities in library school is beginning to suffer, which suggests that this phenomenon is an indication of a larger problem for the field of preservation: "the loss of preservation programs in some Association of Research Libraries (ARL) libraries and schools of library and information studies suggest that the field is withering when it should still be blossoming." Maintaining preservation activities continues to be a challenge. Gwinn (1991, p. 37) suggests that preservation priorities should be established according to user needs and the inherent value of the objects within the context of the available resources:

If it has significance as an artifact, i.e., if its research value lies in its rarity or physical characteristics, such as in the way it was printed or bound, in its illustrations, or in its association with famous persons or events, then the physical form—that is, the book itself—must certainly be retained. But if a book's value is principally for the information, the ideas, or the knowledge it contains, then the possibilities for preservation and continuing access to its contents expand. The factors that influence the treatment decision vary, depending on assessments of the book's intellectual value, as well as estimates of its current and future use. Chief among these considerations is cost.

Little prior attention has been paid to the role of user needs in setting preservation priorities. The concept has been explored to a small degree in archival settings (Walters, 1996, p. 322), and Feather (1991) provides some insight into preservation and the user. Feather (1991, p. 52) emphasizes that “preservation is not an antiquarian exercise for keeping objects from the past simply because they are old. It is a managerial tool for making information available to users.” However, current literature does not differentiate the needs of rare book collections from those of circulating libraries and archival collections, whose missions are very different.

Buckland (1992, p. 3) states that a library's mission is to support the interests of the population it serves. However, as anecdotal observation suggests, preservation decisions often become the prerogative of library staff. The decisions may be made without specific consideration of the information sought by the users of a given collection, which may be compromised by substitution of surrogate materials. Buckland (1992, Ch. 5, p. 8) suggests that “library services from now on will have to provide access to paper documents and to electronic documents according to their users' needs.” This represents a

vital paradigm shift in which the varying user needs at individual institutions assume an integral role in decision-making. The phrase “according to their users’ needs” is important, because it indicates that collections may not find it necessary to house both authentic and surrogate items. Instead, they can maintain some combination thereof, depending upon whether their users require the inherent or textual information contained within a given object. Although user needs may change over time, identifying current user needs is an initial step in the process. Because rare book collections often fall under the organizational umbrella of libraries, it is vital that their parent institutions recognize and incorporate new methods of preservation management.

The literature regarding preservation management has addressed a number of related issues, including preservation for archives and circulating library collections (Baird, 2002; Eden et al., 1999; Feather, 1991; Ogden, 1994; Walters, 1996), but has yet to target the specific niche of preservation decision-making regarding rare book collections. The attempts that have been made to adapt library preservation methods to archival collections have “not yet resulted in workable models of selection for preservation decision-making” (Walters, 1996, p. 326). It has been acknowledged that “what items merit the expenditure of funds should be based upon a systematic examination of the suitability and cost of conservation treatments or the availability, suitability and cost of variant printings, editions, or formats” (Ferguson, 1989, p. 239). However, these “systematic examinations” continue to be based upon subjective terms, such as

“important,” “affordable,” and “suitable,” rather than consistent, objective criteria for decision-making. The preservation needs of rare book collections are complex and varied because they incorporate preservation of both the form and substance of the book.

Deterioration of Rare Books and Their Surrogates

Maintenance of collections including rare materials and electronic media present the individuals in charge of their custody with a unique set of preservation issues. “Material held in rare book collections is often quite fragile. Many factors, from the chemical composition of paper and bindings to a hostile environment and poor storage and handling conditions, contribute to this fragility” (Kamel, 1999, p. 108). Rare book collections contain a wealth of information—both in the textual and illustrative content of the pages and the intrinsic value of the books themselves, based on their age, provenance, or other characteristics. The collection objects consist of a wide variety of materials, including leather, paper, metal, and cloth (Greenfield, 1988, p. 13). Decisions to maintain physical, authentic objects, as well as their digital surrogates, must therefore take multiple materials into consideration. The number of variables which are involved exemplify why the development of a decision-making framework is important for preservation management. The collections require consideration of the physical facilities, environment, and the collection materials themselves (Matthews, 1995, p. 228). Although the staff of rare book collections seek to preserve their collection materials, most also attempt to provide access to the materials, and

therefore the books can be at greater risk. While the books are being handled by users of the collections, preservation challenges can increase, but while the books remain in storage areas, “objects can be so housed . . . that they experience a minimum degree of deterioration or, to put it positively, a maximum degree of preservation” (Stolow, 1966a, p. 175). Implementation of policies for maintaining appropriate conditions in collections areas can reduce risks of damage to rare books, which could otherwise result in the loss of valuable material.

Models for Preservation Decision-Making

The intent of this study is to progress toward a framework which can be expanded into a model for preservation management in rare book collections. Preservation decision-making and general guidelines for prioritization have been explored in a variety of settings, including archives and libraries with circulating collections (Eden et al, 1999; Ferguson, 1989; Walters, 1996). Child (1999b, p. 3) provides a series of questions to assist in determinations of value, but the questions are highly subjective and do not offer a quantifiable mechanism for gauging responses. Although templates exist, few practitioners have attempted to construct a model that can be consistently applied to collection materials, and specific applications to rare book materials remain absent.

Within the relevant literature, some models have been developed for collections assessments and preservation management. Michalski (1994) and Waller (1994) have constructed preservation models pertaining to museum

collections. Michalski's (1994, p. 9) model divides preservation into four "dimensions": agents of deterioration, means of control, object location, and stages of control. However, this model, like much of the preservation literature, focuses on the technical aspects of performing preservation activities than the selection of specific objects. Similarly, the model developed by Waller (1994, p. 12) focuses on a single element of the preservation process by addressing risk for collection materials. Waller suggests that there is an inverse relationship between severity and frequency of risk. The risk factors are: type 1, defined as rare and catastrophic; type 2, which are sporadic in occurrence and intermediate in severity; and type 3, which are constant and gradual (Waller, 1994, p. 12). Natural disasters such as major earthquakes or other rare, catastrophic events could be considered type 1 risks, while persistent, mild risks such as shifts in size of books because of fluctuating relative humidity would be type 3 risks. Waller's model is useful, but it only evaluates the single component of risk, and preservation management is a multi-faceted process.

Ogden (1999, p. 3) presents a model which is similar to Waller's, and which compares feasibility and impact in a matrix comprised of four quadrants based on high and low scores for the two terms. Unfortunately, this model divides all collection materials into only four categories, and under highly subjective circumstances. Other models which have been created for preservation management are similarly insufficient. Michalski's (1994, p. 10) model for prioritizing preservation action utilizes a sum of scores for object value, object

susceptibility, and presence of each agent of deterioration. Scores of 1-5 for each characteristic are added together to obtain a cumulative 3-15 score, with 15 indicating the highest priority for preservation. While useful, the model offers no means for determining object value, which compromises the utility of the model.

The Harvard University Library model addresses the process of selecting objects for digitization. However, the flowchart design of the model is initiated with the question “Does the material have sufficient intrinsic value to ensure interest in a digital project?” (Chapman et al, 1997). The Harvard model relies upon subjective terminology (i.e., “sufficient”) and lacks a quantifiable scoring mechanism for establishing value. Szmelter’s (2003, p. 202) conservation model alludes to the “context of culture and art history,” but otherwise does not specifically address the inherent value of the object. Therefore, neither the Harvard nor the Szmelter model provides an objective framework for initiating decision-making.

Rare books possess unique characteristics which reflect their physical composition, in addition to the context in which the books have existed since their creation. Preservation literature from the library and museum fields provides useful technical information (Lavender, 2001; Michalski, 1992; Ogden, 1994), but lacks a template for preservation decision-making. Rare book collections (as separate entities) are relatively new developments in comparison to libraries and museums (Archer, 1965), and much of the literature remains devoted to traditional library and museum collections. Because rare book collections

possess a wealth of material, much of which is unique and physically or historically valuable, preservation of these materials is vital for retaining the inherent information. The challenge becomes to develop a framework which can provide an objective template for preservation management. Ideally, such a framework would incorporate the intangible and inherently-valuable characteristics of a given rare book. A framework provides the opportunity to evaluate multiple criteria, which may be used to prioritize a given object in a collection for preservation treatment. Furthermore, the framework may be utilized to determine whether maintaining a representation or surrogate is sufficient for maintaining the form and substance of the original object. In such cases, the surrogate might be more appropriate and cost-effective than continuing to house and care for the original.

CHAPTER 3

METHODOLOGY

The intent of this study is to progress toward a viable framework for preservation management in rare book collections. This framework is designed in response to the need of rare book collections to meet a variety of user requirements, while simultaneously limited in the scope of their preservation activities by numerous costs. Furthermore, such a framework could address issues related to authenticity and representation in rare book collections to ensure that preservation decisions reflect the needs of users of institutions with such diverse holdings. For some objects, a representation may sufficiently meet a user's needs, and providing such a surrogate to reduce handling of authentic objects can facilitate greater longevity of collection materials.

To fashion a first iteration of a framework for preservation decision-making, experts in the field of rare books were consulted. When the form and substance of a given document are indistinguishable, which may be the case for rare books, preservation of the original, "authentic" object is warranted. The opinions of the experts were solicited to determine the characteristics which contribute to the blending of form and substance.

The method implemented for this investigation was a Delphi study, utilizing a group of individuals who were determined to be "experts" in the field of

rare books. The Delphi Technique, which was developed in the 1950s by Olaf Helmer and Norman Dalkey at the RAND Corporation, “incorporates an iterative process designed to query an interest group of experts assembled around a specific topic for the purposes of reaching consensus of opinion” (Kochtanek & Hein, 1999, p. 246-247). For this study, the desired consensus consists of a single list of criteria which contribute to the inherent value of a rare book as an information-bearing object. The individuals selected for this study are employed in professional positions within rare book collections, and therefore have an understanding of the preservation needs of such institutions, and the authority to contribute to preservation decisions in their respective facilities.

The structure of this study provides quasi-anonymity to the participants. Because the surveys and responses were issued individually via e-mail between the surveyor and the participant, none of the participants could be aware of the other participants’ identities. Therefore, no one person’s responses could be attributed specifically to that person or to their institution, other than for the surveyor’s differentiation among the participants for data analysis.

To facilitate the ability to visit the participating facilities if necessary, the study was designed to focus on institutions within the state of Texas. Investigation began with the process of selecting participants from a list of 98 universities in Texas (University of Texas at Austin, 2005). The web sites of the universities were explored to determine which institutions possessed special collections containing rare books. Those institutions which only indicated archival

material, and not specifically rare books, were not included. From this exploration, 14 collections were selected. The web sites were then utilized to obtain the name and contact information for a senior staff member for each collection. From the list of institutions, 14 individuals who are employed in relevant institutions within the state of Texas were contacted.

An internet Google search was then conducted with the search terms “rare books” and “university” to locate other university rare book collections in the United States, but outside of Texas. As a matter of convenience, only three collections from the results were selected to be contacted. One was selected based upon a connection to a former employee of that institution, and two others were selected based upon their appearance as the first two “hits” on the Google search. The three institutions outside the state were contacted for participation to provide a comparison to the geographically-similar Texas group. This comparison was intended to reveal any possible regional variants in treatment or maintenance of rare book collections.

A total of 17 individuals were selected for participation in the study. All of the selected participants are employed in positions of authority within special collections containing rare books at institutions of higher education. Because of differences in their collections and variety of academic and professional backgrounds, the perspectives of the individuals at each of the participating institutions may vary greatly. However, given their professional positions within

rare books, it may be assumed that each expert’s credentials have been reviewed and approved as sufficiently appropriate to their authoritative positions.

Each potential participant was contacted individually via a written letter and follow-up e-mail. A written consent form was issued, which each participant was to sign and return, to obtain confirmation of his or her willingness to participate in the study. Within two weeks of submitting the queries to 17 individuals, the investigator received affirmative responses from 10 individuals. The individuals who agreed to participate were employed within collections containing rare books at 10 universities. Nine of the participating universities were in Texas, and one (Cornell University) was located outside of Texas (see Table 1).

Table 1

University rare book collections with consenting participants.

UNIVERSITY	DEPARTMENT / DIVISION
Abilene Christian University	Callie Faye Milliken Special Collections
Cornell University	Division of Rare and Manuscript Collections
Lamar University	Mary and John Gray Library Special Collections
Southwestern University	Special Collections & John G. Towers Papers
Texas A & M University, College Station	Cushing Memorial Library
Texas Christian University	Special Collections, Mary Coutts Burnett Library
Texas Tech University	Southwest Collection/Special Collections Library
Trinity University	Special Collections and Archives
University of Houston	Special Collections Department
University of North Texas	Rare Books and Texana Collections

Iteration 1

Based upon the published recommendations of professionals in the field (Lavender, 2003; Schreyer, 2000; Van Wingen, 1994), a list of characteristics that can contribute to the “value” (in some sense) of rare books was constructed. The characteristics which comprised this list at the beginning of the study were: authenticity, association, textual variants, production, cultural value, historical value, aesthetic value, provenance, binding, condition, demand, availability, and special features. To this list, a criterion was added to reflect the potential monetary value of materials comprising the book, which created a final list of 14 criteria. This list was formatted as a survey, and then submitted via an e-mail attachment to each participant.

Authenticity	_____	Aesthetic value	_____
Association	_____	Production	_____
Textual variants	_____	Demand	_____
Cultural value	_____	Availability	_____
Historical value	_____	Condition	_____
Provenance	_____	Binding	_____
Special features	_____	Value of materials	_____
(additional plates, dust jackets, etc.)		(gold leaf, gems, etc.)	

Formal definitions of the criteria were intentionally not provided. The individuals participating in the study are employed as authoritative professionals in the field of rare books, and responses were sought that would reflect their professional and educational experiences. Providing a pre-conceived definition might have caused their responses to differ, and might not have accurately portrayed their pre-existing opinions.

Each participant, upon receiving the survey, was requested to provide unstructured information regarding the expert's educational background and professional experience with rare books (see Appendix B). Information was requested regarding the number of rare books at each facility and an approximate annual budget for preservation for each institution. The experts also were given a disclaimer that they could elect to abstain from providing any of the information that was of a more personal nature, such as the requested information about personal academic and professional backgrounds.

Next, each expert was asked to rank the 14 characteristics on a scale of 1-14, with 1 indicating the term of greatest importance, and 14 indicating the term of least importance. The experts were then asked to determine if they felt that any criteria were absent from the list, and to indicate if any of the included criteria should be removed. If an expert felt that any of the terminology should be changed, an opportunity was given to indicate additional recommendations.

Iteration 2

Examination of the first iteration revealed a flaw associated with assimilating multiple rankings into a single, quantifiable list. The first survey could produce an ordering of the terms, but no respective weights relative to each of the characteristics. Therefore, a second survey was issued to the participants, which requested that they distribute a set of 100 tokens among the 14 criteria, according to their perspective on the relative importance for each term (see

Appendix C). Each of the experts was asked to respond to the following question relating to the initial 14 criteria included in Survey 1:

Imagine that you have 100 tokens to distribute according to each of the following characteristics. Please distribute these tokens among the 14 characteristics, based on your perception of their respective importance. For example, if authenticity or another given term is highly valued, it would receive a larger portion of those 100 tokens.

