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ABSTRACT

Knowledge organization standards are important community artifacts that set forth agreed upon specifications and protocols, and though they may appear neutral they have been shown to harbor specific perspectives. These perspectives are often covert but hold implications for the ways in which knowledge is conceptualized, organized, and represented. Values are deeply held preferences for ways of acting and ways of being, and represent an effective lens for examining the perspectives embedded in societal practices and artifacts. To date, however, knowledge organization standards have not been approached through formal value analysis. This study addresses this gap through an examination of the influential library standard *Resource Description and Access* (RDA), specifically focusing on what values are present within this standard, how these values are communicated, and how they are recognized and responded to by practitioners.

To address these questions, a qualitative, exploratory, multiphase study was conducted, utilizing value and rhetorical analyses of the text of RDA as well as open-ended interviews with RDA practitioners focused on their interpretations of the document. Findings show that RDA upholds its design principles through the expression of principles-based values and values associated with user needs, communicated through a set of routine structures such as directives and conditionals. In their usage of RDA, catalogers place greater emphasis on values associated with users and their perspectives, and see access as the most important value within this standard. At the same time, the relative absence of asserted community values such as privacy and autonomy illustrates the challenged nature of human values in knowledge organization standards.

Findings from this study demonstrate the integral nature of values in standards, and position value analysis as a useful methodology in the critical study of standards in all domains. For the knowledge organization and cultural heritage communities, this work reveals the ways in which standards and their enactments serve to mediate key community values. In raising questions about the role of human values in knowledge organization standards, this study also contributes to ongoing discussions of information ethics and professional values.

Values in Knowledge Organization Standards: A Value Analysis of
Resource Description and Access (RDA)

by

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DISSERTATION

Submitted in partial fulfillment of the requirements for the degree of
Doctor of Philosophy in Information Science and Technology.

Syracuse University
May 2019

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CHAPTER 1

INTRODUCTION

1.0 Introduction

Standards, documents setting forth agreed upon specifications and protocols, are important artifacts within communities, and though they may appear neutral they have been shown to propagate specific perspectives, especially standards devoted to knowledge organization. Values are deeply held preferences for ways of acting and ways of being, and represent an effective lens for examining the perspectives embedded in societal practices and artifacts. To date, however, knowledge organization standards have not been studied through value analysis. Values embedded in these standards shape how knowledge organization is carried out and are worthy of examination. Among knowledge organizing settings, libraries represent a particularly promising setting for value analysis of standards due to their strong, asserted community values, history of standardization, and the increasing implications of their data. A value analysis of the current *de facto* library descriptive standard *Resource Description and Access* (RDA) can reveal key, underlying priorities and perspectives within this document, and more broadly, how values manifest in standards; results will improve understanding of the presence and role of values in standards for knowledge organization, and demonstrate one means of further examining the social implications and ethics of our increasingly complex information practices.

This chapter provides a brief overview of the research topic of this study. First, background and motivating information is presented, focusing on the relationship between values and standards, gaps in the current understanding concerning knowledge organization standards,

and the library as a suitable setting for exploring these issues. The overall goal of this study is then articulated, along with specific research questions. The significance of this research is addressed, briefly describing potential theoretical and practical contributions. Finally, to facilitate clarity throughout the remainder of the document, definitions are provided for key terms and constructs. This chapter is concluded with a brief summary and overview of the remainder of the document.

1.1 Background and Motivation

Standards are documents that codify and set forth specifications or protocols, and are agreed upon and distributed within specific communities (IEEE Standards Association, 2017). They are a means of bringing varied practice into order (Svenonius, 2000), facilitating cooperation, ensuring reliability, and enabling greater levels of efficiency. While, functionally, standards serve as elements of infrastructure, enabling collective human activity, they are often rendered invisible or taken for granted in the process (Busch, 2000; Bowker et al., 2009). As ubiquitous, widely-adopted standards fade into the infrastructural background, they tend to attain a neutral appearance (Olson, 2001). However, this appearance of neutrality is false. Standards are societal products, and as such, are touched by the perspectives and biases of the communities that produce them. As shared informational infrastructure, standards must espouse certain ideals or points of view at the expense of others (Bowker & Star, 2000). As formal documents designed to communicate “correctness” within the context of a community, they both embody and propagate a shared ethics (Lampland & Star, 2009). And as the products of human design, standards inevitably incorporate the perspectives of their designers (Friedman, 1996). Given this, we would expect these documents to bear values.

Values are enduring beliefs in preferable modes of conduct or end states of existence (Rokeach, 1968). In short, they are preferences for ways of acting and ways of being. The study of values is often concerned with their nature and meaning, structural questions concerning value, and the determination and classification of values (Orsi, 2015). Though potentially anything can be considered a value, values are typically construed as abstract concepts. For example, in Schwartz's theory of basic human values, concepts such as stimulation, power, and tradition serve as important values (Schwartz, 2012). There exists no single, universally accepted classification of values; rather, like Schwartz, value theorists and researchers have categorized values in a variety of ways (Rescher, 1969).

Given their universal nature and classificatory flexibility, values and their implications have been of interest across a range of domains. Social scientists have long recognized values as a useful means of explanation concerning personal and social phenomena (Schwartz, 2012). Here, persons or groups are seen as holding specific values with direct implications for behavior (Rokeach, 1973). As such, much work concerning values within psychology, sociology, and anthropology has been focused on action and motivation. However, the study of values is not limited to outward actions. Values may also be expressed in written documents and other forms of communication, giving rise to the methodological approach known as value analysis (White, 1951). Through value analysis, the preferences and priorities embedded in a set of materials may be highlighted and distilled into a set of values. Taken as a whole, the study of values and its attendant methods depict values as influential preferences, held by persons or communities, and imbued into the practices and artifacts of those persons or groups in meaningful ways.

Given the role of standards as artifacts serving to instantiate community ideals, it is not difficult to expect that they would harbor values. The study of standards, though disparate and

fragmented among a number of disciplines (Ransom, 2003), has in fact shown that standards can carry and perpetuate their own sets of values. Such studies have typically employed a case study approach rather than formal value analysis. For example, Bowker and Star (2000) presented a case study of the standards for racial determination in apartheid era South Africa, which strongly valued social order, authority, and avoidance of ambiguity, as well as carried clear perspectives on the valuation of certain classes of persons over others. The perspective and values of these standards had drastic and often illogical consequences. In another case study, Palme and Pargman (2009) examined the ASCII character encoding standard, which formed the basis of the URL system for Internet addresses. This standard was based on the English alphabet and the needs of American telecommunications workers, and its valuation of these, along with uniformity and expediency, posed problems for other languages and cultures when it was adopted into a worldwide Internet protocol. Finally, Ransom (2003) examined red meat standards in South Africa, which valued quality, predictability, and efficiency at the cost of equitable representation and participation in the food system.

In the preceding studies, values are incidental to the larger issues of perspective and bias, and are not directly pursued through the use of value theory or methods of value elicitation. Even so, such critical case studies hold implications for values in standards. All three cases highlight the fact that values are inherently preferential; in valuing things such authority or uniformity, standards deemphasize other values, such as autonomy or fairness. While standards for the classification of persons in particular may appear to be extreme cases, values in any standard may uphold or betray key community values, and hold important implications for knowledge and for society.

1.1.1 Knowledge Organization and the Library Setting

There has been a particularly strong emphasis on standardization within the information domain (Delsey, 1989), especially concerning knowledge organization. Knowledge organization refers to the representation of knowledge or information in various forms of organizing systems, such as databases, classifications, catalogs, and archives (Andersen & Skouvig, 2006). Hjørland (2008) described knowledge organization as encompassing both “the nature and quality of such knowledge organizing processes as well as the knowledge organizing systems used to organize documents, document representations and concepts” (p. 86). Thus, knowledge organization entails both processes and products. As Hjørland (2008) also noted, organization is typically carried out on surrogates or representations. The organization of resources, representations, and concepts all fall within the conceptual space of knowledge organization, along with the use of specific organizing systems such as ontology, classification, indexing, and description, many of which are governed by well-established bodies of standards.

Knowledge organization occurs in all disciplines and domains. One domain in which knowledge organization sees both widespread interest and impact is that of cultural heritage. Cultural heritage is the study, preservation, and curation of cultural practices and artifacts within a specific group or society (UNESCO, 2017). The domain is complex and distributed, with much of the work carried out under the aegis of specific memory institutions including libraries, archives, and museums. Though the exact goals, strategies, and responsibilities of these three kinds of institutions vary, all can be seen as heavily involved in cultural heritage (Trant, 2009). Within cultural heritage, distinctions are often made between tangible heritage, which encompasses physical artifacts, and intangible heritage, which includes practices, traditions, and

beliefs, with Western cultures frequently placing an emphasis on tangible heritage (Vecco, 2010).

A significant responsibility of Western cultural heritage institutions has thus been the collection, arrangement, and provision of tangible heritage artifacts. Whether documents, digital files, works of art, tools, or other objects, tangible heritage artifacts may be seen as information resources that serve to represent or convey knowledge. Traditional information resources include things such as books, journals, and sound recordings, though under certain circumstances, anything may function as an information resource. Given cultural heritage institutions' responsibility for such resources, knowledge organization work is a critical component of work in this domain. Indeed, libraries, archives, and museums have devoted a great deal of energy to the creation, implementation, and maintenance of standardized knowledge organizing systems such as classifications, controlled vocabularies, and metadata schema. While some cultural heritage knowledge organizing systems, such as thesauri or ontology, represent the more conceptual aspects of knowledge organization, many systems are devoted to the more pragmatic task of representing and providing access to collections of information resources. Within knowledge organization, the practice of creating descriptions or representations of these resources is known as resource description (Hider, 2012).

Among cultural heritage institutions, libraries have a distinct tradition of resource description commonly referred to as cataloging. Cataloging encompasses the creation and maintenance of metadata for library information resources, such as books, maps, or sound recordings. The products of cataloging are bibliographic records, which act as surrogate representations of resources. Taken together, these bibliographic records represent a collection, and may be compiled into a catalog. A catalog of bibliographic records serves both an inventory

function as well as a conceptual function, and allows both catalog managers and users to interact with the collection in various ways (Coyle, 2010). Much of the functionality of the catalog may be attributed to the contents of bibliographic records, which are typically seen as comprising two main types of data, descriptive and analytical. Descriptive data includes metadata elements used to describe and identify the resources (e.g., title on title page, place of publication, measurements) as well as access points, special indexing terms representing important names and titles. Analytical data includes content representations such as subject headings and classifications (Joudrey, Taylor, & Miller, 2015, p. 975). Data in the bibliographic record is governed by what Svenonius (2000) refers to as “bibliographic languages,” standards and systems that serve as a bridge between the language of the resources and the language of the users (p. 53). Various bibliographic languages exist, though traditionally, descriptive data and analytical data are governed by different ones. This language manifests itself on an implementation level in the form of descriptive catalog codes, formal knowledge organization standards compiling rules for consistent descriptive cataloging and utilized by catalogers in creating bibliographic records.

Over the past 175 years, Anglo-American descriptive cataloging practice has been brought into order through a small but influential succession of descriptive standards. The earliest descriptive codes were designed for the collections and needs of a single library or institution (Panizzi, 1841; Jewett, 1852). As the nineteenth century progressed, however, an interest in broader, more generally applicable knowledge organization systems was increasing, with standards being increasingly shared among institutions (Svenonius, 2000). The twentieth century opened up a new era of international cooperation in the development of these standards. Though the outbreak of World War II interrupted international collaboration for a time (Tikku,

1983), collaboration between the American and British libraries culminated in the development of the 1967 descriptive standard *Anglo-American Cataloging Rules* (AACR) and its 1978 follow-up, *Anglo-American Cataloging Rules 2nd Ed* (AACR2). By the close of the twentieth century, a significant number of libraries in English speaking countries around the world were united under the latter. Standards such as AACR and AACR2 have guided the creation of massive amounts of standardized, bibliographic descriptions.

Published in 2010 by an international collaboration of library associations, *Resource Description and Access* (RDA) succeeded AACR2 as the *de facto* descriptive standard for Anglo-American libraries. However, RDA differs from its predecessors both conceptually and structurally, in large part due to its incorporation of the FRBR model. Developed in 1998 by IFLA, *Functional Requirements for Bibliographic Records* (FRBR) was intended to provide a comprehensive model of the bibliographic universe and inform the creation of more specific library standards around the world (IFLA Study Group on the Functional Requirements for Bibliographic Records, 1998). In incorporating FRBR into RDA, English-speaking libraries saw their practice newly aligned with both a distinct entity-based approach and set of specific user tasks.

RDA also symbolizes significant shifts in the overall scope and coverage of descriptive catalog codes. Though descended from the Anglo-American lineage of standards, RDA was expressly designed with the intent of adoption among non-English speaking countries as well. The text of RDA has been translated into Chinese, Finnish, French, German, Italian, and Spanish, and has been adopted or tested by a number of non-English libraries (Poulter, 2012). RDA is thus the first descriptive standard ever created for adoption among both English and non-English speaking libraries. It has also been designed to more greatly appeal to institutions

beyond the library domain, such as publishers and booksellers (Canadian Library Association et al. 2010). Finally, RDA extends its scope even further beyond the traditional domain of books than its predecessors did, providing rules for over 20 different content types including cartographic datasets, notated movement, and three-dimensional moving images. With the proliferation of RDA, more institutions and materials are united under the same descriptive standard than ever before.

1.1.2 Values in Knowledge Organization Standards

Within the cultural heritage domain, library, archives, and museum standards have guided the creation of vast amounts of metadata to represent information resources. However, it is not fully clear what values these standards and their data may be carrying with them. Though knowledge organization standards, particularly those for resource description in the library setting, have received a wealth of scholarly attention, little of this work has touched on values. Instead, much of it has focused on these standards from a historical perspective; representative works include those by Strout (1956), Dunkin (1969), Henderson (1976), and Hoffman (2009). Together, these works focus on a narrative of standards progression, and are representative of the much larger body of literature on Anglo-American descriptive cataloging. Cataloging literature has also looked beyond historical narratives to examine foundational and shaping forces. Delsey (1989) and Svenonius (1989, 2000) both explored major, influential forces associated with descriptive catalog codes, including the economics of shared work and the technological drive toward automation, though neither explicitly addressed the topic of values.

Values are, however, quite of interest within the overall field of library and information science. Work by Bates (1999), Gorman (2015), and Koehler (2015) has explored values of the

field itself, highlighting the influence of human values in particular. Empirical studies of values in librarianship have shown service to be a critical, widely held value (Branch, 1998; Dole, Hurych, & Koehler, 2000). The American Library Association (2004) even maintains a list of core values associated with librarianship, including access, privacy, diversity, and intellectual freedom; the applicability of such values to library knowledge organization work has been called into question though (Shoemaker, 2015). Both Bair (2005) and Beghtol (2008) addressed values associated with cataloging as a profession, describing access, honesty, integrity, and cultural respect as aspired values. In short, values research has addressed the aspired and functional values of the library and information science domain and professions, but has stopped short of examining the standards of this community, including its influential knowledge organization standards. What values these standards express, and whether they uphold or betray intended community values, is an open question.

Values in knowledge organization standards represent an important gap in the literature; the present work has been designed to contribute to this space. Building on my initial, exploratory work concerning values and descriptive catalog standards (Dobreski, 2017), the study developed and presented here is intended to more deeply explore values in knowledge organization standards in cultural heritage, focusing on the current library descriptive standard RDA. What does it mean for a document such as RDA to have values? As a procedural knowledge organization standard, RDA sets out certain ideals concerning resource descriptions and the resource description process. Through the lens of value theory, these ideals can be seen as expressed through a series of valuations. In placing value on certain concepts, the text of RDA communicates a set of preferences to its users concerning resource description practice. These

embedded values thus shape how knowledge organization is carried out here and are worthy of examination. These value commitments and their implications are the subject of this work.

My choice of RDA for this study is supported by several justifications. First, it falls within the larger domain of cultural heritage, an area with a rich history of knowledge organization, and which bears standards with wide-reaching implications for education and information dissemination. Second, by focusing on libraries in particular, I will be able to leverage the field's strong asserted values, lengthy history of standardization, and vast amount of shared resource representation data. Currently, this data stands on the cusp of even wider distribution, as libraries look to share their data beyond the traditional catalog through linked data approaches; this new level of distribution only increases the potential implications of the values embedded in this data and the standards guiding its production. Finally, within the library domain, RDA represents an ideal case due to its status as the current *de facto* descriptive standard, its large international implementation base, and the current lack of in-depth analyses of this standard. Overall, RDA represents an accessible, influential standard for knowledge organization, an analysis of which will address critical gaps while providing findings with implications for the larger domain of cultural heritage knowledge organization.

1.2 Research Goal and Questions

The overall goal of the proposed research is to increase understanding of how values manifest in knowledge organization standards for resource description. Given the broad nature of this goal, it would be impossible to query every domain in which resource description occurs. As stated, the primary focus of this research will be in relation to the cultural heritage domain, encompassing libraries, archives, and museums, and within that domain, libraries in particular.

Though standards from all three of these institutions will be touched on, formal inquiry will be conducted in relation to the library descriptive standard RDA.

In pursuit of my overall goal, the research presented here has been designed to address three specific questions:

RQ1: What values are expressed, and to what extent, in the text of RDA?

RQ2: How are values in RDA recognized and responded to by practitioners?

RQ3: How are values communicated by standards for knowledge organization?

The library descriptive standard RDA serves as the main exemplar of a knowledge organization standard within the context of this study, and as such, the first research question specifically addresses the values associated with this document. Here, the online text of this standard serves as the site of critical inquiry. Through a content analysis focused specifically on values, I will reveal what key values are expressed by the text, as well as the extents to which these values appear. It is important to note that this value analysis is intended to be descriptive rather than normative: values uncovered here are a means of stimulating insight, rather than passing judgment on RDA.

The second research question recognizes that catalogers using RDA may work under different interpretations of this lengthy and complex document. As Palme and Pargman (2009) put it, “standards in documents and standards in practice are two different things” (p. 191). Standards are technological artifacts, but they are also technological performances. Though a value analysis can reveal important values reflected in the text, cataloger apprehensions of these values may differ. In addition, catalogers may systemically react differently to certain values expressed by RDA, prioritizing some while deemphasizing others. In enacting a standard such as

RDA, practitioners may be guided by the values they perceive from these documents, but must reconcile these with the values of their professional community, their individual institutions and working conditions, and perhaps even their own personal values. In order to address the potential consequences of values in knowledge organization standards, it is then vital to explore the understandings of those who function as the primary interpreters of these standards. If descriptive codes are indeed a kind of language (Svenonius, 2000), understanding the values in these documents may not be as meaningful without understanding what may be changed or lost in translation as well. Practicing catalogers serve as critical translators of RDA whose perspectives must be explored.