The largest number of tokens was to be attributed to the term that the experts perceived as having the greatest value. The intent of the second iteration was to provide some insight into the relative weights the panel members would assign to each term, rather than simply providing an ordering of the terms.

Iteration 3 - Non-Numerical Data

Although the first and second iterations of the survey provided quantifiable data, the context for actual practices in operational facilities was missing. Therefore, a final iteration of the survey was conducted. The intent of this survey was to provide speculation of what might be done in rare book collections, based upon what has been done in other facilities in the past. This survey consisted of three questions, which were intended to solicit unstructured information from the panel of experts (see Appendix D). The experts were asked if their facility currently utilizes any policies or procedures for preservation decisions, and if the facilities have an institutional mission statement or goals statements relating to preservation. The participants also were asked, given a problematic preservation decision, how they might apply the 14 ranked criteria from Survey Iterations 1

and 2, or what other decision-making processes they might utilize for making this type of decision.

Data Analysis and Testing the Framework

The data from the second survey were compiled in a series of tables to analyze the respective importance of each characteristic, based on the responses of the experts (see Chapter 4). The tables were then contextualized with the anecdotal information from the third iteration. The two sets of data were utilized to design a framework (see Chapter 4) in which the 14 characteristics might be attributed to a given object in a manner reflecting their weighted values.

To test the applicability of the framework to existing books in rare book collections, the curator and assistant curator at the Rare Book & Texana collections of the University of North Texas libraries were requested to participate in a test of the framework. The two individuals agreed to provide independent assessments of five objects in the collection, and to apply the framework to each of the selected books. The books were selected by the curator and assistant curator, with the instruction that the books should provide a sample of the variety of books that might be present in a rare book collection.

1. *Letters and correspondance, public and private, of the Right Honourable Henry St. John, lord viscount Bolingbroke; during the time he was secretary of state to Queen Anne.* The book is bound in leather with an impressed and gilt cover design. It is one volume of a five-volume series which was published in 18th century England.

2. 1935 Penguin edition of the Mary Webb novel *Gone to Earth*. According to the curator of the collection, “though we do not collect Penguins because they are reprints of out of copyright materials, in paper back with perfect bindings, we collected this one because it was one of the very first Penguins ever produced, on an author that we collect. Penguin produced 10 books on their first day, and this was one of them.” The book is bound in publisher’s printed card covers and retains its original printed dust jacket.
3. Manuscript and galley proofs for Monte Barrett’s *Tempered Blade*.
4. A miniature *Book of Psalms*, published in Israel after 1948. The book is bound in silver, with seven turquoise stones inset on the back cover, a hinged spine, and a fore-edge clasp mounted over a maroon cloth cover.
5. *Monuments to George Washington’s Patriotism*. Contains a facsimile of his public accounts, kept during the Revolutionary War; and some of the documents connected with his military command and civil administration. It is a third edition, w/additions and embellishments, and was published by the trustees of Washington’s Manual Labour School and Male Orphan Asylum in 1841.

The curator and assistant curator applied the fourteen criteria to the five selected objects. The resulting values for each book were multiplied by the normalized percentages established in Chapter 4 to obtain final weighted scores. The resulting data points were graphed on the framework, which was

resubmitted to the curator and assistant curator. They then provided a comparison of the results which were obtained through the use of the framework to those they might have obtained by making a preservation assessment based solely on their expertise and opinions.

The results from the test of the framework within the rare book collection reinforce the utility of the framework for facilitating objective preservation management decisions in rare book collections. In Chapter 5, recommendations have been developed, based on extrapolations of data from the constructed tables and framework. The evaluations are placed within the context of a review of the literature pertaining to preservation and the unique properties of rare books.

CHAPTER 4

RESULTS

Iteration 1

During the first iteration of the survey, seven of the experts responded with completed surveys. The remaining three experts were contacted via telephone and indicated that they would submit their surveys as soon as possible, but the surveys were never received. Of the seven surveys that were returned, two panel members did not appropriately address the survey questions, and therefore the results were not useful for inclusion within the study. One participant indicated within the body of the survey response that this participant could not appropriately complete the survey questions within the requested parameters:

I don't think I can rank these on a 1 – 14 scale. Value is a complex fusion of these elements. . . . If you asked me instead what criteria I use to decide whether or not to pull a book into special collections, would my answers shift? That is what I'll consider as I complete the section below. Meanwhile, my apologies for not being able to give you neat quantifiable data, but I can rank them high, medium, low...

The other participant completed the survey incorrectly, and it appeared that this individual had merely misunderstood the instructions. Therefore, this individual was contacted, and after providing clarified instructions, it was requested that this person re-rank the criteria. The survey was quickly returned after being appropriately completed.

Ultimately, six surveys for the first iteration of the study were received—five from within the state of Texas, and one from outside the state. One improperly-answered survey was omitted, and the remaining six were utilized to tabulate the data. Table 2 was then constructed to reflect the respective rankings given by each expert. The rankings for *authenticity* varied widely, with four experts assigning the term a ranking of 1, while Expert 3 assigned a rank of 7, and Expert 5 assigned a rank of 11—which made *authenticity* one of the lowest ranking terms for this expert. Other terms with widely-varying rankings included: *provenance*, with a high of 3 and a low of 11; *availability*, with a high of 4 and a low of 14; and *value of materials*, with a high of 3 and a low of 14.

In addition to the rankings provided, additional commentary was included by several of the panel members. For example, four of the experts requested clarification of the definition of *production*. Five of the experts indicated no need for additions or deletions of terms on the list. Only one expert indicated any additions or deletions. This expert suggested that *research value* should be added, and *value of materials* should be removed because “one could take a perfectly ordinary book and deck it out with gold and gems and still not have a rare book, merely an expensive ordinary book.” Because the consensus of the remaining experts was that the list required no additional terms or removal of existing terms, the list remained containing the same 14 terms.

Table 2

Rankings, according to six participants, of 14 criteria which may be attributed to rare books.

	Expert One	Expert Two	Expert Three	Expert Four	Expert Five	Expert Six
Authenticity	1	1	7	1	11	1
Association	10	6	12	8	9	14
Textual Variants	7	8	13	9	3	6
Cultural Value	6	4	2	2	5	7
Historical Value	5	3	1	3	6	2
Provenance	3	7	11	4	10	4
Special Features	12	5	10	10	2	9
Aesthetic Value	9	13	6	11	4	8
Production	8	12	8	14	8	13
Demand	13	9	3	12	13	11
Availability	4	14	4	13	14	12
Condition	2	2	5	5	1	5
Binding	11	11	9	7	7	10
Value of Materials	14	10	14	6	12	3

Iteration 2

The survey that was issued for the second iteration was completed and returned via e-mail by all six of the participants who engaged in the first iteration of the study. Upon receiving the revised survey from all six participants, Table 3 was constructed. The table could be used to compare each participant's respective division of 100 tokens among all of the terms with the allocations of the other five experts, to determine patterns in the manner the experts would weight the terms.

Table 3

Allocation of 100 tokens, according to six participants, among 14 criteria which may be attributed to rare books.

	Expert One	Expert Two	Expert Three	Expert Four	Expert Five	Expert Six
Authenticity	30	12	3	50	1	14
Association	0	7	3	5	4	4
Textual Variants	0	7	2	1	12	6
Cultural Value	10	7	15	4	11	7
Historical Value	10	7	15	10	11	12
Provenance	10	7	3	5	4	9
Special Features	5	8	3	1	12	5
Aesthetic Value	5	3	5	10	11	6
Production	0	6	5	1	9	3
Demand	0	6	15	1	0	4
Availability	10	5	15	1	0	4
Condition	15	12	10	5	15	8
Binding	5	7	5	1	10	5
Value of Materials	0	6	1	5	0	13

From this table, a chart was developed to illustrate the frequency of distribution of the terms (see Figure 1). The terms were rearranged to provide an illustration of their respective frequencies, according to the number of tokens that the experts cumulatively attributed to each characteristic.

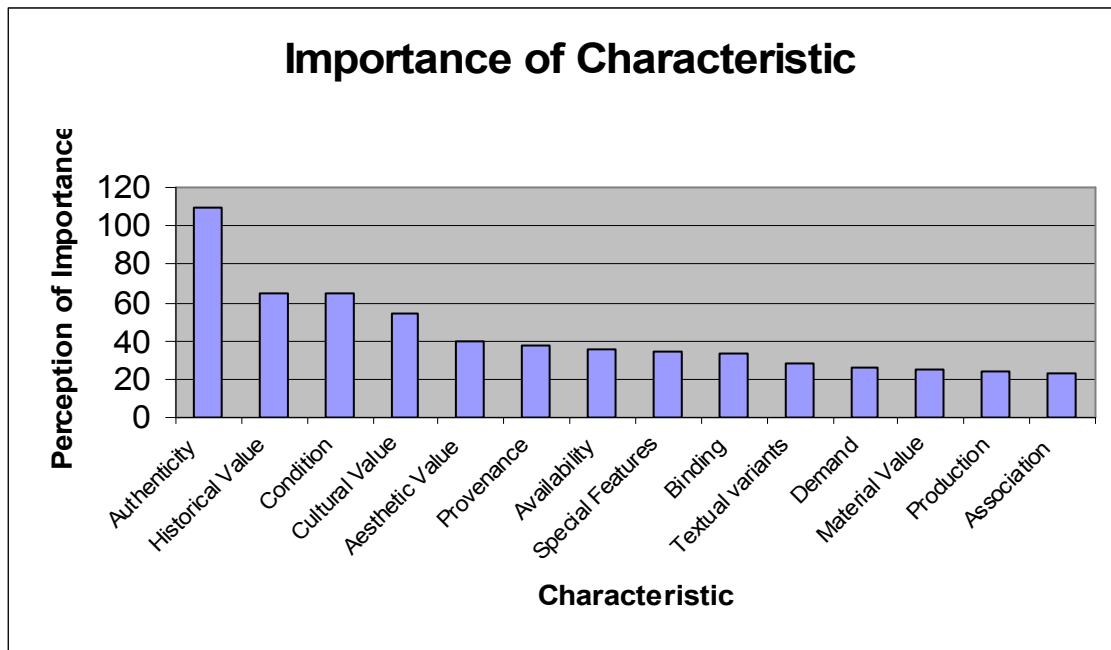


Figure 1. Frequency of distribution for 14 criteria of rare books, based upon cumulative allocations of tokens for all participants.

The 14 terms in Figure 1 could be grouped into three noticeably similar groups, based on a distinct clustering in the values that were recorded regarding the perception of importance for each characteristic. The four criteria which were allotted the greatest number of tokens, and therefore can be categorized as Group 1, are *authenticity*, *historical value*, *condition*, and *cultural value*.

Of the 14 criteria, the one which exhibited the greatest variation in allotment of tokens was *authenticity*. To demonstrate the wide variety of responses for this characteristic, a scale of 0 to 60 was necessary for its representative chart. For the remainder of the criteria, the responses indicated much lower allotments of tokens, and therefore a scale of 0 to 20 was more appropriate for illustrating subtle differences in the data.



Figure 2. Distribution of 100 tokens for authenticity, according to six experts.

Figure 2 represents the distribution of tokens for *authenticity*. One expert allotted only one token to authenticity, and clarified this decision by stating that “there are many examples of ‘fakes’ which are considered rare and valuable and certainly interesting.” However, four of the participants ranked authenticity as the number one criterion in their ranking. Furthermore, for these four experts, authenticity was the characteristic to which they allocated the largest number of their tokens.

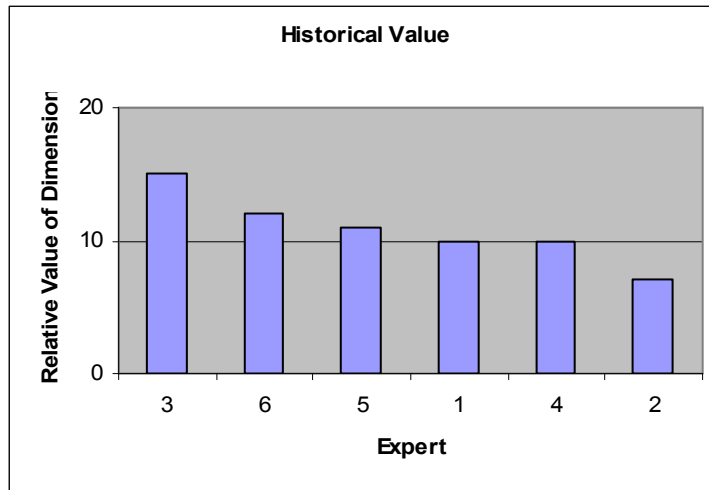


Figure 3. Distribution of 100 tokens for historical value, according to six experts.

As Figure 3 demonstrates, for *historical value* the responses were much more consistent, and ranged only from 7 to 15 tokens. In the initial ranking, historical value scored very highly, and received a ranking of 1 from one expert, and varied from 2 to 6 for the other five responses.

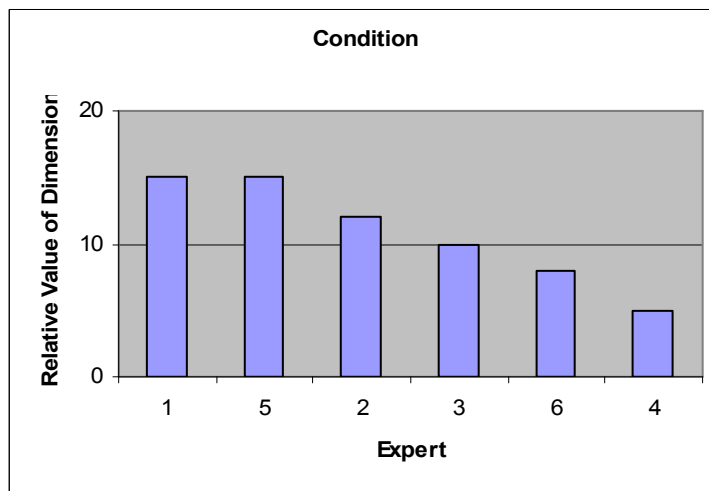


Figure 4. Distribution of 100 tokens for condition, according to six experts.

Figure 3 illustrates that although *condition* received high scores of 12 and 15, two low responses of 5 and 8 caused the cumulative score for this characteristic to be lower than that of historical value. One expert gave *condition* a ranking of 1 in the initial survey, and allotted the greatest number of tokens to this characteristic.

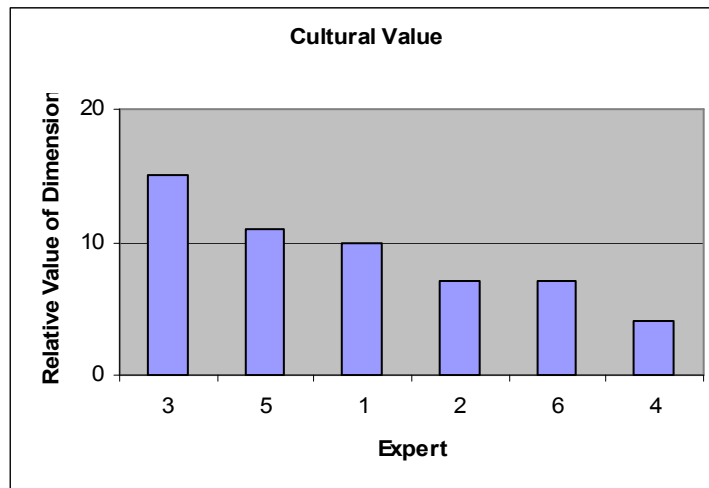


Figure 5. Distribution of 100 tokens for cultural value, according to six experts.

Cultural value, like *condition*, received a lower cumulative score based upon low allocations of tokens by three of the experts, as seen in Figure 5. In addition, it received a lower score than *condition* from one expert, which caused this characteristic to receive a lower cumulative score than *condition* on the frequency of distribution chart. *Cultural value* received consistently high initial rankings, but the allotment of tokens to this characteristic varied greatly among the experts, ranging from 4 to 15.

Group 2 of the data, which includes *aesthetic value*, *provenance*, *availability*, *special features*, and *binding*, received cumulative scores which were very close to each other.

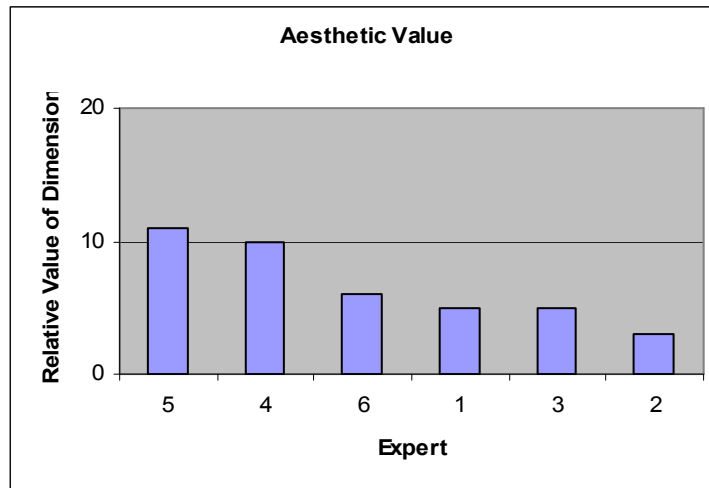


Figure 6. Distribution of 100 tokens for aesthetic value, according to six experts.

As Figure 6 indicates, the token allocation for *aesthetic value* offered little consensus, but all of the responses placed this characteristic within a mid-range of importance. It received between 3 and 11 tokens per expert, and was ranked between 4 and 13.

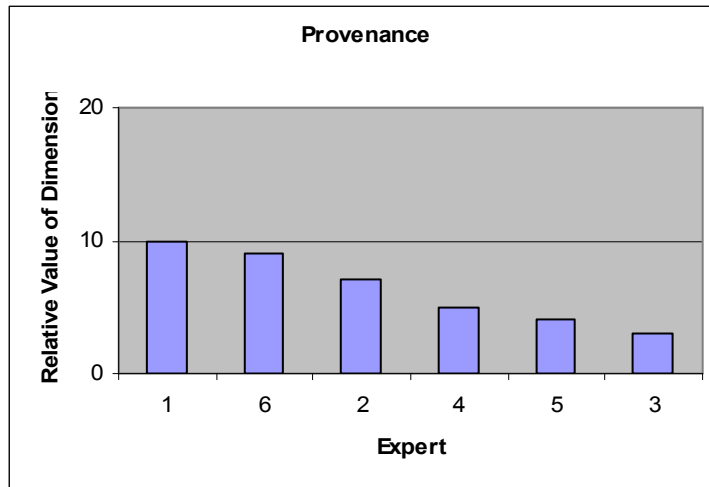


Figure 7. Distribution of 100 tokens for provenance, according to six experts.

In the initial rankings, *provenance* ranked higher than aesthetic value. However, as one can see in Figure 7, during the token exercise the former term received a lower cumulative score.

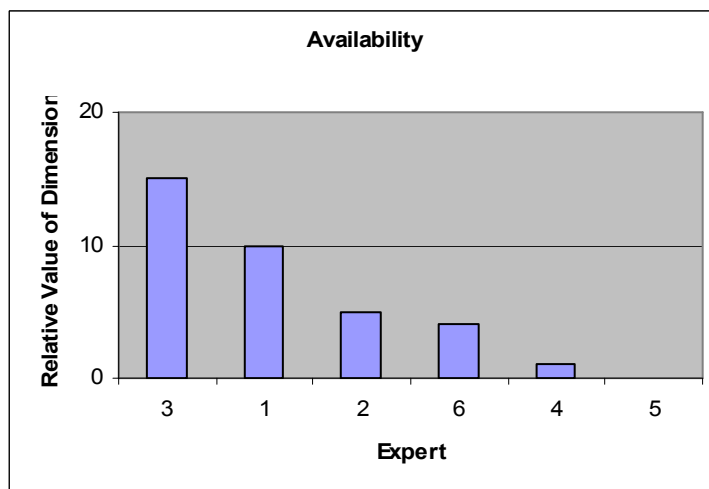


Figure 8. Distribution of 100 tokens for availability, according to six experts.

Although *availability* was allotted very few tokens by two of the experts, one can see in Figure 8 that two other experts assigned very large proportions of their tokens to this characteristic.

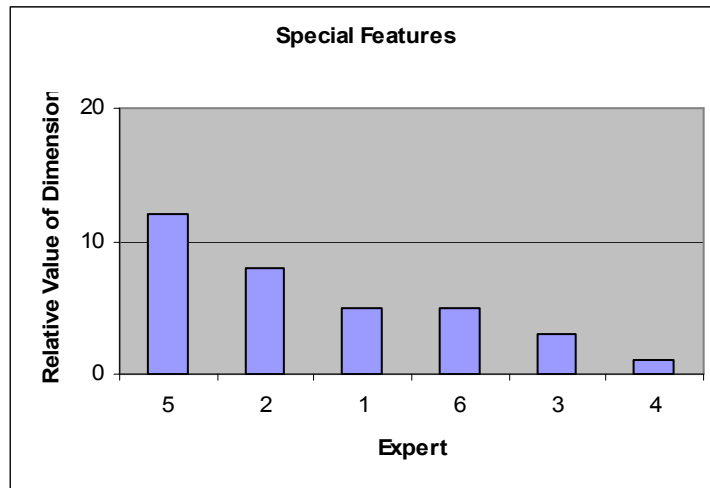


Figure 9. Distribution of 100 tokens for special features, according to six experts.

Special features received a high initial ranking from one expert, but four of the experts assigned it a relatively low ranking. During the allotment of tokens, only one expert allocated a significant number to this characteristic, as can be seen in Figure 9.

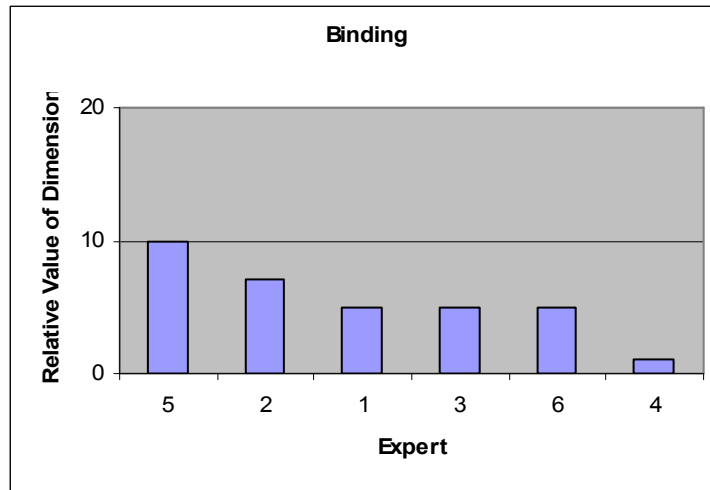


Figure 10. Distribution of 100 tokens for binding, according to six experts.

Two of the experts assigned mid-range rankings to *binding*, and the other four experts all ranked it within the bottom half of the characteristics. However, during the token allocation, one expert assigned it a comparatively higher score (see Figure 10).

The final group of criteria, which includes *textual variants*, *demand*, *value of materials*, *production*, and *association*, received consistently low scores. Because the data sample was small, the characteristics to which one expert allocated 0 tokens received much lower cumulative scores, which contributed to their placement in the bottom grouping. However, these criteria also received lower scores in general from the other experts.

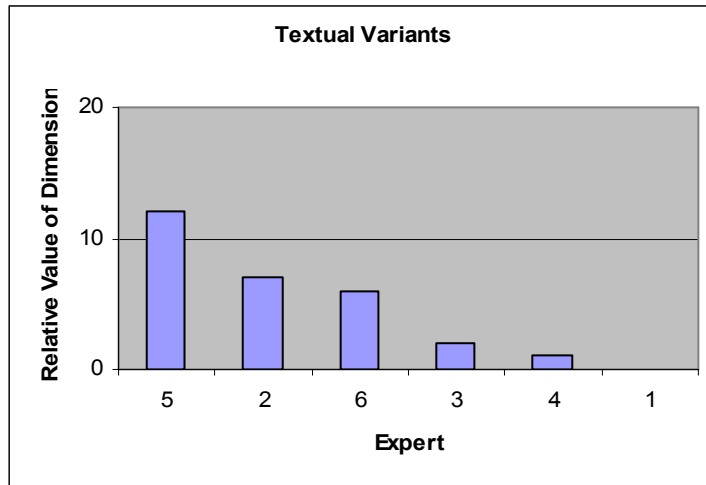


Figure 11. Distribution of 100 tokens for textual variants, according to six experts.

Textual variants were placed in this position because although they received low rankings and token allotments from five of the experts, in both surveys one expert valued this characteristic more highly (see Figure 11).

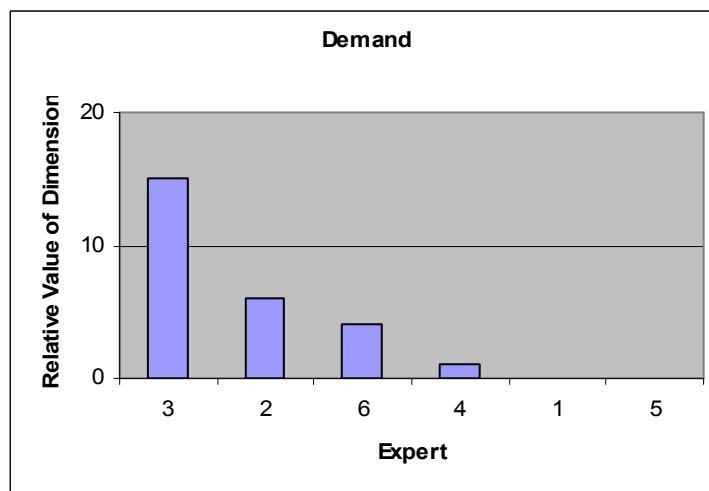


Figure 12. Distribution of 100 tokens for demand, according to six experts.

In both surveys, one expert valued *demand* much more highly than the other experts. Figure 12 demonstrates that although two of the experts allotted no tokens to this characteristic, one expert assigned it to the largest number within their allocation.

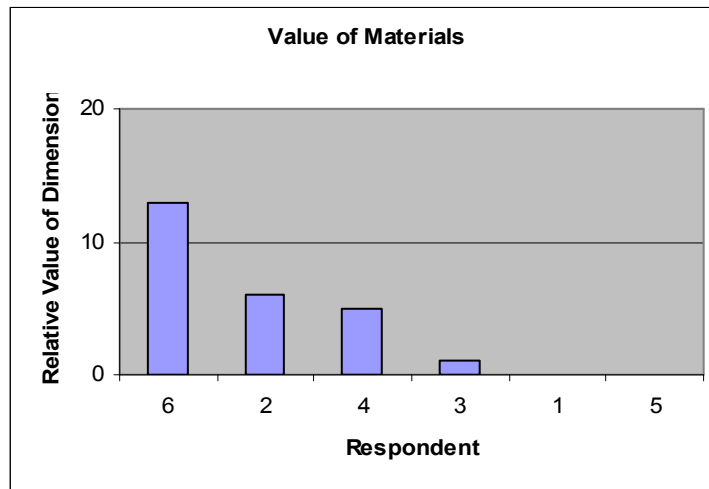


Figure 13. Distribution of 100 tokens for value of materials, according to six experts.

Two experts allocated 0 tokens to *value of materials* (see Figure 13), and one of the two experts elaborated on the decision by stating that one could cover an ordinary book in expensive materials and still not have a rare book, rather merely an expensive ordinary book.

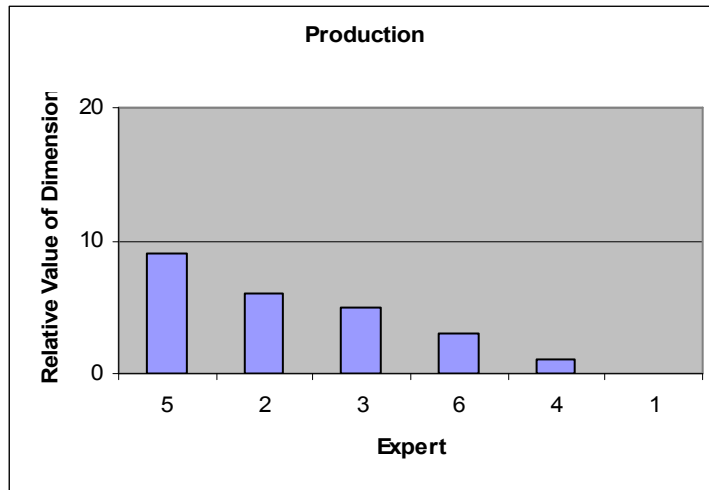


Figure 14. Distribution of 100 tokens for production, according to six experts.

Production received a consistently low score, as Figure 14 illustrates. However, four of the experts requested clarification of the definition of this term. Although they did not have a concise definition, production was not the characteristic that received the lowest cumulative score (see Figure 15).

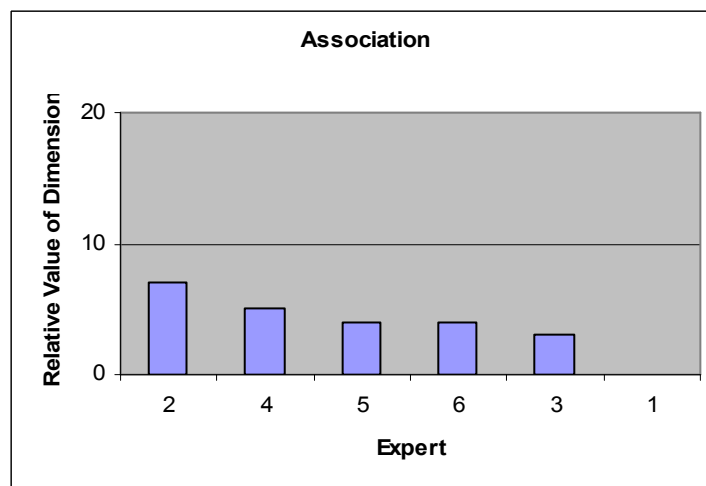


Figure 15. Distribution of 100 tokens for association, according to six experts.