The final research question explores the specific ways in which RDA, as a knowledge organization standard, communicates value. Addressing this question will rely on findings from the value analysis of RDA. During the analysis, rhetorical and stylistic features and affordances of the document itself will be analyzed as well, with attention paid to which features (e.g. priority lists, options, alternatives) are more likely to exhibit values, as well as which values they are most linked to. Findings from the interviews with practitioners will also be important here, as questions and sample passages presented during interview sessions will elicit information about how catalogers perceive values when interacting with this document. Through the combination of these findings, a fuller picture of how values are expressed by RDA will emerge, with implications for knowledge organization standards beyond RDA as well.

1.3 Significance of the Study

This study will offer new insights into the relationship between values and standards while contributing to the small but important body of literature concerning RDA. Findings will

contribute theoretically and practically to areas including value theory and analysis, cultural heritage, library and information science, knowledge organization, information ethics, and standards. These contributions, as well as opportunities for subsequent research, are presented below.

1.3.1 Theoretical/Conceptual Significance and Contributions

Value theory is not a single, comprehensive theory, but rather a collection of theoretical constructs and pursuits concerning value (Orsi, 2015). Many contributions to value theory are classificatory in nature, though the intent of this study is not to offer a new value classification, but rather, a value system associated with the standard RDA. A value system is a set of values arranged by relative priority. Though value systems are typically associated with persons or organizations (Rokeach, 1968), my work applies and modifies the concept of a value system to an artifact. This study also contributes to value theory by exploring the relationships between values and standards, between instrumental and terminal values, between asserted values and functional values, and how the enactment of standards mediates these relationships. Finally, my study represents a unique application of value theory in information science. In using values an evaluative lens, my work draws inspiration from values and design research (Friedman, Kahn, & Borning, 2002; Shilton, Koepfler, & Fleischmann, 2013), but introduces values as a means of evaluating the standard as a genre of information artifact.

Methodologically, this work will contribute to value analysis by identifying certain rhetorical or genre aspects of knowledge organization standards associated with value expression, and laying the ground work for further value analysis of other, similar standards. Within knowledge organization, my work will more fully introduce values as a means of

assessing and comparing knowledge organization standards and the data they produce. For library and information science and cultural heritage, the results of this study will present specific values associated with a key standard as well as comparisons to asserted values in these fields. Finally, in highlighting the inextricable place of values in standards and the importance of the dual documental/enacted nature of standards in understanding this, findings from this study hold significance to the broader study of standards as well.

Conceptually, this work will contribute to ongoing discussions concerning information values and ethics. Information ethics addresses certain normative values such as goodness or rightness in relation to information and information practices. While developments in information technology enable exciting new potentials, they may, in the process, inadvertently violate important ethical values such as confidentiality. Responsible, ethical approaches to technology warrant the use of critical perspectives in evaluating our technological practices and artifacts. The present study demonstrates the use of value analysis as a critical lens for examining information standards and associated practices, and posits values as a useful concept for exploring the social implications and ethics of our increasingly complex information practices.

1.3.2 Practical Significance and Contributions

This study and its findings will be of practical significance to librarians and other knowledge organization practitioners in the cultural heritage domain. While libraries in particular have a strong stance on ethics and values (American Library Association, 2004), the applicability to cataloging work has been questioned, leading to increased discussion within the profession concerning cataloging and ethics (Shoemaker, 2015). Findings from this study will contribute to this discussion by 1) revealing the role that tools such as knowledge organization standards play

in supporting and perpetuating values, and 2) assisting the profession in critically exploring the values associated with their work. Specific findings concerning RDA will be of use to catalogers in interpreting and using this standard in their work, while holding implications for cataloger education and the design of community best practices guidelines as well. Findings may also be of interest to the organizations and persons responsible for the upkeep and revision of RDA, and to those designing knowledge organization standards at large.

This study will also have implications for data use and sharing practices. Values embedded within knowledge organization standards are significant in that they are further perpetuated by the data they are used to generate. Cultural heritage knowledge organization data is typically confronted by users in the context of traditional discovery tools such as catalogs. As cultural heritage institutions become increasingly active in the Semantic Web (Marden et al., 2013), however, linked data approaches to data publishing and dissemination promise to take resource description data beyond the confines of traditional discovery tools. While these advances promise new and exciting uses of cultural heritage data, they may also serve to decontextualize or obscure its origins. As cultural heritage data becomes increasingly enmeshed with the wider online information environment, findings from this study offer further understanding of what values it may be carrying with it into the Semantic Web. For those who will utilize this data, this study helps provide important context behind it that can assist in understanding and using it responsibly.

1.3.3 Opportunities for Further Research

Findings from this study will generate opportunities for further research in several veins. First, following this work, an even broader view of values and their enactment may be

undertaken. While this study focuses on one standard and the practitioners who use it, this represents an excerpt of a much larger ecology of values. The establishment and perpetuation of values may be traced back to institutions or standard designers, as well as forward into systems and end users. Any domain can be viewed as a collision of multiple value systems, with values from individuals, institutions, and artifacts interacting in specific ways. The resulting congruencies and conflicts bear meaningful influence on the role standards truly play, and whether their innate values are supported or subverted. Thus applications of value analysis to texts, practitioners, institutions, communities, domains, systems, and data all hold promise.

Second, these findings serve as a starting point for a more comprehensive comparative analysis of knowledge organization standards in the cultural heritage domain. A fuller comparison of standards such as *Describing Archives: A Content Standard* (DACS), *Cataloging Cultural Objects* (CCO), and RDA may be made by extending the methodological approach taken in this work. Comparative value analyses of standards in other domains may also be undertaken, and could offer a fuller understanding of how values and standards relate at a broader level.

Finally, this study opens up opportunities for VaD research in relation to cataloging and other knowledge organization practices. As a research domain, values and design incorporates a methodological framework for upholding values during the design process (Friedman, 1996) as well as value analysis in design (Le Dantec, Poole, & Wyche, 2009). Understanding values associated with standards and data is one important step in enabling the design and presentation of resource description data and interfaces aligned with desired institutional and user values. Subsequent research could build off of findings in this study, while further examining user perspectives and the overall implications for design.

1.4 Key Terms

This study is built on two key concepts: values and standards. Though these concepts have already been introduced, below, brief definitions are provided for both convenience and clarity. Definitions here are not meant to encompass every sense of the term; rather, they capture the meaning most relevant within the context of this document, along with justifications, disambiguations, and examples where needed.

1.4.1 Values

Values are preferences for modes of action or end states of being that are thought to be beneficial. Such preferences are not temporary or limited to a specific context. They are, rather, considered high-level and sustained; value theorist Rokeach (1968) describes them as deeply held beliefs. Values are often depicted as abstract concepts, such as happiness, wealth, or power, but specific, concrete things can be considered values at times, for example, valuing specific family heirlooms (White, 1951). Values can be held by persons or groups of persons; the underlying set of values and their relative priority for any given person or group is often referred to as a value system (Rokeach, 1968). Values may be embodied in the artifacts produced by these persons or groups. It is important to distinguish values from other closely related concepts, including attitudes, bias, and ethics. Like values, attitudes may be seen as a kind of belief, but are focused around response to a specific object or situation. They exist at a lower conceptual level than values, and Rokeach (1973) theorized that while people may have a dozen or so values, they may have thousands of attitudes. Bias is a systematic and not reasonably justified discrimination which leads to an unfair outcome (Friedman & Nissenbaum, 1996). Biases are not values, but

instead, situations which may be precipitated by values, or which may violate values. Finally, ethics concern beliefs held by persons or communities about what is right or wrong (Gorman, 2015). Ethics is therefore concerned with only a specific set of normative values (i.e. rightness, goodness) and their implications for truth and action.

1.4.2 Standards

Standards are documents that establish agreed upon requirements, specifications, or guidelines (ISO, 2017). They are created in order to ensure consistency and facilitate cooperation and collaboration. Standards are adopted as a means of bringing practice into order within a specific community (Svenonius, 2000), but may also be rejected or replaced depending upon the needs of that community. Once adopted and widely implemented, standards serve as a kind of invisible infrastructure (Bowker et al., 2009) and thus tend to appear neutral (Olson, 2001), but as social artifacts, can be seen as reflecting certain perspectives (Lampland & Star, 2009). A vast array of standards exist for all manners of work and life, covering topics such as road sign measurements, ice cream ingredients, and chair stability (ISO, 2017). The focus of this study is on procedural standards for knowledge organization, particularly those created and adopted to ensure consistency in describing resources. Many such standards exist, including *Cataloging Cultural Objects* (CCO) and *Describing Archives: A Content Standard* (DACS); however, the primary case of interest will be *Resource Description and Access* (RDA), the international library standard published in 2010. This standard covers procedures for creating metadata typically associated with the library catalog. RDA was adopted by United States national libraries in 2013, and its implementation in this and other countries is currently ongoing.

1.5 Summary

Resource description is an important knowledge organizing activity within the cultural heritage domain, providing access to information resources under the purview of memory institutions such as libraries, archives, and museums. Like many community activities, resource description is governed by shared standards; for libraries, this activity, often referred to as cataloging, is guided by the standard RDA. While RDA represents a relatively recent paradigm shift in library practice, few in-depth analyses have been conducted.

More importantly, while standards have been shown to carry values, value analyses of knowledge organization standards have not been conducted, leaving questions concerning what values standards like RDA may be propagating. This study addresses these gaps by undertaking the following questions: what values are expressed, and to what extent, in the text of RDA; how are values in RDA recognized and responded to by practitioners; and how are values communicated by knowledge organization standards? RDA represents a worthwhile case due to the increasing, international influence of this standard, the library community's strong stance on values, the widespread proliferation of RDA data, and the potential to yield findings with generalizability to the larger domain of cultural heritage knowledge organization. Findings from the study will address critical gaps in how values manifest in standards and how standards mediate community values, and contribute to value theory and analysis, knowledge organization, and the study of standards. At the same time, understanding the values associated with information standards is a crucial step toward organizing and using knowledge and associated technologies more effectively, responsibly, and in line with community values.

With the topic, research questions, and purpose of the study laid out in the initial chapter, the remainder of the document is structured as follows. Chapter 2 consists of a literature review

in two parts: the first part covers values and their analysis, including value theory, and perspectives on values in the social sciences, while the second part covers knowledge organization standards for description and their analysis. Chapter 3 outlines the methodology of the study, including the research design, data collection and analysis procedures, and relations to previously conducted preliminary studies. Chapter 4 presents the results of the content analysis phase of the study, while Chapter 5 does the same for the interview phase. Chapter 6 offers an in-depth discussion of the overall findings. Finally, Chapter 7 concludes the document with a review, including implications, limitations, and potentials for future work.

CHAPTER 2

LITERATURE REVIEW

2.0 Introduction

Research on standards has drawn on a variety of disciplines and viewpoints, and has served to increase awareness and understanding of the perspectives and implications of these seemingly neutral pieces of infrastructure. Despite this understanding, little work within standards research has been framed explicitly within discussions of value. Values are deeply held beliefs in the preferability of specific modes of conduct or states of being. While values are commonly attributed to individuals and groups, values may also be embedded in the artifacts they produce. As community artifacts, standards have the potential to harbor rich systems of values, though this potential is yet to be fully explored even in values-laden domains such as cultural heritage. The library domain in particular is one with both a strong history of asserted values and a set of influential and widely-shared standards. Value analysis of these artifacts holds opportunities to reveal more about how values manifest in and are enacted by standards. This is the purpose of the present study, and this literature review is intended to provide the context for such a work.

To do so, this chapter places the present study within the intersection of two bodies of research: the study of values, and the study of standards. Each of the two corresponding sections provides an overview of relevant streams of research, including specific areas of interest, influential theories, methodological approaches, and major findings. Following these, a brief

summary section highlights the current connections between these two areas of research and posits this intersection as a starting point for the current study.

2.1 Values

Values are enduring beliefs in the preferability of states of being or modes of conduct. Values are held by individuals and groups, and may be embedded in or expressed by their artifacts. The study of values originated in philosophy, where it is referred to broadly as value theory, though values are of interest in a number of disciplines, including the social sciences and library and information science. Common to values research in all domains has been the development of classifications and frameworks enumerating specific values, though recently some research has purposely eschewed these in favor of more contextual, inductive approaches to value. The elicitation of values involves a number of specific methods, many of which derive from the social sciences, including surveys, interviews, and observations.

Literature covering these topics is presented below in several sections. First, definitions of values are covered, followed by an overview of value theory and related perspectives from philosophy. Next, theories and perspectives from the social sciences, library and information science, and cultural heritage are described. Finally, value lists and frameworks are summarized, along with literature on the elicitation and measurement of values.

2.1.1 Definitions

Put simply, values are the things that people or groups consider to be important (Cheng & Fleischmann, 2010). Further defining what a value is poses a certain amount of difficulty; in fact, Schwartz (2012) claimed that research into values has been hampered by disagreements over the

basic conception of values. While indeed, definitional variation persists, there exists a certain level of conceptual consensus within values research, particularly within the domains of philosophy and social science. This consensus centers on the depiction of a value as belief in a preferability. For example, Rescher (1969) defined a value as “a slogan capable of providing rationalization of action by encapsulating a positive attitude toward a purportedly beneficial state of affairs” (p. 9). White (1951) similarly framed values as states that are self-evidently desirable. Social psychologist Milton Rokeach (1968; 1973) was instrumental in furthering conceptual agreement around values with the following definition: a type of belief about the preferability of a worthwhile end-state of existence, or a way of behaving, not tied to any specific situation. With this definition, Rokeach placed values at a high enough conceptual level to facilitate theorizing while maintaining the connection between values and behavior so important to social scientists. Subsequent definitions within values research have maintained the spirit of Rokeach’s definition. For example, Schwartz (2012) defined values as beliefs about desirable goals, transcending specific situations, which are capable of guiding action.

Another approach in conceptualizing values has been defining what they are not; that is, disambiguating them from related or similar concepts. Typically, such contrasts are made against beliefs, attitudes, needs, ethics, or traits. Beliefs are simple propositions about the world or the self that a person might believe; while a person may hold many beliefs, only those concerning the preferability of a mode of conduct or end-state of existence are considered values (Rokeach, 1973). Likewise, a person may hold many attitudes, which Rokeach (1968) described as an “organization of beliefs around an object or situation predisposing one to respond in some preferential manner” (p. 112). Values may contribute to attitudes, but attitudes themselves exist only in relation to very specific contexts, in marked contrast to the more general nature of values.

Needs are requirements for ongoing existence, for example, food or water. Whereas needs are often framed as purely behavioral, values are seen as encompassing behavioral, cognitive, and affective aspects, requiring levels of both intelligence and social awareness (Lee, 1949; Kluckhohn, 1951; Rokeach, 1968). Ethics refer to a specific set of normative values (i.e., rightness, goodness) and their implications for truth and action (Gorman, 2015). Finally, traits are characteristics that persons or groups can exhibit, and are quite distinct from values. For example, a person can value creativity without exhibiting it, and similarly, a person may be creative without valuing it (Schwartz, 2012).

Though a number of derivative terms are used in values discourse, one is particularly common and deserves mention here: value system. A value system is an organization of a set of values, arranged in order of priority (Rokeach, 1968). Each person can be seen as having their own value system, with varying orders of priority that have implications for personal behavior (Clawson & Vinson, 1978). Groups can have value systems as well, with individuals conforming to these value systems to some extent as part of their membership (Hills, 2002). Research concerning value systems is common, and is typically focused on ranking priorities of values and comparing systems among person or groups. While there exist many other derivations of the term “value” (e.g., intrinsic value, personal value, instrumental value), such qualifications and classifications of values will be explored further below.

2.1.2 Value Theory and Perspectives in Philosophy

Philosophy is the domain with the longest, most well established tradition of inquiry into values; the study of values in philosophy has come to be known as value theory. It is not a singular, formal theory, but rather, a discipline of inquiry into values. Specifically, value theory

has been concerned with three lines of inquiry: the general study of values, views on what is fundamentally good, and the exploration of structural questions concerning values (Orsi, 2015). The second line of inquiry is also known as axiology, a general theory of values focusing on what things are good, and how good they are (Rescher, 1969). Such conceptions of value are sometimes referred to as “thin” evaluative notions (i.e., limited to goodness or badness) (Orsi, 2015). Though axiology is sometimes used synonymously with value theory, axiology focuses on a specific set of questions, while value theory encompasses a wider range of value questions beyond which things are good (Hirose & Olson, 2015). As such, value theory includes not only “thin” evaluations, but “thick” evaluative notions as well, such as kindness or orderliness. The third line of inquiry, structural questions concerning values, typically involves the development or exploration of classificatory frameworks.

The development of value theory dates back to the work of the Greek philosophers, and has continued to the present day. Though he acknowledged the importance that religious practices hold in establishing social values, Socrates sought instead to uncover the existence of ethics independent of religious faith (Maio, 2017). In his work on values, Aristotle argued happiness through virtuous action to be the ultimate value (Orsi, 2015). Values continued to serve as an important subject of inquiry within philosophy, and featured prominently within the works of Kant, Bentham, Nietzsche, and Dewey. Throughout this time, however, no singular, general theory of values was established (Werkmeister, 1967). Important, long-standing disagreements within philosophy remain to this day, focusing especially on objectivity and relativity. The objectivity or subjectivity of values holds particular implications for normative ethics and has been much debated within philosophy (Clawson & Vinson, 1978), though some perspectives allow for the existence of both (Rescher, 1969). The relativity of values is often

framed within discussions of consequentialist and deontological judgments. From a consequentialist perspective, actions should be evaluated based on the greatest good for all, while deontological judgments focus on the relative good for the people involved (Maio, 2017). Varying views on these and other matters exist within value theory and contribute to the continuing discourse of this discipline.