Only one expert placed *association* in the top half of the ranking, and this participant also assigned a higher number of tokens to this characteristic than the other five experts. As Figure 15 illustrates, the other experts placed association in a consistently low ranking, and allocated very few tokens for this characteristic.

Iteration 3 - Non-Numerical Data

The third iteration of questioning solicited unstructured information from each expert (see Appendix C). For this iteration, only three of the experts returned surveys within the expected time frame. Responses were requested two more times from the other three participants. After four weeks, one more Iteration 3 survey was returned.

The first expert who responded provided a link to the parent institution's preservation division. Information obtained from this response was in keeping with earlier responses provided in the first iteration, which indicated that this facility received its preservation funds from a general preservation budget for the university's entire library system. Similarly, during the first iteration, three more of the six experts indicated that they must receive appropriated funds from their institution's general preservation budget, and that they do not have a separate preservation budget for their special collections.

During the third iteration, one expert failed to respond to Question 2, but some of the information regarding a mission statement for the library's preservation department was available via the link provided in response to

Question 1, indicating that no specific information was available for the rare book collections alone. For Question 3, this expert suggested three criteria that might be utilized by their institution for making a difficult preservation decision:

- Frequency or circumstances of use (i.e., if item is of low use, it will not be given a high place in treatment queue)
- Value of material (items with high research or financial value are given higher priority)
- Availability of grant or donor funding for targeted, project-based conservation (i.e. if we have a funding source that wants to donate money for the conservation of a particular subject or format, that will dictate which items receive faster treatment)

Another expert completed the third iteration several days later. This individual indicated in response to Question 1 that “we do not have a written preservation policy, or if we do, I do not yet know of it. . . . As Special Collections librarian, I would be the one evaluating materials for preservation, within the limits of my budget and resources.” According to this participant, this facility also has no mission or goals statement relating to preservation. This expert indicated that objects that relate to the institution’s mission are of the first priority.

Furthermore, the facility attempts to continually adapt to changes in funding, the needs of the students and faculty, and the university’s changing mission and priorities.

The third expert to complete this iteration stated that at their facility, “we just try to stabilize the book's condition. There is seldom any funding for doing more than making phase boxes or Mylar[®] folders for fragile books.” Furthermore, this individual stated that this facility has no mission statement or goals statements relating to preservation activities. This individual also explained that this department must report the need for difficult preservation decisions to other members of the library staff, who then cumulatively make the decisions.

Responses to the third iteration were repeatedly requested from the other three participating experts, and one of the three submitted a survey several weeks later. In answer to Question 1, regarding preservation decisions, this expert states that “though there are many items within our stacks that still need attention, and we address those when possible, we mainly concentrate on the new acquisitions. All incoming items are first cataloged and processed, then set aside for someone who has the skills to do the treatments.” In answer to Question 2, this facility incorporates its documentation of preservation activities within the job description of the department head, which is revised annually. Other than this, no formal statement exists for the facility. The expert responded to Question 3 by stating “if we have to turn to outside sources, which would be very expensive, there are many factors that have to be considered. Several of the criteria that you listed in the first two parts of your survey would need to play a large role in the decision making process.” Furthermore, this expert indicated

that catastrophic events are often the catalysts for receiving more funds for preservation and conservation of collection materials.

Two of the experts did not contribute to the third iteration. However, the unstructured information provided by the other four offered some insight into the types of activities and decision-making processes which currently occur in operational facilities housing rare books. Such information could then be compared with the quantifiable data from the first two iterations, and then ideally reflected in the constructed decision-making framework.

Responding to the Research Questions

Question 1: What criteria could be used to establish the inherent value of materials in rare book collections?

Although five of the six experts agreed that the list of 14 criteria required no additions, one expert recommended that *research value* be added to the list. However, this term was not added because the textual research value of a rare book, which is not incorporated within the book's inherent value as an information-bearing object, can be adequately represented in a surrogate. Any other research value reflecting the physicality or context of the book can be incorporated into the 14 criteria which originally were presented. For example, research that might be conducted regarding a book's history of ownership could be classified under *provenance*, or the research value of a book based upon a notable individual's marginalia could be classified as *association*.

Several of the participants requested clarification of the word *production*. This term was presented in the literature among other terminology for which the experts requested no clarification. Schreyer (2000) referred to *production* within the proceedings of a preconference for the Rare Book and Manuscripts Section of the Association of College and Research Libraries. The need for rare book experts to request clarification of a term which has been discussed in professional forums within the field indicates that the terminology for rare books is not yet standardized. If a standard existed, practicing professionals should not require a definition to be provided for them—this information should already be part of their professional body of knowledge. Furthermore, the varying rankings received from the experts (see Table 2, p. 52) suggest that there is no consistently-accepted hierarchy of criteria for setting preservation priorities. There was general agreement concerning the inclusion of terms within the list, as only one expert recommended that the list be altered, but more variations existed regarding the relative ordering of the terms.

Although four of the six experts requested clarification of *production*, *association* received the lowest cumulative score. Assigning a higher score to a characteristic for which they requested clarification (*production*) seems counterintuitive. Furthermore, although the placement of *association* at the bottom of the hierarchy of criteria reflects the opinions of the experts, such a ranking seems inappropriate. An association that a rare book shares with a famous person or historical figure contributes to the inherent value of the book,

and would be impossible to replicate in a representation. A significant association might be considered an extremely important part of the intangible experience of engaging with a rare book, and one which has potential for information loss during the development of a surrogate. However, the panel of experts universally assigned this term a low ranking and allocation of tokens.

Another surprising result was the homogeneity of the responses given by five of the six participating experts. Given the lack of a single, concise list in the literature regarding characteristics of rare books, one might expect that the individuals who function in professional capacities within the field would differ in their opinions as well. However, the panel of experts who responded to the survey did not reflect the variety in the literature. All but one of the experts did not recommend that terms be added to the list, and the one term that was recommended by an expert was determined to be inappropriate for inclusion. Therefore, the responses suggested that the list of 14 terms provided by the investigator was complete and comprehensive.

Expert 5 not only provided answers which varied significantly from those of the other five experts, but this individual also provided the most commentary and number of suggestions in the first two iterations. Perhaps the lengthier responses and differing opinions can be attributed to more extensive experience in the field. Two of the experts had less than five years of experience in professional rare book positions, three had between 10 and 15 years, and Expert 5 indicated 20 years of experience. It is possible that Expert 5's 20 years of

experience in the field provided greater insight into the problem, and that in fact the other experts were less knowledgeable. The other five experts might therefore have been in agreement, but incorrect as a group. Because Expert 5's answers varied dramatically from the remainder of the panel, and because the sample size was relatively small, this one participant's opinion caused changes in the survey results that might otherwise have demonstrated more agreement. Although a few variations existed in the responses of the experts, particularly Expert 5, the general consensus suggested that the 14 criteria with which the study began comprehensively represent the characteristics of rare books which contribute to their inherent value.

Question 2: By what method can staff members form a decision about which objects to preserve?

The 14 criteria were divided into two distinct groups: one representing the physicality of the rare book, and the other reflecting the book's context over the period of its life span. Within these two categories, each term was assigned its cumulative allotment of tokens from Survey 2 (see Tables 4 and 5). The cumulative scores were divided by the sum of the scores for all of the criteria in the given category to provide a normalized percentage weight for each criterion. For example, *authenticity* received a total of 110 tokens from all of the experts—the highest number attributed to a physical characteristic. This number was divided by 335, which is the number of total tokens attributed to criteria relating to

the physicality of the book. The resulting normalized score for *authenticity* was 0.328.

Table 4
Percentage weights for physical characteristics of rare books.

Physical Characteristic	Total Number of Tokens	Normalized Score
Authenticity	110	0.328
Condition	65	0.194
Aesthetic Value	40	0.119
Special Features	34	0.101
Binding	33	0.099
Textual Variants	28	0.084
Material Value	25	0.075
Total	335	1.000

Table 5
Percentage weights for contextual characteristics of rare books.

Contextual Characteristic	Total Number of Tokens	Normalized Score
Historical Value	65	0.245
Cultural Value	54	0.204
Provenance	38	0.143
Availability	35	0.132
Demand	26	0.098
Production	24	0.091
Association	23	0.087
Total	265	1.000

A scale of zero to ten was then constructed for each criterion, and used to assign a value for each characteristic. A value of ten for any given characteristic is the highest value that can be achieved, and zero is the lowest. Assigning values to the characteristics of rare books is a subjective process. Reducing the subjective process to a regulated and consistent scale of zero to ten for each characteristic provides a more quantifiable scale for evaluation and measurement.

Characteristics pertaining to the physical nature of the book.

For each of the seven criteria pertaining to the physicality of the rare book, figures have been constructed to illustrate the range within which a given rare book's characteristics may be valued.

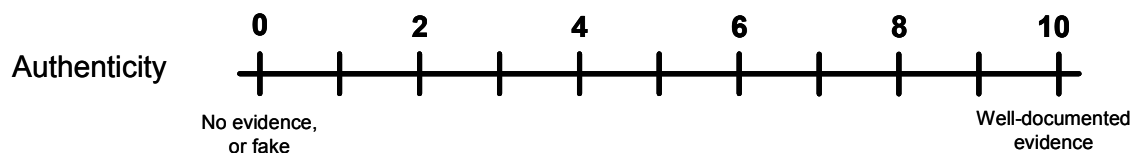


Figure 16. Valuation scale for authenticity.

As Figure 16 illustrates, a value of ten is appropriate for books possessing concrete, well-documented evidence of authenticity. For example, a book possessing associated documentation which confirms the book's authenticity, such as an appraisal conducted by a trained conservator, might receive a value of ten. Conversely, a value of zero indicates a book which has no evidence of authenticity, or a book which is a documented fake or reproduction.

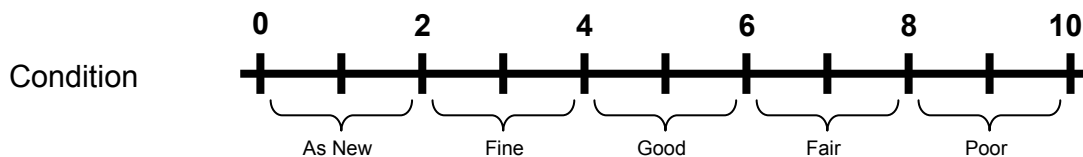


Figure 17. Valuation scale for condition.

The five terms represented in the Figure 17 scale are commonly utilized to describe the condition of rare books (Carter & Barker, 2004). For the above framework, a range of zero to two represents a book in “as new” condition, and two to four is appropriate for a book of “fine” condition. A range of four to six can be utilized for books of “good” condition, six to eight for “fair” condition, and a range of eight to ten indicates “poor” condition. A higher value would be given to a book of poorer condition because preservation of such a book would be of greater necessity to maintain the object’s physical integrity.

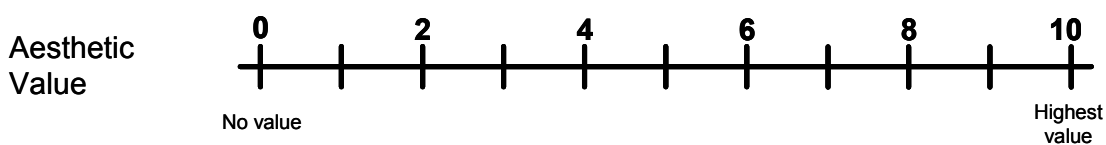


Figure 18. Valuation scale for aesthetic value.

Aesthetic value can be a rather subjective category to evaluate. An item that is considered aesthetically pleasing to one individual may be somewhat distasteful to another. However, a scale was required to reduce the subjectivity to a small degree. Therefore, as Figure 18 illustrates, a book with the highest

aesthetic value according to the person making the preservation decision would receive a value of ten, and one with no aesthetic value would receive a value of zero.

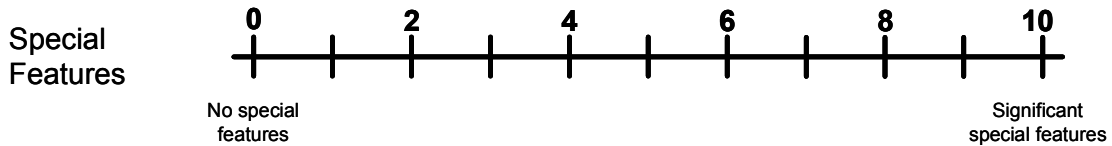


Figure 19. Valuation scale for special features.

In Figure 19, a book possessing significant special features, such as maps, photographs, or dust jackets, would receive a value of ten. Such special features might be part of the original work, or might have been added to the book at a later time. A value of zero is appropriate for books possessing no special features.

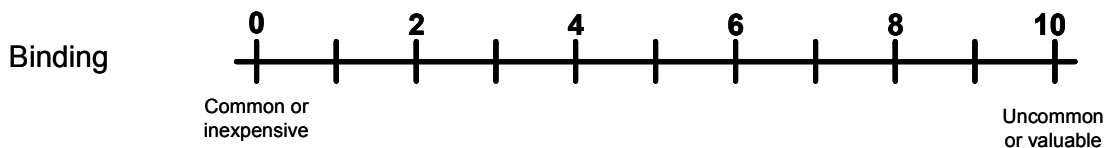


Figure 20. Valuation scale for binding.

Any book possessing an uncommon or valuable binding, including finely-tooled leathers or unique bindings, may receive a value of ten, as indicated in Figure 20. Bindings which are common or inexpensive, such as paper wrappers, may be given a value of zero.

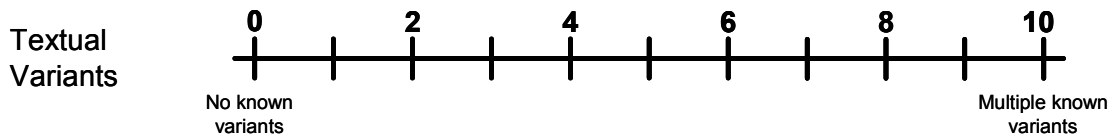


Figure 21. Valuation scale for textual variants.

A value of ten would be given to a book which exists as one of multiple known textual variants—meaning that during the printing process for a given edition of a work, variations in the text occurred that may make a specific book within that edition more unique. As Figure 21 indicates, a value of zero would be assigned to a book for which there are no known textual variants.

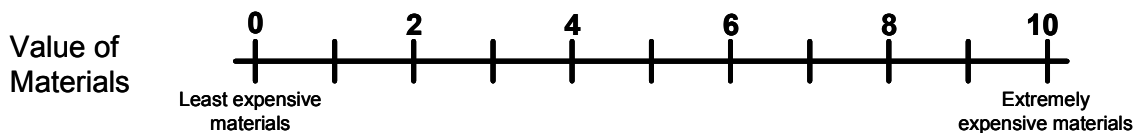


Figure 22. Valuation scale for value of materials.