Though value theory does not offer a singular, comprehensive theory of value, it has yielded a relatively stable set of classificatory terminology for conceptualizing types of values. These types often take the form of pairs, and together, serve as a set of widely used value dimensions. These dimensions include finality, intrinsicality, conditionality, and essentiality. Final or terminal values are those things considered valuable in their own right, such as Aristotle's depiction of happiness. Contrasted with these are non-final or instrumental values, which are valuable only in that they lead to some other valuable end (Orsi, 2015). The intrinsic/extrinsic distinction is closely related and occasionally used synonymously, but generally refers to the metaphysical location of the value property, whether in an object or external to it (Rønnow-Rasmussen, 2015). Conditionality is another commonly used dimension of value: conditional values are only valuable if certain conditions are met, while unconditional values do not depend on the value of anything else (Orsi, 2015). Finally, values can also be described as essential (favorable in all possible occurrences) or contingent (favorable but not in all possible occurrences) (Orsi, 2015). These dimensions are used frequently in discourses concerning values. Further classification of values has been taken up in other disciplines, and will be discussed below.

2.1.3 Perspectives in the Social Sciences

Values have been a popular subject of study within the social sciences, where they are often employed as a means of framing and understanding behaviors and motivations. Though basic concepts and principles from value theory are employed, values research in the social sciences frequently advances and employs more specific theories of value and value classifications. Within the social sciences, values have received the most attention from research in psychology, sociology, and economics (Laszlo & Wilbur, 1968). However, economics bears a specific operationalization of value that has yielded theories and measurements quite distinct from the other social sciences (Hirose & Olson, 2015), and as such, will not be explored here. Rather, three specific, social science disciplines with relevance to the present study will be presented here: anthropology, psychology, and sociology. Influential scholars and pursuits associated with values will be highlighted for each, before exploring values research in library and information science and cultural heritage in separate sections below.

2.1.3.1 Theories and Perspectives in Anthropology, Psychology, and Sociology

Within anthropology, values have been employed as a means of describing, analyzing, and comparing cultural groups. Dorothy Lee is one of the most influential anthropologists to incorporate values in her work, particularly in her study of indigenous cultural groups in New Guinea. For example, in her work with the Trobriand Islanders, Lee (1949) explored cultivation and gifting practices surrounding the taty crop, highlighting the Trobriand values of sameness, pattern, and tradition, as well as the intrinsic value of the taty in order to explain what was otherwise seen as an inefficient or irrational set of behaviors. Lee's work may be seen as representative of the early stance of cultural relativism in anthropology, which had emerged in

response to the inherent imperialism in earlier anthropological works and the growing skepticism concerning Western superiority (Hatch, 1983). A post World War II shift toward universality in anthropology can be seen in later values research in this area. Anthropologist Clyde Kluckhohn (1951) maintained the importance of using values to understand human action. However, according to Kluckhohn, despite the seeming diversity among human cultures, there must exist a universal set of human values relevant to all of them. His work introduced value classification work into anthropology, an endeavor that would be continued on by Florence Kluckhohn and Fred Strodtbeck. In developing what would become their values orientation theory, Kluckhohn and Strodtbeck (1961) proposed that all human societies faced a limited number of universal questions or problems, and their responses to such problem were guided by (and thus could reveal) their values. The resulting values orientation theory is commonly used in anthropology to examine values among different cultural groups, and also among different generational groups within the same culture (Hills, 2002).

Throughout the early portion of the 20th century, psychologists sought to understand and explain human behavior through the use of more narrow constructs such as motives and attitudes (Clawson & Vinson, 1978). Though values had been explored in this domain, psychologist Milton Rokeach brought renewed interest to the subject with his work on beliefs, values, and attitudes. Rokeach (1968) defined values as beliefs in the preferability of a mode of conduct or end state, and presented them as a meaningful yet efficient approach to studying behavior more broadly. As his work took on a more structuralist tone, Rokeach (1973) sought to explain behavior through the concept of value systems, priority-driven organizations of limited numbers of values particular to each person or group. Another significant contribution of his research was the development of the Rokeach Value Survey, an inventory for values that became popular in

social sciences research (Braithwaite & Law, 1985), and remains so today (Weber, 2015; Ittzés et al., 2017). Rokeach also laid the groundwork for subsequent value investigations in psychology, several of which are worth noting here. In his work on mass communications and gratification, McGuire (1974) featured values as a key aspect of motivation. Employing a universalist perspective, Schwartz studied values across cultures extensively. His resulting theory of basic values sets forth ten common values recognized across cultures, the varying priorities of which can be used to explain differences in behavior among groups (Schwartz, 1992). Finally, social psychologist Geert Hofstede's (2003) cultural dimensions theory addresses the relationship between culture, values, and behavior, particularly in relation to international commercial organizations.

Though values were of interest to early sociologists, they were also viewed as an impediment to social understanding. For example, Durkheim (1995) described "collective consciousness" as a system of values and beliefs held in common by members of a society, and that define mutual relations within that society. However, he also felt that social facts were objective, and must be studied without contamination by the values of the observer (Seidman, 2013). Weber similarly advanced a position of value-neutrality within sociology, idealizing the researcher as a blank slate (Seidman, 2013). By the mid-twentieth century, a reaction against scientific positivism in sociology led to a more reflexive perspective concerning values. Mills (1959) declared the inevitability of individual and societal values influencing social analysis and theorizing, and even identified key values he felt to be inherent in the social sciences, including reason, truth, and freedom. In his work, Gouldner (1970) recognized that theories, methods, and tools carry their own value systems, and called for a greater recognition of subjectivity in social knowledge. Ethical reflexivity remains an active and important discussion within sociology

today (Gewirtz & Cribb, 2006). As a subject of sociological study, values feature most prominently within the work of Talcott Parsons. His action theory presents a structuralist perspective on motivation and social behavior, and depicts value orientations as an integral part of social structures, capable of influencing actions and acceptance within social groups (Parsons & Shills, 1951; Parsons, 1977).

2.1.3.2 Library and Information Science

Values have long been seen as an important aspect of library and information science, with the values of the field itself warranting much attention. Examinations of the field at large have often highlighted the importance of human values (e.g., values concerning human well-being and empowerment) (Bates, 1999; Gorman, 2015; Koehler, 2015). Libraries have been a particularly popular subject for values studies in this area, due to their service orientations and inherently values-laden goals (Bates, 1999). The values of American libraries and librarianship are laid out explicitly in the American Library Association *Core Values of Librarianship*. This list of 11 values includes access, confidentiality/privacy, democracy, diversity, education and lifelong learning, intellectual freedom, public good, preservation, professionalism, service, and social responsibility (American Library Association, 2004). A number of writers have offered their own interpretations of core values for library and information science, and as reviewed by Koehler (2003), most contain at least some reference to intellectual freedom, privacy/confidentiality, intellectual property rights, neutrality, preservation of the cultural record, and equity of access. Representative value statements include Koehler and Pemberton (1999), Rubin and Froehlich (2010), Ridi (2013), and Gorman (2015). Feinberg (2009) has suggested universal access to information to be the ultimate, underlying value to the field. Few empirical

investigations have been conducted concerning such values in the field, though findings have suggested service as a crucial value (Branch, 1998) and the similarity of values among information professionals worldwide (Dole, Hurych, & Koehler, 2000).

Beyond a reflexive emphasis on values associated with the field, research in library and information science has also explored values associated with information behavior and organizations. Information behavior focused research has employed values as a lens to examine common information activities such as information seeking and information technology adoption. For example, Lilley (2012) examined the information seeking activities of Maori youth, finding that they drew on specific cultural values and customs, and highly valued the knowledge of other people. In a study of Twitter, Yoo et al. (2014) explored the interplay among social and personal values and its effects on perspectives and adoption of the platform. Research focused on organizations often takes the form of analyses of organizational or professional statements of values. For example, Shachaf (2005) analyzed value statements and codes of ethics from library associations in 28 countries, finding a core of common values and principles, while da Silva et al. (2015) similarly found a common core of values within ethics codes from archival organizations in 10 countries.

Finally, a significant area of research in information science concerns the values associated with technologies. One approach to understanding this relationship is value sensitive design (VSD), initially developed by Friedman (1996) as a means of assessing how values are involved in the design of systems. Utilizing a heuristic of key values, including autonomy and privacy, VSD asserts that such values may be promoted, challenged, or undermined through design decisions (Friedman & Nissenbaum, 1996). VSD was later developed into a three-part methodological framework designed to gather important values and integrate them into

technological design (Friedman, Kahn, & Borning, 2002). A separate but similar area of study, known as values in design (ViD) focuses on a wider range of values beyond the heuristic, moral values of VSD and attempts to depart from post hoc analyses (Knobel & Bowker, 2011). In a literature review of the ViD research space, Snyder, Shilton, and Anderson (2016) found a growing but not converging collection of frameworks and methods for observing values. Recently, values and design (VaD) has been advanced as a general term to refer to both VSD and ViD research (Shilton, Koepfler, & Fleischmann, 2013). In a critique of earlier approaches, recent research in VaD has shown less interest in value heuristics and more of an emphasis on the elicitation of situational values (Le Dantec, Poole, & Wyche, 2009). For example, Pommeranz et al. (2012) suggested incorporating more social sciences methods for values elicitation, and advocated for careful triangulation in values elicitation and design. Shilton, Koepfler, and Fleischmann (2013) employed a sociotechnical systems (STS) perspective in exploring the relationship between values, people, and technology, also urging careful elicitation and consideration of values associated with each.

2.1.4 Values in Cultural Heritage

Value is a critical concept in the cultural heritage domain, one that is frequently invoked in delimiting boundaries of the field and its work. For example, UNESCO (2017) states that cultural heritage is concerned with preserving things that are of outstanding value. Value is used as a key determinant of what things may be worth saving, and thus, their consideration as worthwhile cultural heritage artifacts. As such, values are prominent in cultural heritage discourse and research, typically falling into one of two streams: a self-reflexive focus on values and heritage management, and the relationships between values and artifacts. In the first stream

the values of the field itself, as well as those associated with specific cultural heritage sites, are consulted in determining which values cultural heritage projects should uphold and protect. This values-based approach can be incorporated into heritage management as an analytical tool to navigate subjective, often political terrain and mediate the values of different stakeholders (de la Torre, 2005). Mason and Avrami (2002) identified a number of types of values relevant to heritage management, including historical, artistic, social, spiritual, symbolic, research, natural, and economic.

The second stream of research explores the relationships between values and artifacts. Traditional approaches in cultural heritage depict artifacts as bearing intrinsic and objective values, particularly authenticity and integrity (de la Torre, 2005). This stance places value within the objects themselves and points toward a unity of values and shared sense of common heritage that has become important to the domain (Vecco, 2010). However, more modern approaches have construed values as socially constructed, and thus, subjective and extrinsic to the artifact (Mason & Avrami, 2002). In a key work, Labadi (2013) explored different interpretations of UNESCO's concept of "outstanding universal value" through an analysis of applications for the UNESCO World Heritage List, finding applicants utilized four main types of values in their arguments: social, architectural/artistic, economic, and informational. Though applicants typically framed these values as intrinsic and objective, Labadi (2013) employed the concept of reiterative universalism to understand how these values may be socially constructed while maintaining certain universal aspects. Economic value associated with artifacts and sites has become an increasingly common concern in cultural heritage work (Ruijgrok, 2006; Venn & Quiggin, 2007), though the economically driven, business decision-making style has been controversial in the heritage community (de la Torre, 2005).

2.1.5 Value Lists and Frameworks

Enumerating and classifying values represents a long-standing tradition of work in value theory and research. The resulting frameworks and models typically offer a set number of values, arranged into classificatory structures such as trees or hierarchies that are intended to guide research or further theorizing. Traditional value theory offers a common set of value dimensions as previously discussed: final/instrumental, conditional/unconditional, intrinsic/extrinsic, and necessary/contingent (Orsi, 2015). While these dimensions provide a common core of terminology for discourse on values, many more specific classifications have been created in various disciplines. Rescher (1969) defended values classification as a worthwhile stream of research, and offered six different ways in which values are often classified: by subscribership, by objects at issue, by nature of benefit, by purpose, by relationship between subscriber and beneficiary, and by relationship between values. Indeed, many prominent values scholars have contributed their own value classifications in the forms of frameworks or theories (Clawson & Vinson, 1978), though the epistemological bases of these vary considerably (Cheng & Fleischmann, 2010). Five representative value frameworks from the social sciences and information science are summarized in Table 1 and presented below, followed by an overview of values frameworks specific to library and information science and some further consideration on the use of value classifications in research.

Creator	Title	Area of Origin	# of Values	Structure	Major Divisions	Sample Values
White (1951)	Basic values	social psychology	50	hierarchy	Goals, Standards of Judgment	rest, beauty, intelligence
Rokeach (1968)	Rokeach value survey	psychology	36	tree	Instrumental, Terminal	friendship, logic, a world at peace
Schwartz (1992)	Theory of basic human values	social psychology	56	categorical	Openness to Change, Self-Enhancement, Conservation, Self-Transcendence	power, security, benevolence
Friedman (1996)	Values sensitive design	information science	13	flat	n/a	privacy, autonomy, freedom from bias
Cheng & Fleischmann (2010)	Meta-Inventory of Human Values (MIHV)	information science	16	flat	n/a	freedom, wealth, spirituality

Table 1. Major value frameworks.

In his early work on value analysis, White (1951) presented a framework of 50 value-concepts. White based his framework on human needs, motives, and values as defined in the psychological literature of the time, with subsequent refinements made during eight years of content analysis. Referring to these values as “self-evident,” White (1951) structured them into a hierarchy, with the initial division being between goals (anything a person could enjoy) and standards of judgment (criteria by which things are judged). Goal values include concepts such as rest and happiness, while judgment values include beauty and justice, for example. White’s intention in developing this framework was to facilitate quantitative content analysis of verbal data. White himself employed it in numerous value analysis studies, for example, in his research on war propaganda and the writings of Roosevelt and Hitler (White, 1949).

Similarly to White, Rokeach developed his framework of 36 values from psychological literature on needs, traits, and values, and refined his results through application in research.

Rokeach (1968), however, organized his values differently: the initial division of values here is between terminal or final values (goals for society or the self) and instrumental values (manners of conduct). Within each of these divisions Rokeach placed 18 distinct values, with terminal values including friendship and a world at peace, while instrumental values include honesty and logic. Through the Rokeach Value Survey (RVS) and other instruments, Rokeach hoped his framework would provide a common basis for understanding human behavior. He used his value survey extensively to compare the values of social groups along variables such as gender, income, age, and religion (Rokeach, 1973).

In developing what would become his theory of basic human values, Schwartz (1992) relied on extensive survey work with different groups in over 20 countries, using literature in psychology and sociology to assist in structuring his findings. The resulting theory established a three-level, hierarchical structure of values focused on culturally universal motivations. This structure is often presented as a circular graphic, with four quadrants representing the initial divisions: openness to change, self-enhancement, conservation, and self-transcendence. Within these quadrants appear the 10 basic values of self-direction, stimulation, hedonism, achievement, power, security, conformity, tradition, benevolence, and universalism, with more specific values occurring under each of these (Schwartz, 2012). Under the Schwartz theory, these values are considered to be in conflict with each other, and the resolution of these conflicts is thought to be especially revealing in comparing and contrasting different social groups. Research using this theory is typically conducted with the Schwartz Value Survey, or for children, the Portrait Values Questionnaire (Schwartz, 2012).

Within VaD research, a core framework of values has emerged through what Cheng and Fleischman (2010) refer to as theoretical-empirical means. Values originally introduced by

Friedman (1996), such as autonomy, were justified through theory and literature. Subsequent empirical work in this domain modified and expanded this initial framework. Through integrative and iterative research, Friedman et al. (2013) arrived at a framework of 13 key values for design, including privacy, courtesy, and freedom from bias, though the authors are careful to caution that this is not yet a complete list, and speculated that additional values may be determined through further research. Values presented as part of the Friedman et al. framework function as design heuristics, ultimately intended to balance the usability of technologies with ethical considerations.

Cheng and Fleischmann's (2010) recent Meta-Inventory of Human Values (MIHV) builds upon work by a number of scholars, including Rokeach, Schwartz, and Friedman, in order to establish a comprehensive definition and framework of values. The authors reviewed a total of 12 value models and instruments dating from 1962 to 2006, noting commonalities, and aggregating and aligning individual values where possible. As a rule of thumb, the authors only considered values represented in at least five different sources (Cheng and Fleischmann, 2010). The resulting meta-inventory contains 16 broad values, defined as things that people or organizations find important, including freedom, accomplishment, wealth, and spirituality. MIHV has been used to guide both survey and content analysis research within information science, for example, a recent value analysis of tweets posted by homeless persons (Koepfler & Fleischmann, 2012).

Given the importance of values to the library and information science domain (Bates, 1999), it is not surprising to find a number of value lists and frameworks developed by researchers and organizations in this area. In contrast to the social sciences, library and information science typically employs values for aspirational or normative rather than evaluative

means; empirical work, such as surveying, is relatively uncommon. As such, many value frameworks here find their basis in literature, precedent, and rationalism. Such is the case with Gorman's (2015) framework of nine core values for library and information science, and Rubin and Froelich's (2010) similar list of ethical values. The American Library Association's (2004) *Core Values of Librarianship* presents an aggregation of values drawn from the ALA Policy Manual and other official documentation. Ridi (2013) drew from lists of values from related disciplines to arrive at a set of core values for knowledge organization. Common to most of these varying interpretations of core field values tends to be concepts such as intellectual freedom, privacy/confidentiality, intellectual property rights, neutrality, preservation of the cultural record, and equity of access (Koehler, 2003). Value lists have also been constructed for specific areas within library and information science, such as values associated with catalogers (Ferris, 2008) and ethics in cataloging (Bair, 2005). Value frameworks in library and information science are rarely incorporated into empirical research, but are frequently invoked in discourse concerning the field itself.

Despite the established and productive nature of value frameworks and models in values research, there has also been reaction against these tools in favor of more inductive approaches. Common criticisms of the use of pre-established value lists include their constraining nature and universalist perspectives. Though an objectivist view of values is common in traditional value theory, value scholars have often recognized that anything can be of value in particular situation (Rescher, 1969). In his work on value analysis, White (1951) described such values as intermediate or functionally autonomous, and considered them so specific and contextual that they were treated independently of his core 50 values during analysis; for example, the Marshall

Plan was indicated as a value in and of itself in White's analysis of some post World War II documents.

More contextual, relativist approaches to values have become more popular recently, particularly within VaD research. For example, Le Dantec, Poole, and Wyche (2009) found fault with the use of heuristic value lists in design, warning of the limitations these pose in investigation as well as the dangers of adhering to the perspective of one dominant classification. Pommeranz et al. (2012) advocated the active solicitation of what they described as contextual or situated values, being those that are relevant to a specific real life context, instead of relying on predetermined, heuristic lists. While established value frameworks facilitate important work and discourse in values research, more recent inductive approaches place greater emphasis on value discovery rather than value confirmation, and work to reveal patterns of valuation most relevant to specific contexts. Given the exploratory nature of the present study and the required level of granularity in analyzing one specific standard, no pre-existing value frameworks were employed directly during coding. Rather, comparisons of the results of this study's inductive analysis to these pre-existing frameworks are provided in this document's Discussion chapter.

2.1.6 Values Elicitation

Values elicitation is the gathering and description of values relevant to specific phenomena, and has been employed in a variety of disciplines, especially among those in the social sciences. As a research approach, it is premised on the idea that values have certain behavioral and verbal manifestations that may be observed and analyzed (Rescher, 1969). Earlier work in values elicitation was focused on discovering values and value systems associated with specific persons (Rokeach, 1968), but organizations and artifacts have also become common

subjects. Approaches to values elicitation may be deductive, inductive, or mixed, with many methods coming from the social sciences, especially psychology (Pommeranz et al., 2012). In particular, survey methodology and content analysis are among the most common approaches to identifying values (Koepfler & Fleischmann, 2012). Values elicitation poses certain challenges, however: values can be difficult to conceptualize and discuss, and asking about values can invoke a social desirability bias in subjects (Fleischmann et al., 2012). To deal with these challenges, researchers have developed a number of methods for values elicitation, and triangulation through the combination of several methods is often recommended (Pommeranz et al., 2012). Below, general approaches to values elicitation are reviewed before focusing specifically on content analysis.

Surveys are one of the most well-established methods for values elicitation. Ranking surveys were heavily advocated by Rokeach (1973), and the Rokeach Value Survey is still commonly employed in values research today (Weber, 2015; Ittzés et al., 2017). More recently, online values surveys have been used to elicit and compare the values of different groups, as in studies of international IT organizations (Martinsons & Ma, 2009; Davison et al., 2009). The ranking survey approach has long been criticized for its relatively thin descriptive potential though (Rescher, 1969), with many researchers preferring interviews instead. For example, Kluckhohn and Strodtbeck (1961) recommend intensive interviewing to help subjects think more deeply about values, and Snyder, Shilton, and Anderson (2016) included interviews as a recommended method for eliciting values for design. Another common approach to values elicitation has been observation. Though Rokeach (1973) referred to this method as time consuming and “unnatural,” he recognized its utility, as have values researchers in a number of areas (Friedman, Kahn, & Borning, 2002; Pommeranz et al., 2012; Shilton, Koepfler, &

Fleischmann, 2013). Beyond surveys, interviews, and observational approaches, researchers have also employed a number of other in-situ elicitation methods including ethnography, diary studies, and photo elicitation (Pommeranz et al., 2012; Snyder, Shilton, & Anderson, 2016). Though the aforementioned approaches are effective in studying persons and groups, alternative approaches must be utilized when examining values associated with artifacts. Critical analyses methods derived from the humanities have been employed in analyzing literature and organizational values statements, especially within library and information science research (Ferris, 2008; Gorman, 2015; Koehler, 2015). In studying artifacts such as software and information systems, technical analyses have been employed as well (Friedman, Kahn, & Borning, 2002; Shilton, Koepfler, & Fleischmann, 2013).

The most common approach to studying values associated with artifacts, however, has been content analysis; this approach is often referred to as value analysis. One of the earliest major proponents of value analysis was psychologist Ralph K. White. White (1951) described value analysis as a means of accessing values within verbal data, and in his work, mixed deductive and inductive coding within a quantitative approach. Rokeach (1973) also found value analysis useful, believing it to be a reliable method of uncovering instrumental and final values within historical or literary documents. Using a pre-determined framework of 24 values, Rokeach (1968) found significant differences concerning freedom and equality among writings by Lenin, Goldwater, and Hitler. Value analysis has been applied to a variety of verbal content. For example, in a study of juvenile literature, Chambers (1965) found that social values were not well supported. Dhand (1967) analyzed values in social studies textbooks, finding power and wealth to be the values given most emphasis. Lester (1982) applied value analysis to determine value systems held by fictional characters in literary works. Value analysis has also been applied

to visual content as well; for example, Spiggle (1986) compared values surrounding materialism within comic strips and underground comic books. In library and information science specifically, value analysis has been used to analyze organizational codes of ethics, as with Shachaf's (2005) study of library associations, and da Silva et al.'s (2015) study of archival institutions. Most recently, automated and crowdsourced approaches to value analysis has been applied to social media to uncover key user values (Fleischmann et al., 2012).

2.1.7 Summary

Values are enduring beliefs in the preferability of states of being or modes of conduct; they can be held by individuals or groups, and can be embedded in artifacts as well. Value theory derives from philosophy, though the study of values is of interest in many disciplines including the social sciences and information science. These disciplines have also yielded more specific theories of value, such as Schwartz's theory of basic human values, Kluckhohn and Strodtbeck's values orientation theory, and Parson's action theory. Values research has traditionally been heavily focused on the construction and use of pre-existing value frameworks, though more inductive and contextual approaches are currently gaining interest, especially in information science. A variety of values elicitation methods exist, with content analysis being the most widely utilized and endorsed for the study of textual artifacts. Standards as a specific type of value-bearing artifact will be explored further below, preceded first by an overview of general standards research.

2.2 Standards

Standards are agreed-upon requirements, specifications, or guidelines, accepted within a particular community. Due to their ubiquity and presence in all domains, research on standards is diffuse and interdisciplinary. However, there exists a significant body of works examining standards, their generic conventions, their implementations, and their implications from a variety of perspectives. Memory institutions in particular have developed well-known and widely implemented standards, designed to provide access to resources and facilitate data sharing. In libraries, bibliographic codes serve as important, procedural knowledge organization standards, and have been often studied through critical, historical, and epistemological analyses. The current, *de facto* descriptive standard for libraries, RDA, is now in the process of being implemented, and the body of research around this standard is only beginning to develop.

Literature concerning standards is formally presented below, grouped into the following major areas: the general study of standards, perspectives from genre and rhetorical studies, the study of knowledge organization standards, and the study of library standards, including the small but growing body of literature on RDA.

2.2.1 General Study of Standards

Standards are documents that establish agreed-upon requirements, specifications, or guidelines for a particular community or endeavor (ISO, 2017). They can be seen as addressing recurring problems with codified and instantiated responses (Moen, 1998), thereby bringing practice into order and consistency (Svenonius, 2000). While compliance to *de jure* standards is required by governmental organizations, *de facto* or voluntary standards are not legally enforced, but may be widely adopted to the point of being essentially mandatory (Moen, 1998).

Timmermans and Epstein (2010) provide another means of classifying standards, grouping them into four types: design standards, terminological standards, performance standards, and procedural standards (Timmermans & Epstein, 2010). Thus, while all standards perform similar work, they may be seen as varying in their relationships with compliance, stakeholders, processes, and products.

Standards regulate many domains and aspects of life, but this ubiquity also poses challenges for researchers. Standards serve as elements of infrastructure, enabling collective human activity, but are often rendered invisible or taken for granted in the process, leading to difficulties in discerning their role and effects (Busch, 2000; Bowker et al., 2009). Their relevance across disciplines has also led to a diffuse and fragmented body of research on standards, with contributions coming from areas including medicine, sociology, economy, organizational studies, political science, and information science (Timmermans & Epstein, 2010). Despite the distributed state of standards research, there exists a wealth of critical inquiry into standards and their roles. Bowker and Star's (2000) review of the social implications of classificatory and infrastructural standards serves as a foundational work in this area, and strongly advanced the position that standards espouse a particular point of view. This work was continued by Lampland and Star (2009) in their compilation of studies examining the implications of standards and the shared ethics that they propagate. Timmermans and Epstein (2010) identify their work as building on the findings of Bowker, Star, and Lampland, offering a sociological analysis of the subject and calling for further direct study of specific standards. Below, key findings from typical approaches in the general study of standards will be reviewed before moving on to relevant approaches and perspectives from genre and rhetorical studies.

A primary methodological approach in studying standards is the case study. Such case studies often represent the “key case” approach, in which one particularly telling or insightful standard is explored, though comparative case studies may also be used to contrast two different standards. Encompassing a number of distinct methods, the case study approach allows researchers to confront a variety of questions, including those concerning the origins, appropriateness, and perceptions of standards. For example, Bowker and Star (2000) presented a case study of the standard for racial determination in apartheid era South Africa, reviewing not just the standard documentation, but historical records, news reports, firsthand accounts, and other associated artifacts as well. The authors used their analysis to show the authoritarian nature of the standard and reveal its illogical and damaging consequences. Kirk and Kutchins (1992) offer another critical case study, in which an analysis of the DSM-III revealed problems concerning its development and scientific basis, as well as its acceptance within its intended community. Within organization research, case studies have illuminated the role of standards in social regulation, as in Sandholtz’s (2012) comparative case study of ISO 9000 certification. Standards concerning specific products have also been reviewed through case studies; Tanaka and Busch (2003) provide an example of this with their study of Chinese rapeseed standards. Finally, information standards have been an area of great interest in standards case studies, including work on Ecological Metadata Language (Millerand & Bowker, 2009), UNIX (Kelty, 2008), and ASCII (Palme & Pargman, 2009). All three studies highlighted the unforeseen problems associated with the adoption and enactment of these standards.

Beyond the case study, a variety of other methodological approaches have been employed in this area. Given the complicated and distributed nature of standards and their implementation and enactment, an embedded approach has been effective in revealing the

complex assortment of perspectives and implications. Ethnographic observations can allow in-depth examination of complex standards and their communities. For example, Howe (2008) utilized ethnographic observations and interviews to examine issues surrounding the complicated classification standard for Paralympic competitors and the repercussions of classifying human bodies. Ransom (2003) combined ethnographic observations with interviews in a comprehensive study of standards for red meat tenderness and hygiene in South Africa. Mixed methods have also been effective in standards research, though such studies are often intensive and time consuming. In a particularly complex research design, Bookbinder et al. (1996) employed sequential mixed methods as a means of studying an emerging standard for cancer pain management. Surveys of nurses and patient interviews were conducted and reviewed, leading to subsequent surveys and focus groups to determine if a program to implement this standard had been successful. Critical and historical analyses are also common approaches in the study of standards, useful in revealing the effects standards have had on particular domains or settings. Brunsson and Jacobsson (2000) offered a critical analysis of standards as social regulations and proxies for authority in society, while Koretz (2008) analyzed the effects of standardized assessments in education on students and teachers. Notable historical analyses include Pollard's (1983) economic history tying standards to the facilitation of international trade, and Shenhav's (1999) work exploring standardization and the role of government.

2.2.2 Perspectives from Genre and Rhetorical Studies

Standards are commonly instantiated in the form of shared, community documents. As such, approaches to the study of standards from genre studies and rhetorical studies are worth particular consideration. In rhetorical studies, documents are seen as persuasive forms of

communication, and work often involves the identification of structural or stylistic properties through which documents communicate (Young, 2003). Similarly, genre studies is focused on persistent document forms, their functions, and the conventions and expectations associated with them (Feinberg, 2009). Rhetorical studies and genre studies are both separately evolving areas, not to be conflated. However, in the study of standards, rhetorical and genre approaches are commonly used together. As such, relevant work from both areas will be presented together here.

Standards are commonly considered dry and serious, and written in legal or technical jargon (Busch, 2000). As shared community documents, however, standards must exhibit certain rhetorical aspects in order to be “convincing” to their intended audience and therefore worthy of adoption (Feinberg, 2012). Work grounded in rhetorical and genre studies has shown that such documents seek to persuade their users through specific structures and conventions. While not explicitly focused on standards, Farkas (1999) drew on rhetorical studies to examine procedural discourse (i.e., instructions guiding users in performing specific tasks). Focusing on streamlined-step procedures, he found specific rhetorical structures within these documents, including title, conceptual element, infinitive subheading, step, and note, along with several major rhetorical implications: options suggest flexibility but may demand too much decision making, conditions imply a carefully thought out text but may be taxing, and imperative verbs are clear but may be seen as too authoritative (Farkas, 1999). The conclusion that procedures are inherently rhetorical holds implications for standards, many of which are procedural in nature, especially in the information domain (Moen, 1998). Dixon, Harrison, and Taylor (1993) also examined structures within procedural discourse, finding that explicit action statements and verbal forms improve user recall.

The study of specific standards has also shown the generic and rhetorical nature of these documents. Several relevant works come from the field of accounting, which is characterized by a large, dynamic body of standards. Young (2003) reviewed accounting standards from the Financial Accounting Standards Board, finding their idiosyncratic structures worked to persuade users to see them as good and valuable, while simultaneously silencing alternative practices. Specific rhetorical structures such as explicit justifications, tethering current practice to past practice, and numbering of passages were found to contribute to the ways in which these standards present themselves as serious, credible documents (Young, 2003). In an examination of the ongoing principles-based versus rules-based debate in accounting, Bradbury and Schröder (2012) used rhetorical analysis to examine several accounting standards, finding common, recurring rhetorical structures including rules, justifications, guidance such as examples, and applications such as definitions and references.

Rhetorical and genre approaches are less frequently used in the study of information standards, though notable works exist. Feinberg (2009) drew on genre studies and rhetorical analysis in a study of several knowledge organizing systems, including classification standards, finding that these documents both incorporate and betray specific generic conventions in order to represent a point of view. Her subsequent work also examined classification standards, in relation to specific rhetorical concepts such as ethos or credibility (Feinberg, 2012), authorial voice (Feinberg, 2011), and argumentation (Feinberg, 2010). Together, Feinberg's studies are the exemplary body of work for genre and rhetorical analysis of information standards, and demonstrate the presence of an intriguing set of rhetorical strategies particular to these kinds of documents.

The materiality of standards as documents lends these artifacts to study through rhetorical and genre analysis, with further work in this area warranted. Moving beyond their role as documents, standards are also instantiated and enacted in everyday practice. The following sections will examine standards, their enactment, and their implications, specifically within the domains of knowledge organization and libraries.

2.2.3 Knowledge Organization Standards

Knowledge organization has been described as a wide, interdisciplinary field (Hjørland, 2008) or a metadiscipline (Dahlberg, 2006). At its heart, knowledge organization is concerned with the representation and organization of knowledge or information in various systems, encompassing both the processes, such as indexing and cataloging, and products, such as classifications and databases (Andersen & Skouvig, 2006; Hjørland, 2008). These processes and products occur in all domains, and are frequently developed and refined through standardization. The governing standards behind knowledge organizing activities, therefore, are of great interest to researchers working in knowledge organization. The general study of standards and standardization in knowledge organization research has been carried out largely through critical analysis, frequently framed within discussions of utility or bias. Andersen & Skouvig (2006) argued, for example, that knowledge organization standards privilege certain points of view at the expense of others, a phenomenon that was also explored in Olson's (2007) analysis of feminist critiques of logic in relation to classificatory standards. Idrees (2013) also offered a critical analysis of classifications, here exploring deficiencies in relation to Islamic publications. Building on these and other prior works, Lambe (2015) argued that knowledge organization standards function as tools for predominant ideologies.

More often, though, work in this area takes the form of analyses of specific knowledge organization standards. In such studies, critical pieces of evidence include the standard itself, along with secondary writings, best practices guides, records, systems, and users. Recalling Timmermans and Epstein's (2010) framework of standards, we can find that most knowledge organization research focuses on one of two types of standards: terminological standards or procedural standards. Terminological standards bring consensus around the meaning of terms in a domain, and include knowledge organizing systems such as classifications and controlled vocabularies. Representative works analyzing specific terminological knowledge organization standards include a comparative case study of *Sexual Nomenclature: A Thesaurus* by Ojennus and Tennis (2013), and Osorio and Osorio's (2016) cluster analysis of the Inspec classification. Procedural standards specify how processes are to be performed; processes of interest in knowledge organization include activities such as indexing, abstracting, and description. Case studies are common, as in Anderson's (1994) exploration of the ANSI/NISO Z39.4 for indexing, and Tsay's (1992) work on the *Chinese National Standard for Writing Abstracts*.

Regarding specific domains, cultural heritage is a domain of particular interest to the knowledge organization community. Cultural heritage is the study, preservation, and curation of cultural practices and artifacts passed down through societal groups (UNESCO, 2017). Work in this area is carried out largely by memory institutions including libraries, archives, and museums. Given the complex and distributed nature of cultural heritage work, standards play an important role in coordinating activities in this domain, with knowledge organization standards holding special importance. Libraries, archives, and museums have devoted a great deal of energy to the creation, implementation, and maintenance of knowledge organizing systems such as classifications, controlled vocabularies, and metadata schema. Research on the terminological

knowledge organizing standards in cultural heritage often employs critical, historical analysis, for example, Sherman's (1987) review of the museum classification system Iconclass, or Baca & Gill's (2015) history of the Getty Vocabularies. A major focus of procedural standards in cultural heritage is resource description, the process of creating representations of artifacts (Hider, 2012). Traditionally, libraries, archives, and museums have maintained their own distinct standards for resource description. Within archives, *Describing Archives: A Content Standard* (DACS) (Society of American Archivists, 2013) serves as the *de facto* descriptive standard, emphasizing the structural and relational particulars of archival materials and their creators. Research on DACS includes case studies, as Rush et al.'s (2008) work which found DACS to be useful and flexible for the archival community, and critical, historical analyses which have served to emphasize the relationship DACS bears to other standards such as APPM and DCRM (Nimer & Daines, 2013). Within museums, *Cataloging Cultural Objects* (CCO) (Baca & Visual Resources Association, 2006) is a major content standard for describing works of art and other artifacts, and is often implemented in conjunction with structural standards including CDWA and VRA. Case study approaches to CCO are common, with Coburn et al.'s (2010) study of decision-making processes in relation to this standard serving as a representative work.