In Figure 22, books which possess highly expensive materials such as gemstones or gold as part of the cover decoration, or which contain gold leaf within illuminated manuscripts, might appropriately receive a value of ten. A value of zero would be appropriate for books comprised of the least expensive materials, such as inexpensive groundwood paper.

Characteristics pertaining to the contextual nature of the book.

Seven figures also have been constructed to illustrate the zero to ten scales that may be appropriate for assigning values to a rare book. The scales

correspond to each of the seven criteria pertaining to the context in which the book has existed over the span of time since its creation.

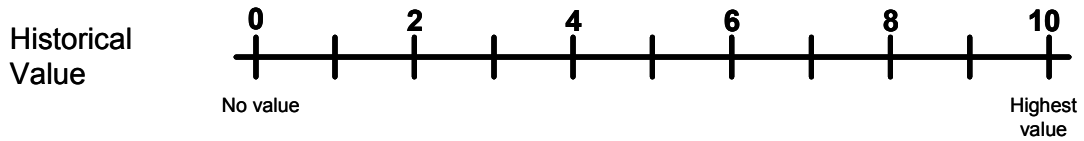


Figure 23. Valuation scale for historical value.

Figure 23 represents the scale for historical value, which can be a subjective category. Staff members may score books in this area by giving books with the most historical value a value of ten. Books with high historical value might include those which played a role in an historic event. Those with no historical value, such as mass-produced modern paperbacks, may receive a zero.

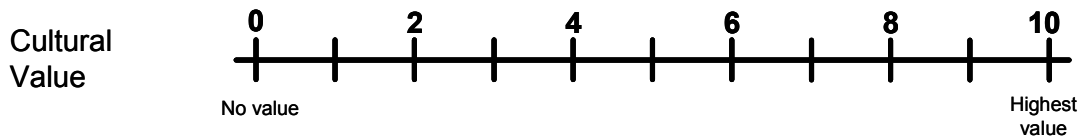


Figure 24. Valuation scale for cultural value.

Like historical value, cultural value is a rather subjective category, and has no objective scale for establishing value. Cultural value can vary depending upon the cultural affiliations of the individual evaluating the book, which may be the case for books with varying religious connections or other unique cultural characteristics. Nonetheless, a zero to ten scale reduces subjectivity to some

degree. In Figure 24, books with the most cultural value, according to the person making the decision, would receive a value of ten. Those with no cultural value receive a value of zero.

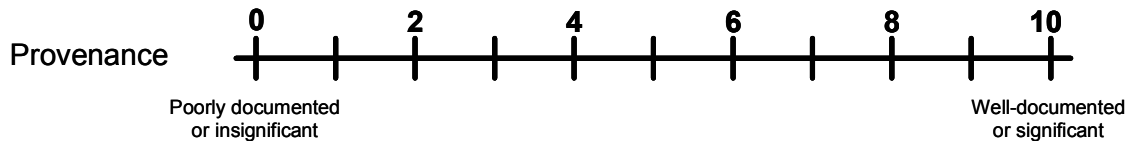


Figure 25. Valuation scale for provenance.

In Figure 25, a value of ten would be given to a book with a well-documented provenance, including official documentation of previous ownership, or one which indicates a pedigree of previous ownership by individuals or groups of significance. Books with poorly documented provenance or indications of commonplace ownership would receive a value of zero. The values would increase or decrease based upon the level of documentation and the significance of the chain of ownership.

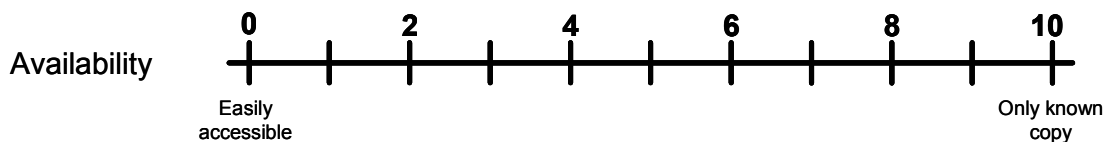


Figure 26. Valuation scale for availability.

A book which is the only known copy of its kind would receive a value of ten, because its uniqueness contributes to its rarity. In Figure 26, an easily-accessible book would receive a value of zero. If several copies of the book are

available, but the copies are not readily available to users, a high value would also be assigned because the information contained within the book is not available.

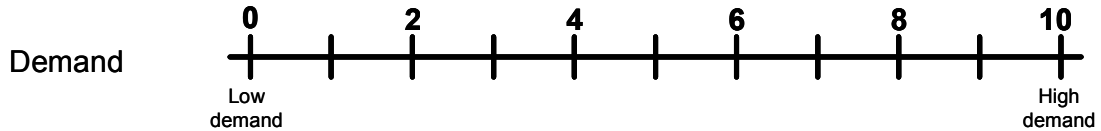


Figure 27. Valuation scale for demand.

Demand can be demonstrated through documentation which indicates that patrons regularly request the use of the book. Examination of catalogs which demonstrate high purchase prices for the book also indicate demand. For a book of high demand, as indicated in Figure 27, a value of ten would be given. A book for which there is no demand would receive a value of zero.

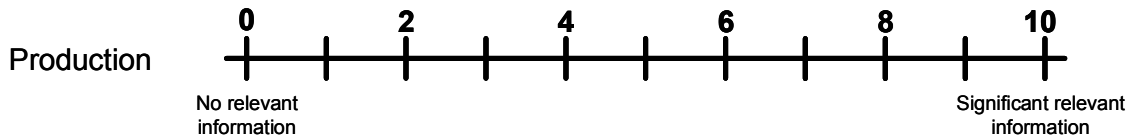


Figure 28. Valuation scale for production.

A book containing significant information of note regarding its production would receive a value of ten, as indicated in Figure 28. Information about production might include signed bindings or books possessing information regarding their publishers or printers. Conversely, a book with no information regarding its production would receive a value of zero. A book which had a

production of little historical or contextual significance, such as a mass-market modern paperback, would be assigned a value of zero.

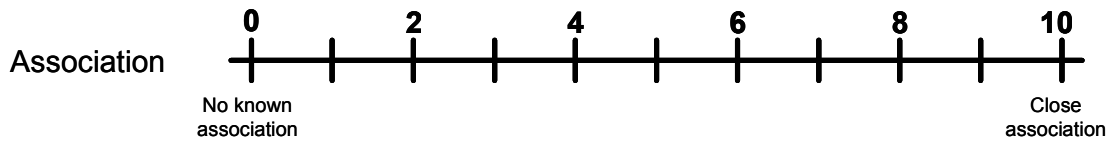


Figure 29. Valuation scale for association.

In Figure 29, a value of ten indicates a book which possesses a close association with either the author or a person or group of interest (Carter & Barker, 2004). Ownership by a particular person or group may be enhanced by signatures, inscriptions, or marginalia, which can be authenticated as being the product of an association. A value of zero indicates no known association with a person or group of renown.

Because none of the 14 terms which were originally extrapolated from the literature were eliminated by the experts within this study, and no additional terms were added, the results suggest that a set of subjective criteria exists which are generally accepted by practitioners. However, the data from this study indicate that seasoned professionals do not agree on the respective importance of the criteria. A challenge exists in establishing an order of importance, and applying the hierarchy to a framework which provides an objective method for prioritizing the preservation of original objects.

Question 3: What is an objective process for evaluating collection materials and establishing preservation priorities?

For the purposes of illustration, an imaginary 15th century copy of the works of the philosopher Seneca will be used to demonstrate the application of the zero to ten scales to a theoretical rare book. If a staff member within a rare book collection wanted to evaluate the book according to the 14 established criteria, the book might receive the following values:

Authenticity: Because a trained conservator evaluated the book and determined it to be a 15th century copy, this book might be given a value of 8. The evaluation can be considered significant evidence verifying the book's authenticity. Corroboration from more than one other trained conservator would have increased the score to 9 or 10.

Condition: The condition borders between "good" and "fine," and therefore a value of 4 is appropriate.

Aesthetic Value: Because the book is bound in an undecorated vellum cover, and the pages are printed with little ornamentation, the staff member determines that aesthetically the value is rather low. Therefore, the book receives a value of 3.

Special Features: There are no special features, and therefore a value of 0 is given.

Binding: The binding for this book is vellum, which is a thin and supple animal skin. Because vellum bindings are uncommon in modern books, and therefore historically significant, the book receives a value of 8.

Textual Variants: Several variants of this book are known to exist because some errors occurred during the printing process, and thus the book is given a value of 7.

Value of Materials: The monetary value of the materials is somewhat low. The paper is handmade and of high quality, but paper and vellum are not particularly expensive. Therefore, for this characteristic the book is given a value of 2.

Historical Value: This historical value of this book is very high. Based on its publication date, the book is classified as “incunabula”—meaning it was published within the first 50 years after the invention of the printing press. Therefore, the book receives a value of 9. A book such as a Gutenberg Bible would appropriately receive a score of 10.

Cultural Value: Because the book contains philosophical texts, it may be argued that the cultural value is relatively high. Therefore, the value for this category is 8.

Provenance: This book possesses some related documentation regarding its most recent former owner, but no other chain of custody. Its former owner also was not a person of particular note, other than being a consistent donor to the institution housing the book. Therefore, the value for provenance is 2.

Availability: The book is somewhat difficult to obtain—only five other known copies exist in the world. Thus, the value for availability is 9.

Demand: There is a moderate demand for this book from users of the collection, and this category might be given a value of 6.

Production: The documentation associated with this book provides no information regarding location of production, although the date is known. Therefore, this category receives a value of 4.

Association: The donor claims that the book was a gift from a former American president, but has no proof of this association. The book therefore receives a value of 6.

After assigning a value to the book for each characteristic, the characteristics are then multiplied by their normalized scores (see Tables 4 and 5, p. 66-67) to obtain weighted scores (see Tables 6 and 7). The resulting scores may then be plotted within a decision-making framework.

Table 6

Physical characteristic scores, based upon normalized percentages for each characteristic.

Characteristic	Score	Weighted Score
Authenticity	8 x .328 =	2.624
Condition	4 x .194 =	0.776
Aesthetic Value	3 x .119 =	0.357
Special Features	0 x .101 =	0
Binding	8 x .099 =	0.792
Textual Variants	7 x .084 =	0.588
Value of Materials	2 x .075 =	0.15
Total		5.287

Table 7

Contextual characteristic scores, based upon normalized percentages for each characteristic.

Characteristic	Score	Weighted Score
Historical Value	9 x .245 =	2.205
Cultural Value	8 x .204 =	1.632
Provenance	2 x .143 =	0.286
Availability	9 x .132 =	1.188
Demand	6 x .098 =	0.588
Production	4 x .091 =	0.364
Association	6 x .087 =	0.522
Total		6.785

When establishing the process by which to plot the resulting scores on a two-dimensional framework, neither physicality nor context may be appropriately defined as an independent variable to be placed on the x-axis, or a dependent variable to be assigned to the y-axis. As a result, another basis for assigning values to the axes was required. Because the physical nature of an object is

more readily recognizable than a given object's context, *physical attributes* were selected for placement on the x-axis of a two-dimensional representation, and *contextual attributes* were assigned to the y-axis (see Figure 30). The lowest possible score for either dimension is zero, which would indicate that values of zero had been assigned for each of the seven characteristics within that dimension. Similarly, the highest possible score is ten, which would indicate that a value of ten had been attributed to all of the criteria.

Within the graphic representation of the framework, it is possible to develop zones of placement, depending upon a book's score pertaining to all 14 criteria. A given book receives a data point based upon its cumulative physical and contextual values. Where books in the collection fall within the field of the framework can begin to assist staff members with setting preservation priorities.

The Preservation Decision-Making Framework

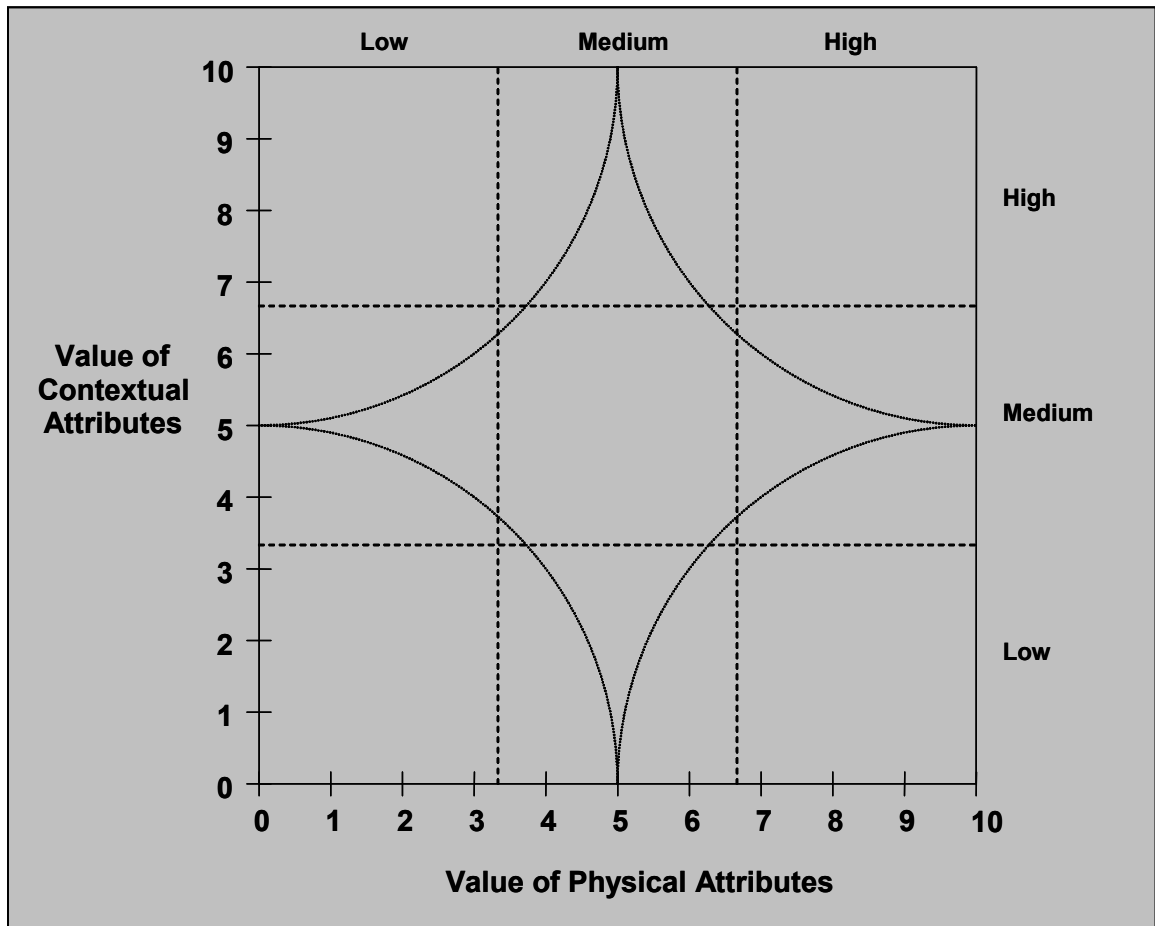


Figure 30. Framework for preservation decision-making in rare book collections, based upon characteristics relating to physicality and context.

Three different methods for assigning zones for prioritization are appropriate. For the first, the graph has been divided into nine squares, representing low, medium, and high scores for each of the two axes. As a given book's total physical and contextual score is plotted as a data point, the score falls into one of these nine zones. Based upon this prioritization, a point that is within the "high" zone for both dimensions would be of the highest priority for

preservation, while one which falls into a “low” classification for both dimensions would be one of the lowest priorities. By providing nine separate zones, the prioritization can be more precisely defined than within the five zone method. For example, high/high scores would precede medium/high or low/high, medium/high would precede medium/medium or medium/low, and so forth.

To indicate a second method for prioritizing, the graph is divided into five zones, based upon curved lines of delineation originating at the midpoints of each axis. Points falling within the upper right zone would be of first priority because the points within the zone would be the result of high scores on both axes. After the upper right zone, the zones in the lower right and upper left would be of the next priority. Those two zones indicate a high score on one axis, but perhaps a lower score on the other axis. The middle, somewhat diamond-shaped area, would be of “medium” priority, based upon medium scores for both axes. The zone in the lower left of the graph would contain items of lowest priority for preservation because such objects would have received low scores on both axes. The zones have been separated by curved lines, rather than straight, to represent the fluidity of the demarcations, and how they may be shifted slightly to accommodate objects on a case-by-case basis. Items with data points close to the lines of delineation may require further review before deciding in what manner to allocate resources for their preservation.

A challenge exists in determining how to prioritize a comparison of two books with scores which place the books in the medium/high and high/medium

zones, or high/low and medium/medium. Because physical characteristics received a cumulatively higher allotment of tokens than contextual characteristics, this study recommends that physical characteristics be weighted more heavily than contextual. For example, a book that received a cumulative score of nine for physicality and zero for contextual characteristics would be prioritized more highly than a book receiving a contextual score of nine and physical score of zero.

In addition to plotting data points within the zones of the framework, a third method for prioritizing can be developed from an ordering of the criteria. Based upon the allotment of tokens by the panel of experts in Iteration 2 of the survey, the list of terms can be placed into three distinct groups. In Figure 1 (p. 48), the criteria were listed in decreasing order, according to their cumulative allocation of tokens. Within the figure, two lines of delineation can be drawn to group the criteria—one line between *cultural value* and *aesthetic value*, and another line between *binding* and *textual variants*. Group 1, which received the highest cumulative allocation of tokens, consists of *authenticity*, *historical value*, *condition*, and *cultural value*. Group 2 contains *aesthetic value*, *provenance*, *availability*, *special features*, and *binding*, and Group 3 is comprised of *textual variants*, *demand*, *value of materials*, *production*, and *association*. After determining a data point within the framework for a given book, Groups 1 through 3 could be used to further refine process of selecting objects for preservation. For

example, given limited funds, one might want to consider a book exhibiting the criteria in Group 1 before those in Group 2 or 3.

The hypothetical 15th century copy of Seneca which was described on p. 76 would receive a cumulative physical value of 5.675, and a cumulative contextual value of 6.785 (see Tables 6 and 7, p. 78). When plotted on the framework (see Figure 30, p. 80), the book would fall in the medium zone for physical characteristics and the high zone for contextual characteristics. A data point at that location indicates that this book would be of relatively high priority for preservation, although it is possible that other collection materials may rank more highly. The scoring is most useful for comparisons of collection materials, and prioritizing them in relation to each other, rather than providing a quantifiable solution for a given book in isolation.

Testing the Framework

The curator and assistant curator of the Rare Book and Texana Collections at the University of North Texas independently evaluated five collection objects according to the 0-10 valuation scales developed within this study. Tables 8-27 demonstrate the resulting cumulative weighted scores for physicality and context that were calculated. The calculations are based on the values that were assigned to each of the 14 characteristics by the curator or assistant curator and multiplied by the normalized percentage weight scores that were calculated in Tables 4 and 5.

Table 8

Curator's assessment of each physical characteristic of Bolingbroke volume, multiplied by normalized percentage to obtain weighted scores.

Characteristic	Score	Weighted Score
Authenticity	8 x .328 =	2.624
Condition	5 x .194 =	0.97
Aesthetic Value	2 x .119 =	0.238
Special Features	3 x .101 =	0.303
Binding	2 x .099 =	0.198
Textual Variants	2 x .084 =	0.336
Value of Materials	2 x .075 =	0.15
	Total	4.819

Table 9

Curator's assessment of each contextual characteristic of Bolingbroke volume, multiplied by normalized percentage to obtain weighted scores.

Characteristic	Score	Weighted Score
Historical Value	1.5 x .245 =	0.368
Cultural Value	1.5 x .204 =	0.306
Provenance	5 x .143 =	0.715
Availability	5 x .132 =	0.66
Demand	3 x .098 =	0.294
Production	5.5 x .091 =	0.501
Association	5 x .087 =	0.435
	Total	3.279

Table 10

Assistant curator's assessment of each physical characteristic of Bolingbroke volume, multiplied by normalized percentage to obtain weighted scores.

Characteristic	Score	Weighted Score
Authenticity	9 x .328 =	2.952
Condition	8 x .194 =	1.552
Aesthetic Value	1 x .119 =	0.119
Special Features	3 x .101 =	0.303
Binding	2 x .099 =	0.198
Textual Variants	1 x .084 =	0.084
Value of Materials	3 x .075 =	0.225
	Total	5.433

Table 11

Assistant curator's assessment of each contextual characteristic of Bolingbroke volume, multiplied by normalized percentage to obtain weighted scores.

Characteristic	Score	Weighted Score
Historical Value	2 x .245 =	0.49
Cultural Value	4 x .204 =	0.816
Provenance	6 x .143 =	0.858
Availability	2 x .132 =	0.264
Demand	2 x .098 =	0.196
Production	5 x .091 =	0.455
Association	5 x .087 =	0.435
	Total	3.514

Table 12

Curator's assessment of each physical characteristic of Gone to Earth, multiplied by normalized percentage to obtain weighted scores.

Characteristic	Score	Weighted Score
Authenticity	8.5 x .328 =	2.788
Condition	6.5 x .194 =	1.261
Aesthetic Value	0 x .119 =	0
Special Features	4 x .101 =	0.404
Binding	0 x .099 =	0
Textual Variants	.5 x .084 =	0.042
Value of Materials	0 x .075 =	0
	Total	4.495

Table 13

Curator's assessment of each contextual characteristic of Gone to Earth, multiplied by normalized percentage to obtain weighted scores.

Characteristic	Score	Weighted Score
Historical Value	3.5 x .245 =	0.858
Cultural Value	6 x .204 =	1.224
Provenance	.5 x .143 =	0.072
Availability	5 x .132 =	0.66
Demand	1 x .098 =	0.098
Production	10 x .091 =	0.91
Association	.5 x .087 =	0.044
	Total	3.866

Table 14

Assistant curator's assessment of each physical characteristic of Gone to Earth, multiplied by normalized percentage to obtain weighted scores.

Characteristic	Score	Weighted Score
Authenticity	8 x .328 =	2.624
Condition	5 x .194 =	0.97
Aesthetic Value	4 x .119 =	0.476
Special Features	5 x .101 =	0.505
Binding	0 x .099 =	0
Textual Variants	1 x .084 =	0.084
Value of Materials	0 x .075 =	0
	Total	4.659

Table 15

Assistant curator's assessment of each contextual characteristic of Gone to Earth, multiplied by normalized percentage to obtain weighted scores.

Characteristic	Score	Weighted Score
Historical Value	5 x .245 =	1.225
Cultural Value	7.5 x .204 =	1.53
Provenance	1 x .143 =	0.143
Availability	6.5 x .132 =	0.858
Demand	1 x .098 =	0.098
Production	10 x .091 =	0.91
Association	.5 x .087 =	0.044
	Total	4.808

Table 16

Curator's assessment of each physical characteristic of Tempered Blade, multiplied by normalized percentage to obtain weighted scores.

Characteristic	Score	Weighted Score
Authenticity	8 x .328 =	2.624
Condition	7 x .194 =	1.358
Aesthetic Value	0 x .119 =	0
Special Features	9 x .101 =	0.909
Binding	0 x .099 =	0
Textual Variants	10 x .084 =	0.84
Value of Materials	0 x .075 =	0
	Total	5.731

Table 17

Curator's assessment of each contextual characteristic of Tempered Blade, multiplied by normalized percentage to obtain weighted scores.

Characteristic	Score	Weighted Score
Historical Value	8 x .245 =	1.96
Cultural Value	3 x .204 =	0.612
Provenance	8 x .143 =	1.144
Availability	10 x .132 =	1.32
Demand	3 x .098 =	0.294
Production	10 x .091 =	0.91
Association	8 x .087 =	0.696
	Total	6.936

Table 18

Assistant curator's assessment of each physical characteristic of Tempered Blade, multiplied by normalized percentage to obtain weighted scores.

Characteristic	Score	Weighted Score
Authenticity	8 x .328 =	2.624
Condition	7 x .194 =	1.358
Aesthetic Value	0 x .119 =	0
Special Features	10 x .101 =	1.01
Binding	0 x .099 =	0
Textual Variants	0 x .084 =	0
Value of Materials	0 x .075 =	0
	Total	4.992

Table 19

Assistant curator's assessment of each contextual characteristic of Tempered Blade, multiplied by normalized percentage to obtain weighted scores.

Characteristic	Score	Weighted Score
Historical Value	8 x .245 =	1.96
Cultural Value	4 x .204 =	0.816
Provenance	6 x .143 =	0.848
Availability	10 x .132 =	1.32
Demand	1 x .098 =	0.98
Production	4 x .091 =	0.364
Association	10 x .087 =	0.87
	Total	7.158

Table 20

Curator's assessment of each physical characteristic of Book of Psalms, multiplied by normalized percentage to obtain weighted scores.

Characteristic	Score	Weighted Score
Authenticity	8 x .328 =	2.624
Condition	4 x .194 =	0.776
Aesthetic Value	8 x .119 =	0.952
Special Features	9.5 x .101 =	0.96
Binding	9 x .099 =	0.891
Textual Variants	0 x .084 =	0
Value of Materials	7.5 x .075 =	0.563
	Total	6.766

Table 21

Curator's assessment of each contextual characteristic of Book of Psalms, multiplied by normalized percentage to obtain weighted scores.

Characteristic	Score	Weighted Score
Historical Value	1 x .245 =	0.245
Cultural Value	8 x .204 =	1.632
Provenance	.5 x .143 =	0.072
Availability	7 x .132 =	0.924
Demand	1.5 x .098 =	0.147
Production	5 x .091 =	0.455
Association	0 x .087 =	0
	Total	3.475

Table 22

Assistant curator's assessment of each physical characteristic of Book of Psalms, multiplied by normalized percentage to obtain weighted scores.

Characteristic	Score	Weighted Score
Authenticity	9 x .328 =	2.952
Condition	4 x .194 =	0.776
Aesthetic Value	9 x .119 =	1.071
Special Features	7 x .101 =	0.707
Binding	10 x .099 =	0.99
Textual Variants	0 x .084 =	0
Value of Materials	7 x .075 =	0.525
	Total	7.021

Table 23

Assistant curator's assessment of each contextual characteristic of Book of Psalms, multiplied by normalized percentage to obtain weighted scores.

Characteristic	Score	Weighted Score
Historical Value	1 x .245 =	0.245
Cultural Value	8 x .204 =	1.632
Provenance	.5 x .143 =	0.072
Availability	7 x .132 =	0.924
Demand	5 x .098 =	0.49
Production	6 x .091 =	0.546
Association	0 x .087 =	0
	Total	3.909

Table 24

Curator's assessment of each physical characteristic of Monuments to George Washington's Patriotism, multiplied by normalized percentage to obtain weighted scores.

Characteristic	Score	Weighted Score
Authenticity	8 x .328 =	2.624
Condition	8 x .194 =	1.552
Aesthetic Value	6 x .119 =	0.714
Special Features	8 x .101 =	0.808
Binding	5 x .099 =	0.495
Textual Variants	0 x .084 =	0
Value of Materials	2 x .075 =	0.15
	Total	6.343

Table 25

Curator's assessment of each contextual characteristic of Monuments to George Washington's Patriotism, multiplied by normalized percentage to obtain weighted scores.

Characteristic	Score	Weighted Score
Historical Value	6.5 x .245 =	1.593
Cultural Value	7 x .204 =	1.428
Provenance	2 x .143 =	0.286
Availability	5 x .132 =	0.66
Demand	1 x .098 =	0.098
Production	4 x .091 =	0.364
Association	5 x .087 =	0.435
	Total	4.864

Table 26

Assistant curator's assessment of each physical characteristic of Monuments to George Washington's Patriotism, multiplied by normalized percentage to obtain weighted scores.

Characteristic	Score	Weighted Score
Authenticity	8 x .328 =	2.624
Condition	8.5 x .194 =	1.649
Aesthetic Value	8 x .119 =	0.952
Special Features	9 x .101 =	0.909
Binding	6 x .099 =	0.594
Textual Variants	0 x .084 =	0
Value of Materials	3 x .075 =	0.225
	Total	6.953

Table 27

Assistant curator's assessment of each contextual characteristic of Monuments to George Washington's Patriotism, multiplied by normalized percentage to obtain weighted scores.

Characteristic	Score	Weighted Score
Historical Value	7 x .245 =	1.715
Cultural Value	8.5 x .204 =	1.734
Provenance	4 x .143 =	0.572
Availability	5 x .132 =	0.66
Demand	2 x .098 =	0.196
Production	3 x .091 =	0.273
Association	6 x .087 =	0.522
	Total	5.672

The resulting cumulative weighted scores produced a series of ten data points, which could be mapped on the preservation framework.

Table 28
Resulting weighted percentage scores for each book, which can be plotted on the preservation framework as data points.

		Physicality	Contextuality
<i>Bolingbroke</i>	Curator	4.819	3.279
	Assistant Curator	5.433	3.514
<i>Gone to Earth</i>	Curator	4.495	3.866
	Assistant Curator	4.659	4.808
<i>Tempered Blade</i>	Curator	5.731	6.936
	Assistant Curator	4.992	7.158
<i>Book of Psalms</i>	Curator	6.766	3.475
	Assistant Curator	7.021	3.909
<i>Monuments to George</i>	Curator	6.343	4.864
<i>Washington's Patriotism</i>	Assistant Curator	6.953	5.672

Figure 31 represents the ten data points as they would be mapped on the preservation framework presented in Figure 30. The points labeled “C” represent the responses given by the curator, and points labeled “AC” represent the responses of the assistant curator.