Due to their long history of collaboration and resource sharing, libraries rely on a large palette of knowledge organizing standards. Long-lived, widely implemented standards are common, including terminological standards such as Dewey Decimal Classification (DDC), Library of Congress Classification (LCC), and Library of Congress Subject Headings (LCSH), and structural standards such as MARC and BIBFRAME. Critical analysis has been a common approach to studying these standards. Notable examples include critical analyses of terminological bias in LCSH (Knowlton, 2005), stigma and bias in LCC and DDC (Adler,

Huber, & Nix, 2017), and cultural bias in LCC (Diao & Cao, 2016). Case studies are also common, especially in the study of the structural standard MARC in its various incarnations (Lutz, Fitzgerald, & Zantow, 1992; Ranta, 1996; Gu, 2014). As with archives and museums, procedural standards govern knowledge organizing activities, especially resource description. In libraries, the practice of resource description is traditionally known as cataloging, and standards covering this activity are known as descriptive catalog codes or bibliographic standards. Research exploring these standards is specifically addressed below due to its relevance to the current study.

2.2.4 Bibliographic Standards

Over the past 175 years, Anglo-American cataloging practice has been brought into order through a small but influential succession of descriptive standards. The earliest descriptive codes were designed for the collections and needs of a single library or institution, though as the nineteenth century progressed, an interest in broader, more generally applicable standards was increasing (Svenonius, 2000). By the close of the twentieth century, a significant number of English speaking libraries around the world were united under the standard AACR and its successor, AACR2. Given this trend, it is not surprising that the general study and discourse concerning bibliographic standards for description is heavily focused on the telling and retelling of the succession of standards, often from historical perspectives (Strout, 1956; Dunkin, 1969; Henderson, 1976; Hoffman, 2009). Alongside this emphasis on standard lineage has been an interest in the underlying, shaping factors on standard development. According to Svenonius (1989), “cataloging rules cannot be developed in a theoretical vacuum, but must be shaped by political and economic considerations” (p. 43). Chief among these considerations has been the

reduction of work through bibliographic record sharing, which has exerted influence not only on standard development, but standard adoption as well. For instance, Sanner (2012) cited American libraries' reliance on LC produced records as a key factor in the development and widespread adoption of AACR2. Technological considerations in standard development are also commonly explored in the literature. For example, Delsey (1989) found consideration of early electronic catalogs to be a key factor in homogenization of catalog rules for various materials, while Tennant (2002) described the development of AACR2 as inextricably intertwined with the development of electronic records and the MARC format. Beyond this, bibliographic standards have been analyzed from a number of perspectives and in a number of ways. Typical approaches to the study of bibliographic standards for description include historical analysis, critical analysis, epistemological studies, and content analysis. These approaches and the major findings they have yielded are presented below.

Historical analysis has been a prominent technique in research on bibliographic standards. A number of foundational works in this body of literature take the form of detailed historical analysis, often following the progression of successive standards from Panizzi forward. For example, Strout (1956) offered an extensive historical overview of the development of bibliographic codes and catalogs, while Henderson (1976) provided a similar historical analysis focused specifically on American traditions. In both instances, researchers constructed an historical narrative through literature review and textual analysis of key standards. Other historical analyses have offered more critical commentary alongside historical tracings, such as Dunkin's (1969) work on American cataloging standards, in which the author criticized the abandonment of Cutter-era principles and called for their return. More contemporary historical analyses have focused on particular aspects of bibliographic standards. For instance, Tillet

(1989) offered a descriptive history of entry and reference practices in prominent Anglo-American catalog codes, indicating both advances and continuing concerns. In a historical analysis of the treatment of electronic resources, Weiss (2003) compared revisions of the AACR2, ISBD, and MARC standards, finding the introduction of new carrier units had spurred new and increasingly specific rules in response. Howarth and Weihs (2008) performed a descriptive, historical analysis of bibliographic standards, focusing specifically on main entries and the so-called “rule of three,” tracing how and why shifts have occurred in their treatment. Broad theoretical and philosophical lenses are occasionally employed in these historical analyses as well; Hufford’s (1992) historical analysis focused specifically on pragmatic aspects of catalog code.

Critical analysis is a common research approach to studying bibliographic standards, and is frequently focused on drawing out underlying trends and perspectives. It has been used to study specific concepts in bibliographic standards, such as Wajenberg’s (1989) critical analysis of cataloging practice and the author concept, and specific trends or movements, such as record sharing (Swanekamp, 1998). In both studies, researchers utilized textual analysis of key standards, with Wajenberg (1989) focusing on the AACR2 bibliographic standard, and Swanekamp (1998) examining Program for Cooperative Cataloging (PCC) guidelines and documentation. In a more extensive critical analysis, Hufford (1992) reviewed several prominent American and British descriptive cataloging standards, finding that while the approach to their development has been ostensibly driven by pragmatism, the absence of the user in such code formation should be seen as problematic. However, critical analyses in this area are typically limited to the study of a specific standard. A comprehensive example can be seen in Coyle’s (2015) critical analysis of FRBR, in which a range of primary and secondary documents are

analyzed in order to draw conclusions about the role and effectiveness of this standard. Other critical analyses have focused on specific aspects of a single standard. Fattahi (1997) conducted a critical analysis of AACR2 in relation to online environments, arguing its continuing relevance, and Bianchini and Willer (2014) did the same for ISBD.

Common to both historical and critical analyses of bibliographic standards has been a focus on epistemological basis, to such an extent that it deserves specific mention here as an important pursuit in this research area. A consistent finding in epistemological analyses has been the importance of rationalism, often at the expense of more empirical perspectives. This trend began with some of the earliest formal codes: Hufford (1992) and Coyle (2015) both noted that nineteenth century standards were largely derived from personal rationalizations of scholars such as Panizzi and Jewett. Though the development of some standards in the twentieth century involved surveys and interviews with librarians (Hufford, 1992), rationalism would continue to serve as a primary epistemological basis. In discussing knowledge organization systems, Smiraglia (2014) found that while other knowledge organization tools, such as taxonomies, may be more epistemologically rooted in empiricism, catalogs and their governing standards remained largely driven by rationalism. Much of the current discourse concerning bibliographic standards and epistemology has focused on FRBR, the standardized conceptual model that served as the basis for RDA. FRBR's development involved no empirical methods (Hoffman, 2009), a fact that has drawn significant criticism. Le Boeuf (2005) suggested that in continuing to rely on the rationalizations of experts, FRBR models what is currently done, rather than what should be done. Coyle (2015) echoed Le Boeuf, suggesting that in originating from the considerations of a small number of current cataloging experts, FRBR functions to justify current bibliographic practice, rather than establishing a new paradigm. Not all scholars have been

critical of rationalist epistemologies in bibliographic standards. Svenonius (2000) made the argument that, given the open-ended nature of bibliographic objectives, decisions may be best left to experts who can balance needs with costs. However, as Markey (2007) pointed out, the library community has frequently left decision-making to a small set of individuals and committees, a practice that has led over time to the reinforcement of a limited point of view.

Content analysis approaches are also common in research concerning bibliographic standards. In such studies, the standards themselves may serve as documents for analysis, or information resources and their surrogates may be analyzed in order to draw conclusions concerning the underlying standard. For example, Smiraglia (2009) analyzed bibliographic records and corresponding AACR2 rules for signs of bibliocentrism in a study that also focused on ethical aspects of information organization. Greenberg, Trujillo, and Mayer-Patel (2012) used an exploratory, qualitative content analysis of online video metadata to investigate the applicability of FRBR to the YouTube platform. Recently, content analyses have been used in studies aimed at comparing AACR2 with its successor, RDA. Harden (2012) conducted a focused, quantitative content analysis of AACR2 bibliographic records, coding errors according to equivalent RDA rules to show that the RDA standard is more intuitive than AACR2. Lisius (2015) offered a comparative content analysis of AACR2 and RDA, examining the standards, secondary documents and discourse, and the online resource RDA Toolkit to determine the current necessity of access to both standards. Further content analyses focused specifically on RDA have been conducted, and will be addressed below.

2.2.4.1 RDA

Published in 2010 by an international collaboration of library associations, *Resource Description and Access* (RDA) succeeded AACR2 as the *de facto* descriptive standard for

Anglo-American libraries. Unlike its predecessors, RDA was also intended for use beyond the English-speaking library community; it has now been translated into a number of languages (Canadian Library Association et al., 2010), and has been made more compatible with standards and approaches from other information industries such as publishers and booksellers (Joudrey, Taylor, & Miller, 2015). Though RDA maintains the rationalist epistemological basis of previous bibliographic standards, particularly in its implementation of FRBR (Coyle, 2015), empirical approaches to understanding and refining RDA began early, even before the standard was widely implemented in 2013. Due to widespread concerns in the community about the feasibility of leaving AACR2 for RDA, the Library of Congress organized the 2010 U.S. RDA testing, in which participating catalogers submitted RDA records as well as their reflections on the process. The findings led to the Library of Congress stipulating a number of changes to the nascent standard that would be fulfilled in the following two years (Boehr, Reynolds, & Shrader, 2012). Since then, RDA's international implementation base has grown (Poulter, 2012), and due to its increasing influence on information environments, it has become the subject of some study. At this time, much of the research concerning RDA has been focused on the logistics of implementation from the perspective of practitioners, though the range of approaches to the study of RDA is growing. The most common methodological approaches will be reviewed next, along with major findings of interest.

As within the larger body of research on bibliographic standards, critical and historical analyses are among the most commonly employed strategies in RDA research. In a comprehensive critical analysis, Lisius (2015) examined both RDA and AACR2, along with secondary documents and resources, concluding the necessity of access to both standards for the time being. Bianchini and Guerrini (2016) provided another comprehensive critical analysis of

the standard, here in relation to online data sharing, and indicated the need for additional standards for effective use of RDA data in different environments. More common, however, are critical analyses of particular passages or sets of rules within RDA. Representative studies include Knowlton's (2009) examination of the treatment of reproductions and facsimile's, and Danskin's (2014) analysis of rules concerning publication, distribution, and manufacture, with both authors recommending modifications to the text of the standard. Specific theoretical lenses have also been employed in these studies. Billey, Drabinsky, and Roberto (2014) applied queer theory in a critical analysis of the gender element in RDA, while Wallheim (2016) utilized Genette's taxonomy of intertextual relationships to show the poor operationalization of some RDA relationship designators. There are far fewer historical analyses of RDA, largely due to the relative recency of the standard. Delsey (2016), however, provided a fairly comprehensive historical analysis of the development of RDA.

Content analysis has been used in a number of studies concerning RDA, though comprehensive analysis of the text of the standard itself is relatively uncommon. Riva and Oliver (2012) provide one example with their work, which examined elements, entities, tasks, and relationships in RDA, comparing them to those in FRBR and FRAD to show important divergences. More frequently, content analyses are performed on bibliographic records as a means of drawing conclusions about the standard. Harden's (2012) analysis of AACR2 records falls in this vein, with the author concluding that RDA is more intuitive for new catalogers than its predecessor. In an analysis of Chinese language records, Kimura (2015) found cultural mismatches between practices and standards, suggesting modifications to both RDA and Chinese language cataloging practice. Park and Morrison (2017) analyzed RDA book records in OCLC, focusing specifically on relationship recording, and found work-to-work relationships to be the

most commonly utilized relationship prescribed in RDA. Content analyses involving RDA have also been used in order to draw broader conclusions about the practice of cataloging itself. For example in Hasenyeager's (2015) dissertation work, the author performed a content analysis of RDA records created during the U.S. national RDA test, and compared the findings to demographic information concerning record creators. Though the author drew some conclusions about the early form of the standard, the primary purpose of the study was to examine the applicability of bounded rationality to cataloger's judgment.

Beyond historical, critical, and content analysis, a variety of other research methods have been employed in the study of RDA. Particularly common in the years surrounding RDA's initial implementation were case studies. Many such studies take the form of "how we did it here" cases, with authors from a particular institution detailing their training and implementation programs and offering recommendations to other libraries. However, in some cases, conclusions were drawn concerning the standard itself, as in Biella and Lerner's (2011) examination of RDA implementation for a collection of Hebrew materials that indicated the need for further input for RDA to become a truly international standard. Less frequently, case studies have used descriptions for specific resources as the cases of interest, as in Smiraglia's (2015) comparison of RDA and FRBRoo records, in which the author found that the incorporation of FRBR into RDA did not alleviate the bibliocentrism present in prior descriptive standards. Surveys have been a less common approach to studying RDA, though have been used to gauge practitioner attitudes toward the standard (Mansor & Ramzdan, 2014). In one notable study, Ashman (2013) surveyed libraries utilizing RDA to catalog electronic theses and dissertations, finding practices in flux and a need for more specific directions within the standard. Focus groups are another technique that has been used to study RDA, specifically concerning user responses to bibliographic data

generated with the standard. For example, Hider and Liu (2013) held focus groups designed to examine the relationship between RDA elements and the FRBR user tasks, finding inconsistencies with the standard's distinction between core and optional elements.

2.2.5 Summary

Standards are requirements, specifications, or guidelines that have been agreed-upon and accepted within a particular community of practice. As common, ubiquitous artifacts, standards occur among all domains, and as such, the study of standards is diffused among a number of disciplines. Within knowledge organization research, standards of interest are typically terminological or procedural in nature, and frequently examined through critical analysis and case studies. Within the domain of cultural heritage, knowledge organization standards have been especially influential and the subject of much research. In libraries, descriptive catalog codes are standards that guide the creation of resource descriptions for inclusion of the catalog. The current, *de facto* descriptive standard for libraries, RDA, is currently in the process of being implemented among a large, international base of libraries and information institutions. The body of research surrounding RDA and its implications is growing, fueled largely by critical analysis and case studies of implementation. Still, opportunities for further exploration of RDA exist, particularly through comprehensive content analysis and elicitation of user perspectives. Value analysis in particular holds potential to reveal more about this standard and its enactment, as further addressed in the following section.

2.3 Conclusion: Values and Standards

Research in standards has drawn on a variety of disciplines and viewpoints, and has served to increase awareness and understanding of the perspectives and implications of these seemingly neutral pieces of infrastructure. As Lampland and Star (2009) argued, all standards embody a set of ethics and values. In setting a reference for what is good and what is bad, standards make up a part of the moral economy of society (Busch, 2000). Despite this understanding, few studies in standards research are framed explicitly within discussions of value, though a number of critical case studies have touched upon the issue. For example, Bowker and Star's (2000) case study of the standards for racial determination in apartheid era South Africa, which were shown to strongly value social order, authority, and avoidance of ambiguity. Palme and Pargman's (2009) case study of ASCII revealed the valuation of uniformity, expediency, and ease of use by American telecommunications workers. In her examination of South African red meat standards, Ransom (2003) found that the tastes of certain groups were valued over others, leading to a system that rewarded those who supported this valuation. The body of work on accounting standards has frequently shown these documents to place value on consistency, usefulness, and feasibility (Young, 2003; Bradbury & Schröder, 2012).

Genre and rhetorical analyses of standards and other procedural discourse have also touched on the presence and role of values in indirect but important ways. Feinberg (2010) noted that rhetorical arguments are often based on audience values, and thus if standards are to be seen as rhetorical documents, values in these documents must be of interest. Rhetorical and genre analyses of standards typically frame values as a key persuasive element in these documents. For example, Young (2003) noted that the values found in accounting standards tell us what the

standard author believes should be able to persuade users. In her rhetorical analysis of knowledge organizing systems, Feinberg (2012) noted that the apprehension of shared values plays a key role in how persuasive audiences find a classification to be.

In the preceding studies, values are incidental to the larger issues of perspective, bias, and rhetoric, and are not directly pursued through the use of value theory or methods of value elicitation. At the same time, research in information science has been incorporating theories and frameworks of values into the study of system design (Cheng & Fleischmann, 2010; Friedman et al., 2013), but has thus far refrained from including standards as systems of interest, even as ViD researchers call for a wider array of approaches to studying values in relation to specific artifacts (Shilton, Koepfler, & Fleischmann, 2013). This echoes recent calls in standards research for deeper examinations of specific standards (Timmermans & Epstein, 2010).

Cultural heritage work sees libraries, archives, museums, and other memory institutions striving to preserve and provide access to practices and artifacts. It is a domain that has been characterized by a strong sense of values (Bates, 1999; Vecco, 2010; Labadi, 2013; Gorman, 2015). Given the complex and distributed nature of cultural heritage work, it is also a domain characterized by standardization, particularly knowledge organizing standards such as classifications, controlled vocabularies, and metadata schema. Mirroring the trends in general standards research, critical case studies of cultural heritage knowledge organization standards have confronted values indirectly through exploration of perspective or bias. Examples include studies on LCSH (Knowlton, 2005), AACR2 (Smiraglia, 2009), The Women's Thesaurus (Feinberg, 2012), DACS (Nimer & Daines, 2013), Library of Congress Classification (Diao & Cao, 2016), and Dewey Decimal Classification (Adler, Huber, & Nix, 2017). Further discourse concerning values and cultural heritage knowledge organization is typically aspirational in

nature, seeking to determine and justify values and ethics related to the activities but omitting direct examination of standards. Bair (2005), Beghtol (2008), Ferris (2008), and Fox and Reece (2012) all provide thoughtful examinations of the values and ethics of knowledge organizing activities, and provide a useful starting point for examination of the standards that guide these activities.

Within libraries, descriptive catalog codes are procedural knowledge organizing standards, developed to guide the process of representing collections of resources. These standards are long-lived, widely adopted among libraries, and have governed the creation of millions of bibliographic records. In particular, the current *de facto* descriptive standard, RDA, is being implemented among the widest base of libraries and information institutions yet, including English and non-English speaking libraries around the world (Poulter, 2012), and is poised to become increasingly influential in the current information environment. The lineage of descriptive catalog codes has received significant scholarly attention, particularly through historical analysis (Dunkin, 1969; Delsey, 2016), critical analysis (Hufford, 1992; Billey, Drabinsky, & Roberto, 2014), and content analysis (Harden, 2012; Hasenyager, 2015). Though little work has directly touched on the values associated with these standards, there are several notable works. In her historical review, Strout (1956) noted that the descriptive codes valued brevity, simplicity, and practicality. Lubetzky and Hayes's (1969) work highlighted the values of expeditiousness, uniformity, and cooperation. Both Henderson (1976) and Hoffman (2009) observed recurring values of uniformity and collaboration in association with these standards. Focusing specifically on epistemology, Hufford (1992) argued that pragmatism had come to be strongly valued, while Smiraglia (2009) made similar arguments for rationalism. Together, this body of literature provides a crucial background for approaching a comprehensive value analysis

of descriptive standards, an area which I have already begun exploring with a recent critical, historical analysis that showed the influence of conventional values of authority and universalism (Dobreski, 2017). Further opportunities exist for examining individual descriptive catalog codes, such as the emerging and influential RDA, and the values these standards embody and perpetuate.