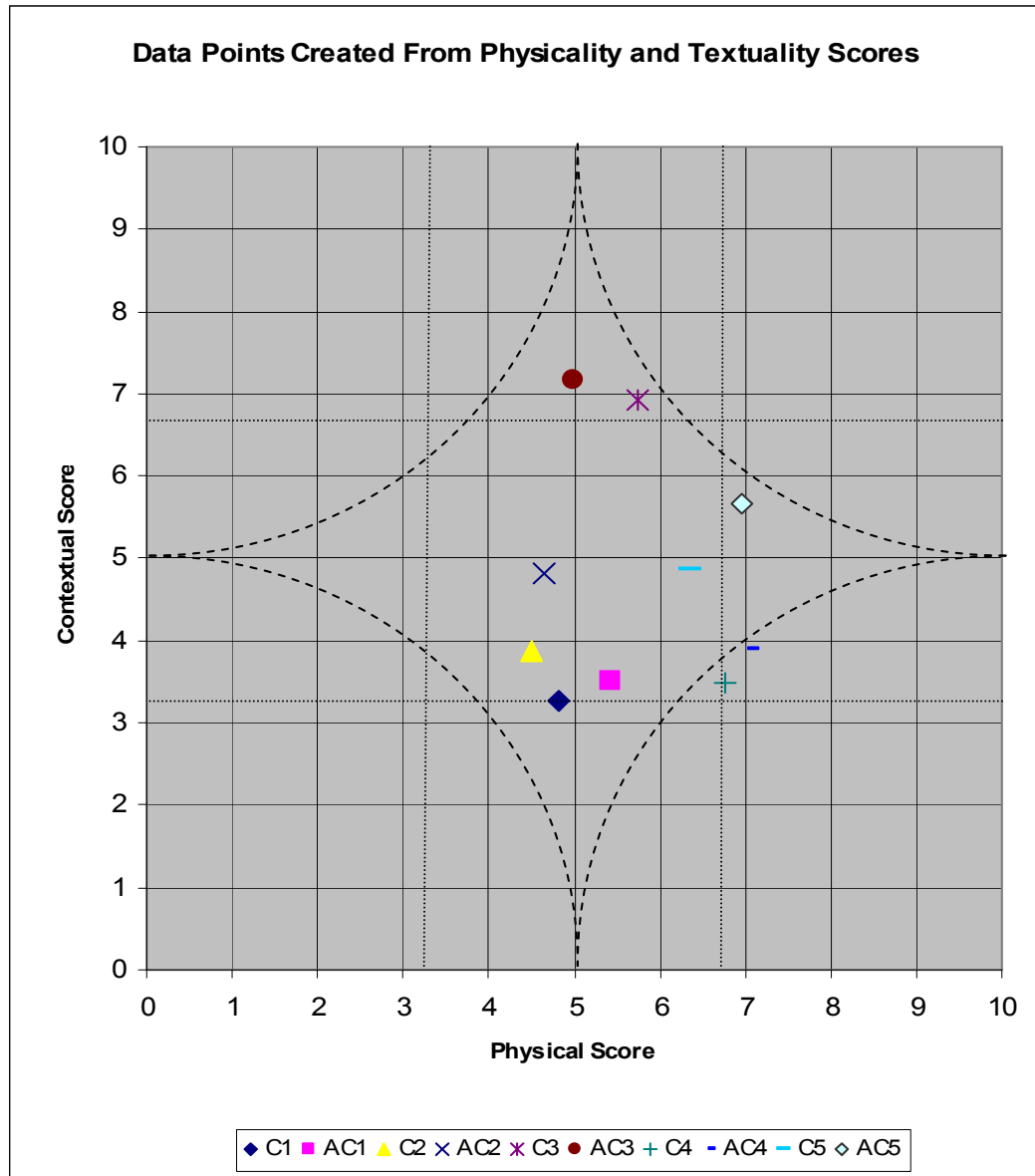


Figure 31. Data points for five books analyzed by two individuals, as plotted within the preservation framework, based upon the valuation scales developed within this study.

Based on the data points plotted within the graph, the curator would assign the highest priority to the *Book of Psalms*, followed by *Tempered Blade* and *Monuments to George Washington's Patriotism*, and finally *Gone to Earth*

and the Bolingbroke volume. The *Book of Psalms* fell within the high/medium zone based on the nine zone prioritization scheme, and within one of the two high zones based on the five zone scheme. Furthermore, as suggested on p. 86, this study recommends that physical characteristics be weighted more heavily than contextual characteristics. Because the *Book of Psalms* fell within the high zones for physicality, it is prioritized more highly. Both *Tempered Blade* and *Monuments to George Washington's Patriotism* fell within the middle, medium-priority zone in the five-zone scheme. However, *Tempered Blade* was located within the medium/high zone within the nine zone scheme, and *Monuments to George Washington's Patriotism* was within the medium/medium zone.

Therefore, *Tempered Blade* would be ranked more highly. *Gone to Earth* and the Bolingbroke volume both received relatively low scores, but their zone placement suggests that *Gone to Earth* would be prioritized above the Bolingbroke volume.

The assistant curator's results differed somewhat, with *Monuments to George Washington's Patriotism* receiving the highest priority, followed by the *Book of Psalms* and *Tempered Blade*. However, the assistant curator's results agreed with the curator's assessment of the other two volumes. Both individuals placed *Gone to Earth* and the Bolingbroke volume as the lowest priorities.

CHAPTER 5

DISCUSSION

It will greatly assist the decision-making process if a long-term strategy for the collection, taking into account the information contained in the collection, the demand for its use, the artifactual value and condition of individual items, and the resources available, is developed. (Kamel, 1999, p. 112)

A need exists for a standardized and objective decision-making framework to guide preservation activities in rare book collections. This study provides a compilation of professional recommendations regarding the characteristics which contribute to the value of rare books as information-bearing objects. The structured and unstructured data which were solicited during this study are used to formulate an objective decision-making framework for preservation management in rare book collections. Subjectivity is reduced through standardized tabulation of rankings and weighted scales for evaluating criteria pertaining to the physical and contextual characteristics of rare books.

In terms of preservation, prioritizing is a process for determining which actions will have the most significant impact upon collection materials, which are the most important, and which are the most feasible (Ogden, 1999, p. 1). Three criteria to consider when setting preservation priorities are: the impact, or the extent to which a given action will improve the preservation of the collection; the feasibility of implementing the action; and the urgency of the action (Ogden,

1999, p. 1-2). "Setting priorities is no easy task, even if a library chooses to concentrate almost exclusively on the treatment of materials that are heavily used" (Merrill-Oldham, 2003, p. 79).

Regarding the preservation and treatment of rare books, it is recognized that ". . . treatment is both time consuming and expensive, so it will almost certainly be necessary to set priorities for the treatment of specific items in the collection" (Kamel, 1999, p. 108). A need exists for a preservation decision-making framework within the field of rare books, but working professionals are not yet taking the necessary steps to develop such a template. Development of a framework that can be consistently applied to objects in rare book collections offers the potential for reduction in arbitrary preservation decisions, thereby increasing the cost-effectiveness of preservation activities. However, the very concepts of "rare" and "how rare" and "worth" suggest that subjectivity will not be eliminated.

Challenges associated with limited resources, such as money and time, are inevitably present in preservation decision-making. Furthermore, Merrill-Oldham (2003, p. 80) suggests that the presence of a substantial staff or budget do not ease the difficulty of setting priorities for treatment because the disparity between the need and the capacity to meet the need is far too great. The template that has been constructed is an initial approach to the problem and provides a preliminary step in developing an ultimate framework. The objective of

the framework is to encourage decision-making that maximizes limited resources.

If constructing a framework for preservation management was an easy task, professionals in the field would have already constructed one. The literature continues to address the need for preservation priorities (Feather, 1991; Gwinn, 1991; Walters, 1996), and to posit some subjective criteria that could be utilized for making such decisions (Ferguson, 1989). However, prior to this study, the step had not yet been taken to attempt development of a framework that may be consistently applied to objects within a rare book collection.

Limitations

A limitation exists in the number and nature of the individuals who participated in the study. Given the small number of participants, there is reason to speculate whether the participants are completely representative of the entire preservation community as a whole. However, the Delphi study conducted by Kochtanek and Hein (1999) resulted in a similarly low set of responses. All of the participants in this study are employed in professional capacities at reputable institutions, and therefore the responses to the surveys that the individuals provided possess a level of authority. It also is possible that the sample of experts from Texas provided responses which deviate from those that might be obtained from individuals in other areas of the United States.

The variety in the experts' backgrounds and experiences creates some challenges. Professionals in the field of rare books enter through an assortment

of academic and professional paths, and practical decisions may be made according to varying experiences. Developing a standard of practice for preservation priorities can be a challenge when the practitioners in the field are all drawing from different bodies of knowledge. However, the experts were able to establish a consensus in this study in spite of different academic and career experiences, which suggests that the experts' unique training and perspectives do not contribute to significant differences in their professional opinions.

Limitations also existed in the survey instrument. First, the study required solicitation of participation from individuals who had no knowledge of the surveyor or direct contact other than via telephone and e-mail. Each expert was notified that the survey might require several iterations of questioning. Although ten individuals initially agreed to participate, the number of returned surveys decreased through the course of the three iterations. After contacting the individuals via telephone, several agreed to submit their surveys, but then never did so. The first iteration returned six viable surveys, but by the third iteration only four were submitted. The reduction in the number of completed surveys affected the evaluation of later iterations of the survey because less data sources were available.

A second challenge associated with the survey was the level of dedication of each panel member to the study. Only one expert responded at length to the addition, deletion, and modification questions in Survey 1. For all of the surveys, the responses of the other experts were relatively brief, although the questions

provided the possibility for rather extensive, descriptive responses. In some cases, it appeared that the respondents were rather hurried in completing the questions, and perhaps did not elaborate as much as possible. There was little incentive for these individuals to provide extensive responses, and this presented a limitation to the amount of unstructured information that could be incorporated into the results.

Implications

This study is a preliminary investigation into establishing a framework for preservation management in rare book collections. Ideally, these results can be used to move toward development of a complex model for preservation activities. Such a model is beyond the scope of this initial Delphi study. The preliminary study provides a foundation which indicates that a preservation management model is a viable possibility, and continued exploration would be useful.

Obtaining Financial Assistance for Preservation

Development of a concrete methodology for the potentially costly process of preservation management is beneficial for facilities which are in search of funding to support preservation activities. Because institutional funding for preservation has suffered in recent years in favor of digitization projects (Baird, 2002; Cloonan, 2001), obtaining monetary support for preservation activities becomes particularly important. "Traditionally, in preservation arenas, funding for preservation work has been obtained from grants" (Sannett, 2002, p. 399). When

submitting a grant application, the staff of a given facility may present an objective methodology, such as the framework developed within this study, for making preservation decisions. In doing so, the institution may have a greater likelihood of receiving funding because concrete agendas for preservation priorities can be provided to the granting institution.

Use of Representations

The results of this study suggest that information regarding the form and substance of the rare book is retained in the original object, and may in some cases be lost in the process of constructing a surrogate. However, the results also maintain the possibility of effective use of surrogates. Based upon the unique nature of rare books as containers of textual information as well as inherently-valuable objects, one can speculate that representations have the potential for effectively maintaining the information content of certain collection materials.

Three particular circumstances exist in which substitution of a representation may be appropriate. First, surrogates can provide access to relevant information for users who are interested in the textual information contained within the book. If it can be determined that a given book possesses substantial textual information but little or no physical or contextual information, a surrogate may be appropriate. Second, books which do not possess the highly-ranked criteria could likely be substituted with a surrogate. For example, a book in poor condition with no evidence of authenticity or historical value may not

require maintenance in its original form. Third, those books which receive extremely low values for a significant number of criteria also might be appropriate for substitution with reproductions. Such books may be those which would be located in the low/low section of the framework, with cumulative scores of 3.33 or below for both their physical and contextual attributes. In this way, this framework has the potential for not only setting priorities among the books that should be preserved in their physical form, but also has the potential for indicating which books may be suitable for conversion to other formats.

The 14 selected criteria were evaluated by the panel of experts to indicate the ranked importance of the criteria for determining the value of a rare book as an inherently-valuable, information-bearing object. Because the terms pertain to the physical and contextual nature of the book, when the criteria are attributed to a representation, many of the criteria no longer apply. Therefore, substituting a representation for a rare book that possesses many of the 14 criteria may not be sufficient for maintaining much of the information contained within the form and substance of the object. When it is determined that a representation would be insufficient for maintaining the information content within the object, it is the recommendation of this study that the original object be preserved.

Decision-Making

The criteria which the panel members indicated as contributing to the inherent value of rare books are characteristics which are tied to the physical and contextual nature of the individual object. Such information often cannot be

sufficiently replicated in a surrogate, and provides a strong argument for the need to preserve objects possessing these criteria in their original form, or otherwise the risk of information loss increases. I have been employed for several years in a facility which engages in preservation activity, and have spoken at length with a variety of professionals regarding preservation activities in their respective institutions. During this time, I noted that many preservation decisions can become somewhat arbitrary, rather than being the product of carefully-considered prioritization plans. Based on my personal observations, decisions to address the preservation of a particular book occasionally consist of nothing more than a staff member perusing the stacks and selecting a book which catches his or her eye.

After developing the preservation decision-making framework within this study, a need existed to test the suitability of the framework for decision-making in rare book collections. Analyses of five books were conducted by the curator and assistant curator of the Rare Book and Texana Collections at the University of North Texas (see Chapter 3), and the resulting scores from the analyses were plotted on the preservation framework (see Chapter 4). The curator and assistant curator were then questioned regarding the results of the test compared to hypothetical preservation decisions they might have made for the books without the framework. The curator suggested that the Bolingbroke “would be a top candidate for actual conservation work,” but this study addresses preservation measures more than active treatment of objects. Accordingly, the curator agreed

that *Tempered Blade* and the *Book of Psalms* “would definitely get boxes made for them.” The assistant curator suggested that his definition of preservation might differ from that of the curator—he “thinks in terms of boxes and wraps or jackets,” while the curator “may be thinking more in terms of repair/restoration.” The curator also suggested that her assessments were based upon comparisons with any similar books that might exist in other collections, while the assistant curator’s assessments may have been based upon comparisons with other materials within the same collection.

The resulting weighted scores from the test of the framework fell within the range of 3.279 and 7.158. While the results did not represent the wide range of scores accounted for in the original framework, the smaller range is to be expected, given the nature of materials within a rare book collection. It is unlikely that a rare book collection would dedicate its already limited resources to maintain materials that are of so little value that they would receive exceedingly low cumulative scores for each of the 14 criteria. Conversely, it is unlikely that a collection would possess a “perfect” book that would be considered of maximum value for all 14 criteria, and therefore receive cumulative physicality and contextual scores of 10.

Differences in the definition of preservation cause interesting challenges in preservation decision-making. One must make an already subjective decision without a concrete understanding of the parameters under which one is operating. The results of the test are encouraging, because they suggest that the

framework has the potential to reduce margins of error resulting from personal subjectivity on the part of rare book staff, to offer a more common basis for individuals to think about preservation issues, and to provide more consistent results for preservation decisions.

Future Research

Expanding the Sample

For further exploration of this topic, surveys could be conducted with a larger sample of experts. A larger number of respondents would reduce the fluctuations in the data that can occur in a small sample, when a single response is included which is dramatically different from the general consensus. For the purpose of this initial investigation, an objective was to gain a consensus from individuals with comparable professional positions. The number and variety of panel members could increase in future explorations.