CHAPTER 3

METHODOLOGY

3.0 Introduction

This study is focused on values in the knowledge organization standard RDA, how they are communicated by the text, and how they are responded to by practitioners. In order to effectively address these topics, I employed a qualitative, multiphase research design. Prior to the present work, two preliminary studies were completed during summer of 2017, covering value analysis of cultural heritage knowledge organization standards and the working practices of catalogers, respectively. To build off the preliminary studies, a two-phase, sequential plan was developed and employed. In the first phase, a comprehensive content analysis of RDA was designed to yield a framework of values associated with this standard, as well as the particular structural affordances of this document. In the second phase, interviews with catalogers were arranged in order to reveal how these values are recognized and responded to in practice. In this chapter, I first present a description of the completed preliminary studies, followed by the comprehensive methodological plan for the present study, including key considerations, challenges, and justifications for my research design.

3.1 Goals and Considerations

The overall goal of this study is to increase understanding of how values manifest in and are enacted through knowledge organization standards. Seeking to leverage its rich history of institutional values as well as its body of well-established standards, I chose the cultural heritage

domain as the setting for this study, focusing particularly on libraries and their knowledge organization standards. The primary subjects of interest are the knowledge organization standard RDA, and the practitioners (catalogers) who work with this standard to generate data.

In approaching this topic, there were a number of considerations and challenges to be addressed. Many of these concerns stemmed from the fact that values are difficult to elicit and study. Values can be challenging for human participants to conceptualize and discuss, and simply asking about values can invoke a social desirability bias (Fleischmann et al., 2012). Eliciting values from artifacts poses its own set of difficulties, as embedded values are often implicit in nature. In making the implicit explicit, a certain level of interpretation is required. Though a great deal of attention within value theory has been devoted to the categorization and recategorization of values, there is no one, pre-existing framework capable of guiding all value analysis. Indeed, the discovery of specific, situational values may require the avoidance of predetermined value frameworks altogether (Pommeranz et al., 2012). Finally, values are theorized as a kind of sustained, high-level belief (Rokeach, 1968), but in practice, their presence and priority may be extremely contextual. Any domain can potentially be viewed as a collision of multiple value systems, with values from individuals, institutions, and artifacts interacting in specific ways. These interactions hold implications for the ways in which values may be enacted or obscured.

The methodological approach presented in this chapter was designed to address the proposed goals and objectives while carefully accounting for the challenges noted above. Below, I offer a description and justification of the overall research design, detailing how it is both appropriate and effective in addressing important research goals and challenges. Following this, a brief review of the preliminary studies is presented before describing each of the phases of the

current study in detail, as well as the overall analysis designed to synthesize the results of these phases.

3.2 Justification of Overall Design

Qualitative approaches are generally recommended for research scenarios in which the primary goals are exploratory rather than confirmatory in nature (Creswell, 2009). Given the lack of previous work examining values in knowledge organization standards, the present study is inherently explorative. Though value theory is central to this work, it is incorporated as a key, critical lens, rather than a specific structure to be verified or confirmed, in part due to its generally diffuse nature. Though more specific theories of value are available, such as Schwartz's (2012) theory of basic human values, I believe an inductive approach to values elicitation to be more fruitful given the specificity of the topic area, as has been suggested by recent values work in information science (Le Dantec, Poole, & Wyche, 2009; Pommeranz et al., 2012). With an emphasis on participant's meanings, multiple sources of data, and the researcher as a key interpretive instrument, qualitative designs are conducive to inductive approaches (Creswell, 2009).

In examining values associated with textual artifacts, content analysis has been consistently recommended and applied, a tradition of research that is often referred to as value analysis (White, 1951; Rokeach, 1973; Spiggle, 1986; Fleischmann et al., 2012). As a strategy for systematically analyzing aspects of communicative material, content analysis lends itself well to the elicitation of values from standards. Qualitative content analysis may employ deductive, inductive, or mixed approaches (Elo & Kyngäs, 2008). For the present study, a mixed approach was selected, allowing for content analysis to iteratively build off earlier findings without being fully constrained by them, and to remain sensitive to situational values (Pommeranz et al., 2012).

To more fully understand the values associated with a standard, it is necessary to solicit the views of those most responsible for its enactment. Through their work, enactors of standards recognize values, and may systematically enforce or obscure them. For the knowledge organization standard RDA, catalogers represent the primary interpreters and enactors. Historically, values elicitation concerning persons has utilized a survey based approach, using well-established instruments such as the Rokeach Value Survey (RVS) (Braithwaite & Law, 1985). However, there are several reasons why I elected for semi-open interviews for the present study. First, surveys such as the RVS are concerned with eliciting the personal values of the participants; this study is more concerned with what catalogers recognize to be the values of RDA, and what they believe is of value pertaining to their RDA cataloging work. This distinction is easier to maintain during an interview setting. Second, the interview setting offers greater opportunities to address values-related social desirability biases in responses than would a survey. Third, in keeping with the qualitative and inductive approach of the study, interviews are more conducive to open ended responses, less limited by any previous listing or framework of values, and better attuned to making the implicit explicit. Finally, interviews are recommended for deeper, more contextual explorations of values (Snyder, Shilton, & Anderson, 2016).

The overall design of the study is multistage, with the two prior, completed preliminary studies serving as precursor to the two sequential phases of this study (Figure 1). The initial preliminary studies were conducted in order to prove the feasibility of the present study and inform the approach to be taken. In the first preliminary study, content analysis of excerpts from four descriptive standards showed that values could be elicited from the texts of such standards, and provided a starting set of codebooks for a comprehensive value analysis of RDA. These

outputs provide support for RQ1 and RQ3 (see Table 2). Observations in the second preliminary study showed that catalogers rarely, if ever, consulted the text of the standards RDA or AACR2 in the course of their daily work, while also revealing the importance of specific values with no direct counterparts from the first preliminary study. Outputs of the second preliminary study included a revised values codebook, and a base of material from which to form the interview protocol for the present study. These findings and outputs provide support for RQ1 and RQ2.

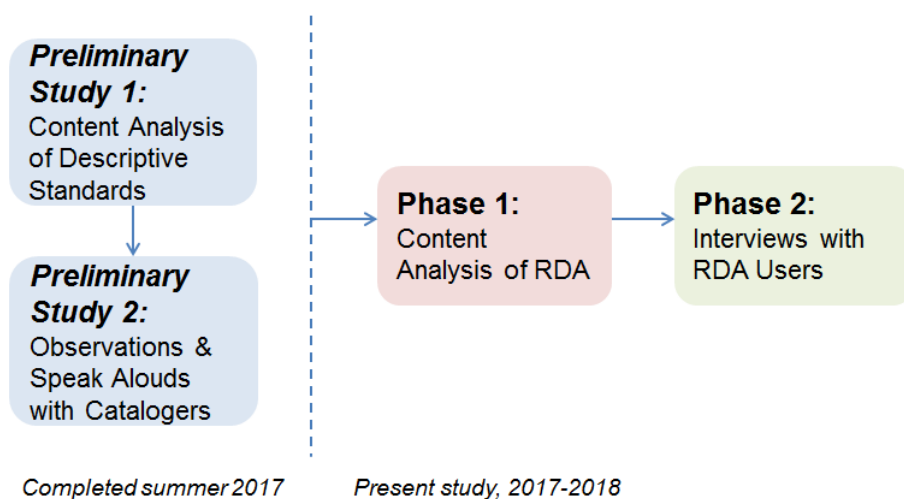


Figure 1. Overall research design.

Following the preliminary studies were the two, sequential phases of the present study. Phase 1 involved qualitative content analysis of the complete text of the RDA standard. Coding was based on the values and structures codebooks developed and refined during the preliminary studies, with additional codes developed as needed during analysis. Following this phase, a second, interview-based phase with practitioners who regularly work with the RDA standard was implemented. Interviews utilized a protocol developed to further illuminate findings from all preceding work.

Study	Goals	Related Research Questions
Prelim. 1 (Content Analysis)	Development of initial codebooks for values and standard structures	<i>RQ1: What values are expressed, and to what extent, in the text of RDA?</i> <i>RQ3: How are values communicated by standards for knowledge organization?</i>
Prelim. 2 (Observations)	Further development of value codebook Development of interview design	<i>RQ1: What values are expressed, and to what extent, in the text of RDA?</i> <i>RQ2: How are values in RDA recognized and responded to by practitioners?</i>
Phase 1 (Content Analysis)	Completed codebooks for values and standard structures Framework of values associated with RDA Development of interview design	<i>RQ1: What values are expressed, and to what extent, in the text of RDA?</i> <i>RQ3: How are values communicated by standards for knowledge organization?</i>
Phase 2 (Interviews)	Framework of values associated with RDA Description of practitioner enactment	<i>RQ2: How are values in RDA recognized and responded to by practitioners?</i>

Table 2. Study goals and relations to research questions.

Phase 1 content analysis and Phase 2 interviews were designed to further develop the values codebook, ultimately resulting in a framework of values associated with RDA and its enactment that is capable of addressing RQ1 and RQ2. The overall methodology was also designed to yield the following: from Phase 1, a completed codebook of rhetorical/communicative structures (addressing RQ3), and from Phase 2, a rich description of the practitioner enactment of RDA and its values (addressing RQ3) (Figure 2).

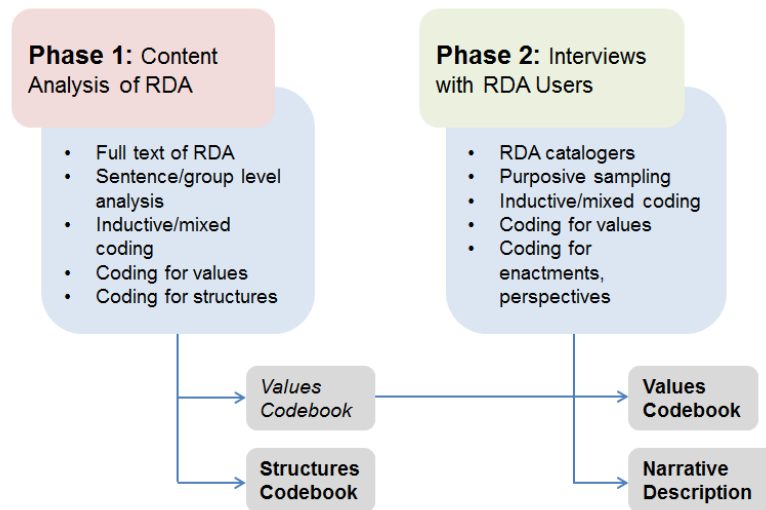


Figure 2. Major phases and outputs.

3.3 Preliminary Studies

Though often associated with quantitative approaches, pilot studies are also employed in qualitative research. Beyond verifying the general feasibility of the main study, pilot studies offer a number of benefits for qualitative work. They can reveal barriers to data collection, inform the development of protocols, and suggest overall modifications in methodological approach (Kim, 2011). They can also allow researchers to begin inductive development of frameworks or theories, and provide opportunities to clarify important constructs and definitions. As the approach of the “pilot” studies that I conducted differs significantly from the proposed study, it may be more helpful to consider these as formative, preliminary studies.

Little previous work has explicitly addressed values in knowledge organization standards, how they manifest, and how they are enacted. Therefore, I conducted two preliminary studies in this area to provide further background from which to work while building evidence for the general feasibility of the research approach. Beyond this, my preliminary studies were designed to accomplish several specific goals. First, the preliminary content analysis study was designed

to yield inductively developed codebooks for both values and communicative structures in knowledge organization standards. These codebooks address the fact that no pre-existing frameworks were suitable for this research topic. Second, observational data collected during the second preliminary study offered insight into cataloger interactions with standards and informed subsequent, more structured inquiry through the development of an interview design. Finally, the examination of several different descriptive standards in the cultural heritage domain during the preliminary studies offers the ability to make some generalizations and comparisons after the more comprehensive study of RDA, and sets the foundation for further comparative study in future work.

3.3.1 Relevant Findings from the Preliminary Studies

The purpose of the first preliminary study was to test the feasibility of value analysis on knowledge organization standards, as well as to begin inductive development of codebooks for values and communicative structures. Four descriptive standards were chosen from the cultural heritage domain: *Describing Archive: A Content Standard* (DACS) for archives, *Cataloging Cultural Objects* (CCO) for museums, and both *Angelo-American Cataloging Rules, 2nd Ed.* (AACR2) and *Resource Description and Access* (RDA) for libraries. Next, four comparable elements were identified within these standards: Personal Name, Personal Dates, Title, and Work Dates. I performed sentence level content analysis of passages associated with these elements, focusing on perceived expressions of values (e.g., prioritization, assertion of the importance of something). Following this first round of coding, all sentences that had been coded as expressing a value were coded a second time for any communicative structures utilized (e.g., priority lists,

options, alternatives). For a more detailed account of the research process for the first preliminary study, please see Appendix A.

At the conclusion of the coding process, 21 candidate codes and 4 sub-codes for values had been developed (see Appendix B). The most prevalent value expressed within the four standards was *Clarity*, which denoted a valuation of the clear and simple presentation of data to end users. This value was expressed in 129 different sentences among the standards (see Table 3). Following this was *Common Usage*, the valuation of general, common usage of names and terms. More specific aspects of common usage were coded instead in one of the four sub-codes: *Frequency*, *Relevant Works*, *Scholarly Sources*, and *Users*. Other prominent values identified within the standards included *Access*, where value was placed on explicit implications for user access, *Institutional Preference*, the prioritization of the cataloging institution's choice regarding certain elements, and *Accuracy*, which referred to the preference for accurately reflecting the manner in which a resource or entity presents itself.

Value	Occurrences	Value	Occurrences
Access	76	Differentiation	11
Accuracy	46	English Language	19
Agent Intent	43	Institutional Preference	55
Clarity	129	Item in Hand	19
Common Usage	113	Meaningfulness	2
CU/frequency	11	Prominence	25
CU/relevant works	24	Recency	29
CU/scholarly sources	70	Reliability	2
CU/users	18	Something over Nothing	36
Completeness	29	Standards	36
Conciseness	22	Vernacular Language	30
Consistency	43	Western Culture	29
Creative Responsibility	6		

Table 3. Absolute frequencies of values across all standards.

Through the second round of coding, I developed 14 candidate codes for rhetorical/communicative structures within descriptive standards (see Appendix C). The most prevalent structure across the four standards was *If, Then*, a conditional structure in which specific directions are prescribed when one or more stated conditions are met. Following this, *Do/Must/Should* appeared the most frequently, referring to sentences which employed an imperative verb, with or without modal qualifiers such as “must” or “should.” Together, these two structures accounted for 506 of the 734 structures observed (see Table 4). Other common structures include passages and directions that were marked as optional, commentary sentences which serve to explain rather than prescribe action, and *Do Not* sentences in which a specific action is disallowed.

Structure	Occurrences
Alternative	15
Commentary	44
Discouragement	2
Do/Must/Should	209
Do Not	27
Encouragement	9
Example	8
Exception	20
Footnotes	6
If Important	23
If Possible	11
If, Then	297
Option	59
Priority List	4

Table 4. Absolute frequencies of structures in valuating sentences across all standards.

The purpose of the second preliminary study was to reveal the nature of practitioners' interactions with descriptive standards, and begin to explore their recognition and enactment of values related to these standards. Working in collaboration with a separate, IRB-approved study headed by Dr. Rachel Clarke at Syracuse University, we performed observations with catalogers working in library settings. During observation sessions, participants were asked to carry out their normal cataloging duties for up to 1 hour, while narrating their actions to the lead researcher and myself. Researchers prompted for additional information at times as necessary, and took notes during the process. My analysis for this study was focused on transcriptions of these sessions, as well as my personal notes. During analysis I examined two things in particular: interactions with standards (e.g., direct consultation, use of a cheat sheet), and expressions of value. Interactions were coded inductively, while coding of values utilized the codebook developed from the first preliminary study as a starting point (see Appendix B). During values coding, additional codes were developed inductively as needed. For a more detailed account of the research process for the second preliminary study, please see Appendix D.

Five participants took part in the observation sessions. Participants were all full-time employees in library settings; three worked in academic institutions (P2, P4, P5), one worked in a public institution (P1), and one worked for a K-12 school system (P3). All participants cataloged with RDA (P1, P4, P5), AACR2 (P3), or both (P2). Coding revealed very few interaction types between practitioners and standards (see Appendix E). Notably, none of the participants consulted RDA or AACR2 directly during the sessions, instead relying on indirect sources of guidance. All five participants demonstrated working from personal memory of descriptive standards. All participants, with the exception of P2, also relied on pre-existing AACR2 or RDA records as guidance during the cataloging process, taking data directly from

them or consulting them to see examples of how particular data was entered or formatted.

Beyond this, a few other interaction types were noted, including use of a previously set up RDA record template (P3, P4), consultation of listserv discussions for information about RDA (P2), and consultation of specific best practices interpretations of RDA (P5).

Transcripts of the sessions were also coded for verbal expressions concerning values by the participants. Though general valuation statements were common among participants, I focused my coding specifically on valuations associated with the descriptive standard in use (AACR2 or RDA) or with cataloging work in general. Values from the pre-existing codebook from the first preliminary study were used where possible. However, I developed three new value codes during the coding process as well: *Efficiency*, *Productivity*, and *User Convenience*. A total of eleven different values were expressed by participants during these sessions. Table 5 shows each of these values as well as the participants who referenced them during observation sessions. All participants expressed valuations of *Accuracy*, with *Completeness* and *Efficiency* as the next most commonly mentioned.

Value	Participants
Access	P2, P3
Accuracy	P1, P2, P3, P4, P5
Clarity	P2
Completeness	P1, P2, P4, P5
Conciseness	P2
Consistency	P4, P5
Differentiation	P2, P4
Efficiency (<i>new</i>)	P2, P3, P4, P5
Institutional Preference	P2, P5
Productivity (<i>new</i>)	P2, P4
User Convenience (<i>new</i>)	P3, P5

Table 5. Values expressed by catalogers.