Although the data that comprise this study were collected only from institutions of higher education, the ubiquity of rare books in a variety of collections suggests that the framework might be applicable in other facilities. Therefore, it is recommended that the study could be expanded to investigate the applicability of the framework in other types of institutions. Eden et al. (1999, p. 33) acknowledge that every institution is unique, and guidelines for preservation will differ accordingly. One might investigate whether procedures would be implemented differently for a rare book collection housed in a museum or a private collection versus an academic institution. Museums are similar to rare

book collections in their attempt to preserve original objects of intrinsic value, but the two fields possess enough differences to merit an inquiry into how the framework might operate differently.

Within libraries, museums, and private collections, it is possible that variations of the framework might be appropriate for institutions with slightly different characteristics. Small and large academic institutions might be compared, as well as those academic institutions which are state funded or privately funded. The size of an institution and its budget will likely affect the size of rare book collections, as well as the resources dedicated to the maintenance of the collections. On a smaller scale, one might explore whether rare book collections with their own preservation budgets function differently than those which receive appropriated funds from a larger institutional budget.

Another variable to explore is the governing structure of the institution within which the rare books are housed. Child (1999b, p. 4) suggests that the political environment within an institution can be a factor in creating or reducing obstacles for preservation planning. Governance could play a role in determining the course of preservation management within the institution because of the potential influence on resource allocation, lines of reporting to superiors, and institutional missions.

In future permutations of the study, it would be beneficial for the experts to be questioned regarding the use of surrogates for rare books. One such question might include asking the experts about any instances in which they believe the

use of surrogates is appropriate. In particular, the participants might be questioned about instances in which they believe that substituting a representation in lieu of an original would be more cost-effective and beneficial for the collection. As indicated in Iteration 3, unstructured data can be valuable for constructing the framework and comparing its theoretical utility to current activities within the environments in which it might be applied.

The survey also may be further expanded to address aspects of preservation management in rare book collections beyond the priorities established by members of the staff. Questions could be issued to the participants to address the role of users in preservation management. Specifically, the experts could comment on the role of user needs in the current preservation activities at their respective institutions, to determine if user needs are being addressed in operational facilities. The information gleaned from the experts' comments may be useful for determining where the most significant needs exist, where user needs are not being met, and therefore in which areas preservation activities might most effectively begin.

In addition, the study could be expanded to incorporate other "stakeholders" in rare book preservation. Although the responses of the experts may be useful, new permutations of the study might question users of rare book collections directly, rather than relying on staff interpretations of user needs. Speaking directly to users would be a valuable resource for determining priorities for an institution—assuming that for a particular facility, the user is a primary

concern. This study offers a significant amount of potential for expanded research in a variety of areas. The core issues remain the same, but each permutation of data possesses the ability to provide a contribution to the field of preservation management in rare books.

Refining the Framework

The framework as it currently exists does not provide quantifiable data points for mapping a given object. The framework is not yet refined to a degree to allow for prioritizing two books which might be plotted rather closely within the framework. For example, one book may receive a score of 9.9 for physicality and 7.6 for context, while another book receives a score of 8.6 for physicality and 8.2 for context. Although both books fall within the high/high zone, prioritizing one book over the other becomes a challenge. Future permutations of the study could further explore this concept and attempt to refine the process. Perhaps future applications of the framework would determine that applying only a few of the 14 criteria to a given book would be sufficient, rather than utilizing all 14 for decision-making.

The framework could be expanded by exploring the ways in which specific resources might be addressed and incorporated into a more elaborate model. For example, specific costs associated with time and money currently are not addressed in the framework. The current framework establishes collection priorities, and opens the field to a great deal of exploration regarding application

and implementation, but does not specifically adjust for numerical values for limited resources.

Applications to Other Types of Collections

Rare book collections share much in common with libraries and museums. Libraries strive to provide access to information, and museums attempt to protect and preserve the collections they maintain. Rare book collections represent a blend of both libraries and museums. It is therefore appropriate that techniques which are applied to rare books have potential for applications within library and museum collections, and the decision-making framework developed within this study may have useful applications in such collections. Similarly, Walters (1996, p. 326) states that decision-making models remain largely absent from archival collections. Perhaps minor variations in the criteria could be made to adapt the framework to the unique characteristics of archival collections.

Museums might implement a permutation of this framework for management of their collections because in some ways, rare books are similar to the historical objects that may be housed in museum collections. Like rare books, museum objects are valued for characteristics other than monetary worth, and may be maintained as part of a collection for their aesthetic or other qualities (Sachs, 2004, p. 104). Therefore, one may assume that the decision-making process for making determinations of value is the same for museum objects and rare books. The process remains subjective, and determining what makes an object “significant” or “suitable” (Ferguson, 1989), and therefore worthy of

preservation, can be a challenge. The similar valuation of objects suggests that a framework that provides an objective method for making preservation decisions in rare book collections has the potential for applicability within the museum community as well.

Intangible Qualities of Rare Books

The term “intangible qualities” is used in the title of this work because on the surface, it seemed that this would be a prominent issue in the preservation decision-making process. It is still puzzling that the intangible qualities seem to have played so little part in the minds of the experts. Perhaps because the psychology of emotion and the intangible qualities of rare books remain open issues, the experts recognize that development of an ironclad model for preservation management in rare book collections which incorporates the intangible qualities is difficult. For example, *cultural value* is one of the criteria included in the study, but when assigning a value to that characteristic, whose definition of *cultural value* should be used? Valuation of collection materials can be very much a social construct, which may change according to the culture in which the object is maintained.

Another area which merits investigation is the intangible characteristic of *association*—in particular, an association that a given item in a collection may share with a person or group of note. Such a characteristic, and the intangible experience it can create, would seem to contribute to the value of the book as an

object. Smith (2003, p. 177) provides the example of the Bible that Abraham Lincoln held as he took the oath of office as president:

It is one of an undistinguished print run, and the text is well known, to say the least. If we lost that item, we would lose no information. But to the extent that it has associational value, it clearly is irreplaceable. (Smith, 2003, p. 177)

One might question why the experts' responses during the iterations of the study did not reflect "associational value." Perhaps the experts concluded that *association* does not require its own category, and could be assimilated into other categories. For example, a book owned by Abraham Lincoln might merit a high value for *provenance*, or because the Bible was used to swear in an American president, it might rank highly for *historical value*.

However, assuming that association is a valuable, independent category, the question becomes determining a line of demarcation where decisions relating to *association* can be made. Perhaps merely "knowing" that an object was at one time in the possession of a particular individual or group is not sufficient. A book that possesses George Washington's signature or margin notes will maintain a closer association with him than one which was merely in his possession. *Association*, like many of the characteristics explored within this study, can be subjectively applied and is very difficult to quantify. Providing a zero to ten scale for each criterion, from which rare book staff may select a numeric value, is merely a first step in standardizing the evaluation of these characteristics.

Because the surveyed experts within the Delphi study consistently scored *association* extremely low, and the human response to the intangible qualities of

rare books might suggest otherwise, future research would benefit by exploring the concept of *association* within the context of rare books. The surprising result of the study could be attributed to a variety of variables—a lack of understanding of the terminology by the experts, an unwillingness to place significant value upon intangible characteristics, or simply a belief that *association*, for any reason, should receive the lowest score. Regardless of the explanations, the intangible experience that can exist when a user is aware of the associations a particular book possesses merits consideration. It may be assumed association cannot be maintained in a surrogate, and therefore this characteristic is of tremendous importance when considering preservation decisions within the collection.

Further Investigation of Preservation Management and Rare Books

This study has provided an initial step in the process of establishing a starting point of commonality for preservation management in rare book collections. The constructed framework may function for rare book preservation in much the same way that a dictionary may function for a given language. The framework allows practitioners to establish a starting point of commonality, upon which everyone may agree. From the common starting point, preservation decisions may begin to be constructed under similar parameters and with a consistent understanding of applications and potential results. However, the results have left the opportunity for further research agendas, stemming from questions that have arisen in the process of exploring the intangible qualities of rare books:

- Within a rare book collection, who has the authority to make preservation decisions? If an individual is given this responsibility, is there a risk that preservation decisions could be based on personal values rather than societal values? Although management techniques are often based on objective policies, is it possible to conduct objective preservation decisions, or must they incorporate a degree of emotion?
- If a rare book is lost, what does that mean? What is lost? How does the rare book define or represent a culture in ways that a surrogate might not? What are the intangible experiences, or the “aura” of a rare book, that cultural objects such as rare books evoke in the viewer?
- What happens to the authentic object if the preservation process requires restoration, in which portions of the object may no longer be original? For example, if a book is rebound, how would that action affect the information content of the rare book?
- How would the framework change if condition was addressed independently from the other 13 criteria? For example, if the value assigned to the condition of an object were to change, in what ways might that affect the values that would be assigned to the other criteria?
- How would valuations for the 14 criteria change depending on the level of associated documentation provided for a given book? What might be the repercussions if the book has been altered (e.g., rebound) at some point, but this fact is undocumented and unknown? Associated documentation

can contribute to the value of an object, but what might be the effects of incorrect or absent documentation?

As evidenced by the results of this study, and the further questions that have been raised, developing an understanding of the intangible qualities of rare books is a complex issue. Determinations of value for rare books are clearly highly subjective and require careful consideration of the multiple tangible and intangible characteristics which can contribute to the value of the object. This study provides an initial exploration of the concept of value in rare books and establishes a starting point of commonality from which practitioners in the field may begin approaching preservation decisions.

Conclusion

The advantages of the new forms in which old texts can now be made available must not be allowed to obscure the fact that the new forms cannot fully substitute for the actual physical objects in which those earlier texts were embodied at particular times in the past. . . . All objects purporting to present the same text--whether finished manuscripts, first editions, later printings, or photocopies--are separate records with their own characteristics; they all carry different information, even if the words and punctuation are indeed identical, since each one reflects a different historical moment. (Modern Language Association, 1995, p. 27)

Preservation management in rare book collections is a complex process which requires careful consideration of the various materials contained within the collections. As digitization and other technological advances in surrogate technology have developed, new opportunities and challenges have arisen. While a variety of new representations are available, risks to original collection

materials can increase when the original objects become neglected in favor of technological surrogates. For rare book collections, a considerable challenge is involved in evaluating collection materials in terms of their inherent value, which includes the textual and intangible information the materials provide for the collection's users. The form and substance of rare books present preservation dilemmas which do not exist in museums or circulating library collections, where often the form or substance of collection materials are maintained, but not both. When the form and substance of a given object are indistinguishable, it may be necessary to maintain the physical object, or risk losing the information retained in its inherently-valuable characteristics. In some cases, however, substituting a representation for costly maintenance of an original may be the most efficient use of resources for a collection.

Utilizing a standardized template for making preservation decisions offers a variety of benefits. Preservation decisions may include prioritizing action upon the authentic objects, or developing and maintaining surrogates in lieu of retaining costly original collection materials. The framework constructed in this study provides a method for reducing the subjectivity of preservation decision-making and facilitating the development of a standard of practice for preservation management within rare book collections.

APPENDIX A
DEFINITIONS

Technical Terminology

Association Copy: a copy which once belonged to, or was annotated by, the author; which once belonged to someone connected with the author or someone of interest in his own right; or . . . belonged to someone peculiarly associated with its contents (Carter & Barker, 2004, p. 27).

Binding: the strong covering of a book, which holds the sheets together, and protects the volume (Oxford English Dictionary Online, 2005).

Condition: refers to both the book's external physical appearance and to the completeness of its contents (Van Wingen, 1994, p. 3).

Production: the action of producing, bringing forth, making, or causing; the fact or condition of being produced (Oxford English Dictionary Online, 2005).

Provenance: the pedigree of a book's previous ownership (Carter & Barker, 2004, p. 177).

Special Features: may include maps, photographs, artifactual examples, additional plates, and dust jackets (Lavender, 2003, p. 2).

[Textual] Variant: a general-purpose term used to describe a copy or copies of an edition or impression exhibiting some variation, whether of text, title-page, illustrations, paper or binding, from another copy or copies (Carter & Barker, 2004, p. 225).

Concepts Pertaining to Determinations of Value

Aesthetic: of or pertaining to the appreciation or criticism of the beautiful (Oxford English Dictionary Online, 2005).

Authenticity: the quality of being authentic, or entitled to acceptance, . . . as being what it professes in origin or authorship, as being genuine (Oxford English Dictionary Online, 2005).

Availability: several aspects of publishing and bookselling fall under this consideration, but they all come down to the fact that a particular book is hard to find (Lavender, 2003, p. 2).

Cultural: relating to civilization, esp. that of a particular country at a particular period (Oxford English Dictionary Online, 2005).

Demand: a book is “rare” only if someone wants it and is willing to pay for it. . . . Demand often is created by the popularity of a subject or author (Lavender, 2003, p. 2).

Historical: related to or connected with history (Oxford English Dictionary Online, 2005).

APPENDIX B
ITERATION 1 QUESTIONNAIRE

SURVEY FOR DELPHI STUDY—ITERATION 1

Approximately how many rare books are contained in your facility's collection?

If possible, please provide the following information:

- Your facility's approximate annual budget for preservation:

- Your educational background (degrees, fields of study, etc.):

- Your experience in the field of rare books (years of experience, institutions, positions held, etc.):

Please rank the following criteria, from 1 to 14, with 1 indicating the criteria of most importance for establishing the value of a rare book, and 14 indicating the term of least importance:

Authenticity	_____	Aesthetic value	_____
Association	_____	Production	_____
Textual variants	_____	Demand	_____
Cultural value	_____	Availability	_____
Historical value	_____	Condition	_____
Provenance	_____	Binding	_____
Special features	_____	Value of materials	_____
(additional plates, dust jackets, etc.)		(gold leaf, gems, etc.)	

Are there any additional criteria that you feel should be included on this list?

If yes, please describe:

Are there any criteria that are currently included that you feel should be eliminated?

If yes, please describe:

Of the included criteria, is there any terminology that should be changed?

If yes, please describe:

APPENDIX C
ITERATION 2 QUESTIONNAIRE

SURVEY FOR DELPHI STUDY—ITERATION 2

Imagine that you have 100 tokens to distribute according to each of the following characteristics. Please distribute these tokens among the 14 characteristics, based on your perception of their respective importance. For example, if authenticity or another given term is highly valued, it would receive a larger portion of those 100 tokens.

Authenticity	_____	Aesthetic value	_____
Association	_____	Production	_____
Textual variants	_____	Demand	_____
Cultural value	_____	Availability	_____
Historical value	_____	Condition	_____
Provenance	_____	Binding	_____
Special features	_____	Value of materials	_____
(additional plates, dust jackets, etc.)		(gold leaf, gems, etc.)	

APPENDIX D
ITERATION 3 QUESTIONNAIRE

SURVEY FOR DELPHI STUDY—ITERATION 3

Please provide a description of any policies or procedures your facility utilizes for making preservation decisions or setting priorities for preserving collection materials.

Does your facility have any mission statement or goals statements relating to preservation activities? If so, please describe them.

Given a problematic preservation decision, such as one that requires a substantial use of monetary or other resources, how might you apply the fourteen ranked criteria from Surveys 1 and 2? Or what other decision-making processes might you utilize for making this type of difficult decision?

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