3.3.2 Implications of the Preliminary Studies

Both the number and variety of values elicited during content analysis suggested a complex yet discernible value system associated with descriptive knowledge organization standards. Trends among the elicited values include those closely associated with the user and their needs (*Clarity, Access*), and those associated with particular perspectives (*Agent Intent, Institutional Preference, Western Culture*). While, based on these findings, the presence of certain values could already be commented on, their respective functionalities could not. Value theory distinguishes between terminal values, being those that have become valuable in their own right, and instrumental values that are simply valuable in leading to terminal values. To make this distinction within RDA's value, fuller interviews with catalogers would be essential; their opinions of where alternative practices are acceptable and where certain, desired conclusions cannot be compromised could help illuminate the difference between the two in practice. Within the texts of the four standards examined, complex, conditional statements were most likely to be used in association with valuations, even more so than directive statements. More information, however, was required before further conclusions could be drawn on standards, structures, and values. Though occurrences among valuating sentences were determined, occurrences of structures among all sentences, including those not expressing value, would allow for insight into which portion of each standard is expressed by each structure, how the standards compare, how often each structure expresses one or more values, and which values are most associated with which structures. This level of analysis was therefore incorporated in Phase 1 of the subsequent, formal study.

The most surprising result of the observation sessions was participants' lack of direct consultation of the descriptive standards. Rather, all catalogers referred to and demonstrated the ability to work from personal memory of the standards, as well as from secondary sources such as templates or best practices guides. These findings imply that catalogers might engage in a small number of critical interactions with descriptive standards, perhaps only during training or under exceptional circumstances. When and how often do catalogers actually consult their standards? At what level of detail do catalogers interact with these documents, or do they simply ascertain the spirit of the rules and then work from there? Questions concerning these issues would be vital in an interview protocol designed to understand the enactment of values here.

During observations, catalogers expressed many values that I had identified during the content analysis phase, though they also referenced three important values with no direct counterparts within the standards. Values such as *Productivity* and *Efficiency* have direct bearing on work occurring in actual workplaces, so it is not altogether surprising to find them not in the standard but rather in its enactment. In real working environments, standards serve as ideals that may need to be compromised in favor of more pragmatic concerns. Asking catalogers about how they negotiate conflicts between values emerged as crucial in further illuminating this issue. The overall difference in values and their relative priorities between standards and catalogers suggested the two may be operating under different value systems (Rokeach, 1968).

3.4 Present Study: Phase 1

Content analysis is a systematic approach to analyzing communicative material. As Neuendorf (2002) puts it, content analysis is the measuring of the amount of some variable within a message or set of messages. As implied by this definition, content analysis originated as

a quantitative research approach, however, qualitative content analysis has since become a prominent approach in its own right (Hsieh & Shannon, 2005). In qualitative studies, qualitative content serves as the data of interest, and concepts develop through an abstraction process dependent upon researcher insight and interpretation (Elo et al., 2014). Though inductive approaches are common, in which concepts develop from specific to more general, deductive approaches may be used in qualitative content analysis as well, with concepts refining from theory to more specific instances (Elo & Kyngäs, 2008). Beyond this, both qualitative and quantitative approaches share similar processes and characteristics, including the preparation of content, the organization of a structure of codes, and the determination of reliability and validity, albeit through different procedures (Schreier, 2012). Though content analysis shares similarities with critical and historical analysis, such as a focus on communicative documents as research objects and their inherent meanings, content analysis differs in that it is more expressly focused on examination of language and the classification of document language according to a specific coding scheme.

As a method, content analysis has been recognized for its content sensitivity (Krippendorff, 2004), with qualitative approaches specifically cited for their flexibility and their focus on meaning, intention, and consequence (Elo & Kyngäs, 2008). As a research method, it is both inexpensive and unobtrusive (Creswell, 2009). In the study of values, values analysis through content analysis is well recognized and established. White (1951), one of the early developers of value analysis, recognized content analysis for its ability to access values within verbal data, and advocated for combining deductive and inductive approaches. Value theorist Rokeach (1973) also indicated content analysis as the most reliable method of uncovering values within documents. It remains one of the most prominent and important methods in contemporary

values research (Shachaf, 2005; Flieschmann et al., 2012; da Silva et al., 2015). Though research on standards employs a wide array of approaches, content analysis is an important method in this domain as well. Content analysis has been used to draw out various aspects of documented standards, and has been an effective method in analyzing knowledge organization standards in particular (Smiraglia, 2009; Riva & Oliver, 2012; Lisius, 2015).

Content analysis has several limitations of note as well. Creswell (2009) defines content analysis as a descriptive method that must be combined with other approaches if the desire is to understand more about underlying motivations. In such instances, triangulation is recommended. Qualitative content analysis approaches are generally less standardized than quantitative (Hsieh & Shannon, 2005), though Elo and Kyngäs (2008) argue the presence of a common, underlying framework to both. As with all qualitative methods, qualitative content analysis poses challenges to the researcher in ensuring reliability and validity, in part due to the positivistic roots of these concepts, though there are many reliability and validity procedures tailored to qualitative content analysis (Elo et al., 2014).

In Phase 1 of this study, I chose content analysis as a means of exploring the values expressed by the text of RDA (RQ1) and how values are conveyed by structural affordances of standards such as RDA (RQ3). In focusing on eliciting values and communicative structures, Phase 1 extended the inductive approach to values discovery started during the first preliminary study described above. Content analysis provided a means of accessing and interpreting values from this body of textual material. This approach brings some inherent limitations though, especially concerning what kinds of values may be elicited. It's possible that some influential values are too implicit in texts such as RDA to be fully recognized by the value analysis procedure used in this study. Larger, more diffuse values may also be missed by this fine-

grained, heavily content-based approach. As a descriptive method, it is thus recommended that content analysis be combined with other methods in order to yield a fuller picture of underlying motivations (Creswell, 2009); the Phase 2 interviews, described further below, provide this means of triangulation in the present study.

3.4.1 Population and Sampling

The source of data for this phase was the English text of the RDA standard. Justifications for the selection of this standard include its status as the *de facto* descriptive knowledge organizing standard in libraries, its increasing impact worldwide and online, and its contextualization within libraries' strong history of asserted values (for a fuller discussion of these justifications, see section 1.1.2). During content analysis work, sampling is often needed to help generalize results to a larger population of interest, with random sampling specifically recommended (Neuendorf, 2002). However, due to the nature of the study, sampling within the text of RDA was not required. As with other content analysis studies focusing on a particular document, for this study the population is inherent in the topic selection (Beck & Manuel, 2008). Therefore, the entire text of RDA was included in content analysis. This included 38 chapters, 13 appendices, and all optional and alternative passages throughout. There are several exceptions to note, however. Following the appendices in RDA is a simple glossary containing short definitional statements for terms used throughout the text. Due to its structure, supplementary nature, and lack of complete sentences, this glossary was not included in the content analysis. Also, accompanying the text of RDA is a number of rule interpretations from groups such as LC-PCC and MLA that were similarly not included in this study. These are separate documents, and

must be considered as distinct from the main text due to differing authorship, origins, publication, and intention.

3.4.2 Data Collection

Data collection for this phase took place via the online RDA Toolkit site¹ accessible via Syracuse University's subscription. Though print and PDF versions of RDA are available, the electronic version is the most up-to-date, with regular updates occurring monthly. Though several interface languages are available, only the English language version was collected. Due to the continuing nature of this resource, it was necessary to download a complete copy of the text at one time and make note of the date of download; portions of the text are liable to change in the future, though a history of these changes is available within RDA Toolkit if needed. Text was collected on December 9, 2017, and reflected the text of the October 10, 2017 RDA update. Though a December 2017 update was published subsequent to my data collection, this update did not include any changes to the English version of the text.

As determined during the preliminary phase, copying and pasting the text into documents within the analysis software NVivo represented the best method for preserving formatting of the text. This also maintained all examples and footnotes in their proper place, but not necessarily all graphical content. Graphical content in RDA is used to indicate the presence of more specific rule interpretations, though as these separate documents were not included in the present study, these images and their linked content were not of interest. Text was collected from the complete main text (Chapters 0-37), as well as all appendices (A-M). The glossary of RDA was not collected. Each chapter or appendix was saved as a separate document within my private installation of NVivo.

¹ <http://www.access.rdatoolkit.org>

3.4.3 Analysis

Coding of the text of RDA was accomplished with two separate rounds. In the first round, I coded for rhetorical/communicative structures, while in the second round I coded for values. Though in the previous preliminary studies I performed structural coding after coding for values, there are several reasons why coding for structures first was beneficial. First, though structures specifically associated with valuating sentences are of great interest, all structures used throughout RDA are of interest in terms of describing the overall document and contextualizing specific passages. As such, there was no need to wait until values had been coded to do structural coding. Second, structures are often more overt than values, meaning it was easier to notice structures on a first read through, while values coding benefitted from having previously read the text during the previous coding round.

For each of the 51 chapters and appendices in RDA, I coded on a chapter-by-chapter basis, first for structures, then for values. Once both rounds of coding were completed for a single chapter or appendix, I proceeded to the next. The order in which chapters and appendices were coded did not follow the order of the text, but rather, was determined randomly. As the chapters of RDA are structured into units comprising similar subject matter, I surmised that a random order might better support a more even development of the codebooks over time. For example, geographic places and their names are not addressed until starting in Chapter 16, meaning any specific values or structures associated with rules concerning them would not be present in the first third of the document.

Both rounds of coding were conducted at the sentence or sentence group level. Several levels, including paragraph and numbered instruction, were considered during the preliminary

study, with sentence level ultimately proving the most effective given the nature and structuring of the texts. However, I also determined that in some instances, the preceding or succeeding sentence was needed in order to clearly capture the expressed value or structure; in such cases, a group of sentences was coded together as one in order to preserve this context.

During the first round of coding, I coded the selected chapter or appendix for rhetorical structures. The purpose of this coding was to recognize the various patterns with which the text of RDA communicates. For example, options, choice lists, and if-then statements are all common, recurring structures employed in RDA. The unit of analysis for coding was the sentence or sentence group level. Though many structures were expressed with a single sentence (e.g., *Do/Must/Should, If, Then*), certain structures inherently required a group of consecutive sentences or sentence fragments (e.g., *Priority List, Example*). For these more complex structures, typographic cues were often used to determine the beginning and end of a particular structure. For example, for a passage given as optional, the text remains italics until the optional instructions are complete, while an example passage is contained within a distinct yellow textbox. Coding took place within the NVivo program, and utilized the structures codebook developed during the preliminary work preceding this study (see Appendix C). This initial codebook was built upon using a mixed/inductive approach. For every sentence or sentence group, I coded using one or more codes from the structures codebook. In instances where structures had no analogue concept in the codebook, a new structural code was created and added to the existing codebook. Thus, every piece of text in RDA was coded with at least one structure.

Following this first round of coding, the chapter or appendix was coded a second time for perceived values. The purpose of this round of coding was to reveal the concepts that the text of RDA gives value or prioritizes. The unit of analysis for coding was the sentence or sentence

group level. Coding was performed in the NVivo program, utilizing the values codebook developed during the preliminary work preceding this study (see Appendix B). Values coding utilized a mixed/inductive approach. Any time that I perceived an expressed value (i.e., a preference for an end state or a way of doing), I coded the sentence or sentence group using one or more codes from the values codebook. In instances where expressed values had no analogue concept in the codebook, a new value code was created and added to the existing codebook. Not all sentences were seen as expressing values, and thus, not all sentences received values codes. During values coding, I made the decision to refrain from coding any specific metadata elements as values, for example, title, author, or bibliographic relationship. This level of coding would have been too granular, too literal, and would have resulted in hundreds of codes.

During both rounds of coding, constant comparison was used to support reliability and facilitate the grouping of codes. Code grouping is a classification task relying on researcher knowledge and interpretation, and aides in the development of themes (Dey, 1993). During the coding process, grouping resulted in the condensation of some codes, while in other instances, relationships among codes was captured through classificatory structuring such as the broader/narrower relationship.

3.5 Present Study: Phase 2

In a qualitative interview, the researcher administers a protocol of open-ended questions in an effort to elicit views and opinions from participants (Creswell, 2009). Interviews are typically synchronous, and may be conducted face-to-face, over the telephone, or online. Interviews exhibit a number of characteristics particular to qualitative approaches, including collection of open ended data, purposeful sampling, and emergent designs (Creswell, 2009). The

role of the researcher is also an important consideration; during data collection, the researcher is present, and analysis often relies on researcher insight and interpretation. While these factors align interview research more closely with constructivist and phenomenological paradigms, they also make susceptibility to bias a potential concern (Tashakkori & Teddlie, 1998). Interview results may be analyzed deductively in accordance with a theoretical framework, or may be analyzed using more inductive techniques such as grounded theory. Though interviews are more time consuming than surveys, they allow deeper and more responsive explorations of participant knowledge. Focus groups may be more time efficient than individual interviews, but results may be affected by group bias and more difficult to generalize.

Interviews are a common research method in many areas, and offer a number of advantages. Interviewing offers direct access to participants, and allows for the collection of more covert information that cannot be easily observed (Creswell, 2009). Synchronous interviews allow for real-time interaction between the researcher and the participant, facilitating more iterative lines of questioning and richer responses. Face-to-face interviews allow the researcher to observe and record behavioral and other nonverbal data, and while telephone or online interviews may lack this affordance, they provide access to participants from a range of geographic areas, some of whom may be otherwise hard to reach (Beck & Manuel, 2008). Interviews are also an important method in values research, particularly when studying the values of a specific population. Though surveys may be the most traditional approach in this regard, they have long been criticized for their relatively thin descriptive potential (Rescher, 1969). Interviews have been recognized for their ability to elicit deeper responses about values from participants (Kluckhohn & Strodtbeck, 1961), and have been recommended by

contemporary researchers as a key method for values elicitation (Snyder, Shilton, & Anderson, 2016).

As with all methods, interviews are characterized by certain limitations as well. Gaining access to the desired sample of the population of interest may prove difficult and time-consuming (Beck & Manuel, 2008). Though interviews allow direct access to the thoughts and opinions of participants, this aspect can be detrimental as well. Data elicited is filtered through the perspectives and understandings of participants, which may vary widely, and the presence or behavior of the researcher may bias their responses (Creswell, 2009). Values researchers must be especially cautious, as asking about values can often invoke a social desirability bias in subjects (Fleischmann et al., 2012), though this may be addressed by indirect questioning or the presentation of hypothetical scenarios in which participants are asked to respond to a situation through the perspective of a typical person (Fisher, 1993). Like other methods based on direct interaction between researcher and participant, interviews may elicit sensitive information with potentially harmful consequences for the subject (Beck & Manuel, 2008). Appropriate care must be taken by the researcher to limit biasing, maintain privacy, and prevent negative repercussions for interview participants.

In the second phase of this study, I chose to use interviews in order to explore how values in RDA are recognized and responded to by catalogers (RQ2). Observations conducted during the preliminary studies revealed that practitioners' regular, direct interactions with this standard are rare, suggesting fewer, critical incidences in which these documents are consulted. During cataloging work, prioritization is also complicated and largely covert, requiring explicit explanation by catalogers themselves. Though standards may provide a value system from which catalogers work, their choices may actively highlight specific values while deprioritizing others.

Through interviews, I sought to gain further access to the actions, perspectives, and choices of the primary interpreters of RDA. Interviews were designed to yield results offering insight into the relationship between values and standards enactment.

3.5.1 Protocol Development

Following the preliminary studies and the first phase content analysis of the present work, I set about creating a semi-open interview protocol capable of addressing the major research question associated with the second phase: how do practitioners recognize and respond to values in the text of RDA? There were a number of important considerations during the development of this protocol. First, certain background information about participants would be necessary to place their work and perspectives in context, including their current work setting, how long they have cataloged, if they used any descriptive standards prior to RDA, and if they were familiar with authority control work. Second, observations in the preliminary studies showed that catalogers may not routinely interact with the text of RDA in the course of their normal work, so asking about the nature and frequency of such interactions would be important. Finally, asking people directly about values can introduce social desirability bias; one means of addressing this is to incorporate indirect questioning (Fisher, 1993), for example, asking participants to respond to passages from RDA, or describe characteristics of a hypothetically “good” record.

In pursuing my research goal while taking these challenges into account, I developed a three-part interview protocol (see Appendix F). In the first part, participants were asked to respond to general prompts concerning their past and present professional background. In the second part, participants were asked more specifically about their experiences with RDA, including when and how they were trained, and how often they interact with the text of the

document. The third part contained a set of indirect questions, asking participants to read three passages excerpted from RDA and respond to prompts concerning meaning and prioritization within each passage. Passages were presented in the same format, coloring, and typography as they appear in the RDA Toolkit. In selecting the passages, I chose rules that emerged as particularly values-laden during first phase content analysis and concerned different RDA entities (Manifestation, Person, Corporate Body). For each excerpt, the entirety of one distinctly numbered section was presented, including all options and examples. Finally, at the conclusion of the protocol, participants were asked to explain RDA in one sentence if possible.

I next tested the interview protocol on two pilot participants. These participants were catalogers from my personal network who I approached via email, and who agreed to take part in a pilot study with the purpose of refining questions and ordering. Pilot participant data was not included in the analysis in the present study and was deleted following the conclusion of the pilot phase. Interviews with the pilot participants resulted in some wording changes to increase the clarity of the protocol. Pilot participants found one of the sample passages to be relatively obscure, but were able to discuss it along with the other two, and did not feel that different passages should be selected. I ultimately decided to maintain the passages that I had selected, reasoning that it would be useful to have passages that were both familiar and unfamiliar to most catalogers. After minor revisions were made, the interview protocol was submitted to the Syracuse University IRB and received approval prior to the beginning of recruitment.

3.5.2 Population, Sampling, and Recruitment

The population of interest was catalogers (i.e., library staff members who perform cataloging work, regardless of rank or title) who use the RDA standard for some or all of their

cataloging work. Unfortunately, the total size of this population is unknown, and not easily estimated. Statistics from the American Library Association estimate 119,487 libraries in the U.S. (American Library Association, 2015b), though not all of these libraries would be using RDA, and some may not have catalogers at all. American Library Association statistics from the same time period also show 366,642 staff employed in all libraries in the U.S. (American Library Association, 2015a), but similarly, only a fraction of these would be responsible for cataloging. Additionally, many libraries beyond the U.S. are currently using RDA, including libraries in Canada, United Kingdom, New Zealand, Australia, China, and Japan (Yang & Lee, 2014; Ducheve & Pennington, 2016). There are no statistics available on the number of libraries worldwide that are using RDA. In short, there are currently no available estimates of how many catalogers are using RDA.

Given the difficulty of estimating the total population, I employed purposive sampling, in which participants are selected according to pre-determined criteria (Creswell, 2009). Criteria for interview participants in this study were as follows: (1) perform RDA cataloging as part of professional duties, (2) have consulted the English text of RDA directly on some occasion, as opposed to only secondary documentation, (3) can speak English. Catalogers in all settings (academic, school, public) and countries were therefore included. For qualitative studies in which purposive sampling is employed, saturation is the prevailing determinant of sample size (Guest, Bunce, & Johnson, 2006). Saturation is defined as the point at which no new concepts or themes emerge from the data (Glaser & Strauss, 2008). Though this concept is somewhat difficult to operationalize, Guest, Bunce, & Johnson (2006) found that saturation occurred between 6 and 12 qualitative interviews, while Creswell (2009) suggested at least 20 interviews for grounded theory approaches. For this study, I planned to conduct interviews until the values

codebook was saturated (i.e., no new codes are emerging), and estimated that this would occur somewhere after 12 interviews.

In an attempt to reach a large number of RDA practitioners, primary recruitment occurred through recruitment emails to relevant listservs. With the permission of listserv administrators, an IRB-approved recruitment email (see Appendix G) was sent to three professional listservs: RDA-L, OCLC-CAT, OLAC-L. RDA-L is a listserv dedicated to discussion of RDA, sponsored by the Joint Steering Committee for the Development of RDA and hosted by the American Library Association. OCLC-CAT is a listserv hosted by OCLC for catalogers contributing to WorldCat, and intended for general discussion of cataloging matters. OLAC-L is the listserv of the OnLine Audiovisual Catalogers, also hosted by OCLC, and used to facilitate discussions concerning the cataloging of various media materials. These three listservs were chosen due to their general reputation and popularity in the cataloging community, and potentially high concentration of RDA catalogers subscribed to each of them. Interested individuals were asked contact me via email for further information on the study and to arrange an interview time.

Snowball sampling was also employed during this phase. Participants who took part in the study were asked to recommend potential, additional participants from their professional networks who meet the criteria for this study. The recommended individuals were approached through an individual email containing the same IRB-approved wording as the mass recruitment email.

To encourage interest in the study as well as recognize the time commitment required to participate, participants were offered compensation of up to \$20 in the form of an Amazon gift card. Participants who completed 25 minutes or more of the interview were promised the full \$20, while participants who began the interview but completed less than 25 minutes were

promised \$10. Amazon gift cards were delivered in the form of a redeemable online code sent via email to each participant.

While appropriate for the scope and design of the current study, the sampling and recruitment strategies employed here are not without some limitations. Recruitment through professional listservs limited the overall reachable population, and voluntary participation raises the possibility that participants self-selected in systematic ways. Indeed participants in this study were, overall, experienced catalogers who felt confident in their use of RDA. Less experienced and less confident catalogers may have been more reluctant to take part in this study. While participants in this study represented a range of settings, future work involving additional methods can be used to further extend the exploration begun in this study.

3.5.3 Data Collection

Following recruitment as described above, interviews with participants were scheduled over the phone or over Skype, at the preference of the participant. In-person interviews were not conducted in order to facilitate a wide-range of perspectives while keeping the interview process as similar as possible for all participants. Prior to their scheduled interview, each participant was provided with a copy of the interview protocol and an IRB-approved consent form describing the purpose and nature of the study and allowing participants to agree to audio recording (see Appendix H). Due to the remote nature of these interviews, an oral consent procedure was approved by the Syracuse University IRB.

During these interviews, participants were asked to be a location of their choosing conducive to being interviewed and affording privacy; I was alone in my home office. At the start of each interview, participants were asked to read the previously emailed consent script.

Participants were given as much time to read through the document as needed. Following this, participants were able to ask any questions that might have had concerning the research and the collection and use of their data. After addressing these questions, I asked for participants' oral consent to take part in the interview, as well as their consent to have their interview audio recorded. Audio recording was optional and not necessary to take part in the study.

Interviews were scheduled to last approximately 45 minutes. Interview utilized the protocol finalized following the test participants (see Appendix F). During the interviews, I led participants through the interview protocol, taking notes and recording if permitted. Following the conclusion of the protocol, participants were given a chance to ask questions of me. Afterwards, I asked participants to consider if they had any colleagues who might be eligible for and interested in the study, as well as reminding them of my contact information, the IRB contact information, and the details of their electronic gift card. Gift cards were sent via email to participants within 24 hours of their interview time.

3.5.4 Analysis

Audio recordings of the interviews were transcribed by the researcher. During the process, participant dialogue was transcribed into sentences where possible, based on phrasing and perceived intention. Identifying information, such as participant name, coworker or colleague names, and institution names were omitted to protect participant confidentiality. I replaced these names with placeholder statements, for example, "P1 Institution." Each interview transcript was then uploaded as a separate document into my personal NVivo installation. My researcher notes taken during the interviews were also uploaded into NVivo to serve as reference.

Interview transcripts were coded in two rounds. In the first round, I coded the transcripts for perceived values. Though participants could express values related to many things, in this round coding was limited to values associated with only two things: the standard RDA, and the process of RDA cataloging. I coded these concepts according to the values codebook developed during Phase 1 of this study, utilizing a mixed deductive/inductive approach. Coding took place within the NVivo program. Any time that I perceived a participant to be expressing values associated with RDA, I coded at the sentence level, using one or more codes from the values codebook. In instances where expressed values had no analogue concept in the codebook, a new value code was created and added to the existing codebook. Beyond expressing associated values, participants also expressed challenged or absent values, for example, expecting a value such as *Common Usage* in a particular passage of RDA but not finding it there. In White's (1951) foundational work on value analysis, he advised that such instances of "frustrated values" be specially annotated during coding. For any compromised values expressed by participants, I coded according to the values codebook but added a special notation to indicate the expressed value was challenged or absent (e.g., *-Common Usage*).

Following values coding, I conducted a second round of coding on the interview transcripts. Unlike the first round, this round did not rely on any pre-existing codebooks. Coding was purely qualitative and inductive, and focused on emergent themes of interest that I noted during my study of the transcripts. In this round of coding, I chose to code at the response level (e.g., all participant dialogue given in response to one interviewer question or prompt); this unit of analysis provided more flexibility for inductive coding than the sentence level, enabled higher level summation of responses, and allowed for easier comparison of results among participants. Coding was again conducted within the NVivo program. Examples of concepts coded during this

round include types of supporting documentation consulted, characteristics of a “good” RDA record, and justifications for action (i.e., “I believe X is important, which is why I always do Y”). Through constant comparison during the coding process, these inductively generated codes were combined through axial coding (Saldaña, 2015) where possible to begin to determine larger themes of interest.

Through both rounds of coding, my researcher notes for each interview served as reference documentation. These notes were consulted in order to further understand and interpret participant responses during the coding process. Notes themselves were not coded unless the participant declined audio recording for their interview. In these cases, the notes were substituted for the transcripts for those particular participants, and were coded according to the same process described above.

3.6 Supporting Validity, Reliability, and Generalizability

Assessing the quality and impact of any methodological approach is often done in relation to several key constructs. Chief among these for qualitative approaches are validity, reliability, and generalizability (Creswell, 2009). This section addresses efforts taken during the data collection and analysis process to support these key constructs.

3.6.1 Validity

In research, validity is a conception of the soundness, accuracy, and representativeness of the findings. Validity is typically operationalized differently for qualitative research than for quantitative. In qualitative studies, validity hinges on determining the accuracy of findings from the standpoint of the researcher, participants, or readers (Creswell, 2009). Qualitative validity

can be difficult to support due to the need for researchers to interpret findings through their own perspectives (Elo and Kyngäs, 2008). In discussing qualitative validity, researchers may use terms such as trustworthiness, credibility, or authenticity (Elo and Kyngäs, 2008). Regardless of terminology, a common set of strategies is often recommended to enhance validity in qualitative research.

Triangulation, the use of evidence from multiple sources, is advised, particularly during thematic development (Creswell, 2009). Triangulation can be used to determine if the results from one dataset are congruent with those of another. This study was intentionally designed to draw on two sources of data, the text of RDA and the perspectives of those using it. Due to the exploratory nature of this study, interviews with RDA practitioners were not intended to prove or refute findings from the content analysis; rather, they serve to provide additional perspectives and streams of insight. Findings from both of these data sources are brought together in the Discussion chapter of this document, where triangulation is used to explore their general congruency. Rich descriptions of both the analysis process and the findings also enhance validity (Elo and Kyngäs, 2008), as does presenting evidence that runs counter to important themes (Creswell, 2009). These strategies are also employed in the overall analysis presented in the Discussion chapter of this document.

I had considered an additional validity procedure for this study, member checking, though ultimately decided not to implement it. Member checking involves checking final results or reporting with participants for their opinions on accuracy (Saldaña, 2015). For this study, interview results could have been provided to participants for their comments on the appropriateness of my interpretations. Due to my use of values as an analytical lens, however, member checking procedures could introduce new opportunities for social desirability biases and

personal confirmation biases from my participants. Openly asking for participants to comment on my interpretations of their values is at odds with the indirect approach to values taken during the interviews, and could elicit personal value assertions that the original methodology was intentionally designed to avoid.

3.6.2 Reliability

Reliability refers to the overall stability and consistency of the research approach. One of the most commonly recommended reliability procedures in qualitative research is documentation: researchers are advised to document in detail as many steps in their research procedures as possible (Yin, 2013). Process documentation is especially important in presenting a case for stability in qualitative works, as approaches and findings may be volatile or emergent during the research process. Careful, systematic description of the process is key to both validity and reliability in qualitative works (Elo and Kyngäs, 2008) and enhances overall trustworthiness of the research (Saldaña, 2015). During the research process, I kept a set of researcher logs tracking what was done on a given day, any important decisions made, and any difficulties encountered. These logs assisted in the formal documentation of the research process I present in the present document.

Gibbs (2008) recommended a number of other reliability procedures for qualitative work as well, including checking transcripts carefully before coding, avoiding definitional drift in codes by constant comparison of data during coding, and coordination of communication among all participating researchers. While intercoder agreement is a required reliability procedure for confirmatory, deductive coding, work involving exploratory, inductive and mixed coding establishes trustworthiness through other means (Elo et al., 2014). As most inductive analysis is

conducted by one researcher, reliability can be enhanced by checking for representativeness through constant comparison during the coding process (Kyngäs et al., 2011). I was the only coder for this study. As such, during coding in both phases of the present study, I utilized constant comparison in order to support reliable use of the codebook and avoid definitional drifts in codes. Qualitative content analysis may also utilize expert, external members who review portions of coding and serve to confirm if coding and codebook use is appropriate and consistent (Graneheim & Lundman, 2004). I considered expert checking as a reliability procedure for this study, but ultimately decided not to implement it. Given this study's exploratory nature, coding was intended to provide useful insight into values through an initial framework, not to prove or confirm any particular framework or model of values. Future work building from this study's findings may take a more confirmatory approach conducive to expert checking.

3.6.3 Generalizability

Generalizability is the extent to which findings from a study may be applied to new settings. Claims to generalizability in qualitative research tend to be more limited due to the inherently contextual nature of these studies and their goals of deeply describing specific scenarios (Creswell, 2009). Indeed, due to the focus of the present study (i.e., a single standard, RDA), certain generalizability procedures are out of scope. However, procedures can still be undertaken to support generalizability in such qualitative work. Elo and Kyngäs (2008) recommend providing a clear description of the cultural setting, context, selection, and characteristics of participants. For this study, I provide such a description of the interview participants and their settings in the following Results chapters. Careful exploration of study limitations is also suggested to support generalizability (Elo et al., 2014), and will be addressed

in the Conclusion chapter of this document. Creswell (2009) argues that generalizability is enhanced when researchers begin to explore additional cases. Though the present study is focused only on the case of RDA, work undertaken during the preliminary studies explored three other cultural heritage knowledge organization standards as well (AACR2, CCO, DACS), providing potential for additional, future works capable of offering further insight into generalizability.

3.7 Combined Analysis

In Elo and Kyngäs's (2008) model of qualitative content analysis, the final research phase begins with the presentation and description of codes. Indeed, according to Creswell (2009), thorough code presentation must take place before any further thematic development. Following this advice, my combined analysis of all results began with an in-depth examination and description of the two codebooks developed over the course of the study. Value codes (e.g., *Clarity*, *Conciseness*) were presented and described, using examples from the text of RDA, as well as interviews. The codes for communicative structures (e.g., *Priority List*, *Option*) were presented using examples from RDA.

Following the description of the codes, qualitative analysis proceeds on to two important, complementary tasks: development of larger themes, and presentation of narrative description (Creswell, 2009). Thematic development began with codebook arrangement. Though structuring of values and structures codes occurred during constant comparison during coding, following the full description of codes, further axial coding was used to begin arrange codes into major themes. The thematically arranged set of codes for values also functions as a value system or framework for RDA, which holds particular significance for RQ1 (What values are expressed in RDA?). For

the inductive, openly coded portion of interview coding, thematic development similarly began during the coding process via constant comparison, yielding a set of major themes used to organize and present the results of the interviews. Alongside thematic description and exploration, I developed narrative descriptions as well. Narrative description involves rendering information about people, events, and settings pertinent to the subject of interest. In this study, narrative description was focused on cataloger enactment of RDA and associated values, offering narrative information on the catalogers, their work, their environment, and the nature of their interactions with and interpretations of RDA.

After coding and the development of descriptions and larger themes, the final stage in qualitative analysis involves interpreting the meanings of themes and descriptions (Beck & Manuel, 2008). Interpretation requires the researcher to draw on all material available as well as their own perspective in order to make sense of findings, and in many ways, occurs iteratively throughout the entire qualitative research process (Elo & Kyngäs, 2008). My final interpretations of the results are presented in the Discussion chapter of this document, in which I draw on previous literature, all data sources consulted, and my own insight and understanding of the area. This summative interpretation takes the form of a written narrative that works to accomplish several things: indicating the significance of the themes, exploring the relationship between themes and descriptions, tying findings to previous work and literature, relating findings to the major research questions, and highlighting higher level implications.

3.8 Statement on Researcher Identity and Role

In qualitative research, statements on the background and characteristics of the researcher are often presented as a means of further contextualizing the study and its findings. Due to the

interpretive nature of qualitative research, as well as the manner of interaction between the researcher and participants, it is often recommended to explicitly identify the background and potential biases a researcher may be bringing with them (Creswell, 2009). Researchers must make interpretations of what they witness and record, and such interpretations cannot be separated from researcher identity and perspective, a fact that poses challenges to validity in qualitative research (Elo & Kyngäs, 2008). Presentation of a self-reflexive statement on the researcher and their intended role in the study is one strategy for supporting validity, integrity, and credibility in such works. These statements contribute to the reader's ability to understand the research process, work to ensure that interpretations are valid, and improve the trustworthiness of results (Elo et. al, 2014).

In keeping with these recommendations, I present here information pertaining to myself as the researcher. I have worked as a librarian in academic settings, performing cataloging and working extensively with the MARC, AACR2, and RDA standards. During this time, RDA was published and formally adopted by the U.S. national libraries. My own training on RDA was a combination of Library of Congress video training and self-teaching. I then served as a regional trainer for RDA, leading workshops for catalogers across New York State. I have also been an adjunct instructor at Syracuse University since 2013, teaching information organization and cataloging courses for graduate students in a formal classroom setting. As a cataloger, I enjoyed the process of creating comprehensive and consistent descriptions, and view the role of the cataloger as a facilitator for the user in approaching library collections. I see standards such as AACR2 and RDA as enabling consistent work among an increasingly collaborative network of libraries while providing justification for particular cataloging practices. I find cataloging work

to be valuable in informing users and enabling access to information, and believe consistency, clarity, and standardization to be integral to supporting this process.

Defining the role of the researcher in relation to participants is important, especially for work involving interviews (Rubin & Rubin, 2011). My interaction with participants during this study occurred during the interview phase, in which I acted as interviewer in one-on-one sessions with catalogers. During recruitment phase, I identified myself as a doctoral student at Syracuse University doing research on the RDA standard, its enactment, and the associated values. I also disclosed my previous experience as a practicing cataloger, and current experience as an instructor in information organization. At the start of each interview, I introduced myself and my background again, presenting my previous experience as a cataloger as a means of assuring them that they could speak to me as a fellow practitioner. During the prior preliminary study observations, participants felt self-conscious or intimidated at times, perhaps due to having teachers watching them. While for this study I did disclose my status as an instructor, I assured participants that I would not be grading or judging their responses, and that there were no incorrect answers. As an interviewer, I believe it is important to be open, approachable, and understanding, to thank interviewees for their contributions, and to assure them of their confidentiality; I strove to achieve all these things during this study's interviews.

3.9 Summary

For this study, I designed and implemented a two-phase sequential methodology focusing on values in the RDA standard and practitioners' understandings of them. Design choices were influenced by two prior preliminary studies, focused respectively on values in descriptive standards and the working practices of catalogers, as conducted in the summer of 2017. In

designing the present study, I selected specific methods capable of addressing major research questions, while suitable for dealing with challenges such as the difficulties particular to values elicitation and the implicit nature of standards interpretation. In the first phase of the study, comprehensive content and value analysis of RDA was used to elicit values expressed by this document as well as an understanding of the communicative structures used to do so. In the second phase, interviews with catalogers were employed to reveal how these values are recognized and responded to in practice. Throughout the process, I made specific efforts to support validity, reliability, and generalizability of study results while maintaining an awareness of the role and perspective of myself as researcher.

CHAPTER 4

RESULTS: PHASE 1

4.0 Introduction

In this chapter, I present the results of data collection and analysis carried out during Phase 1 of the research as described in the preceding chapter. To accommodate the amount and variety of data produced, this chapter is broken into three major sections, followed by a summary (Figure 3). First, results of the value analysis of the text are given. This is followed by a section on the results of the content analysis focused on communicatory structures in the text. A third section provides results exploring the relationships between values and structures. Together, results in this chapter address RQ1 (What values are expressed, and to what extent, in the text of RDA) and RQ3 (How are values communicated by standards for knowledge organization).

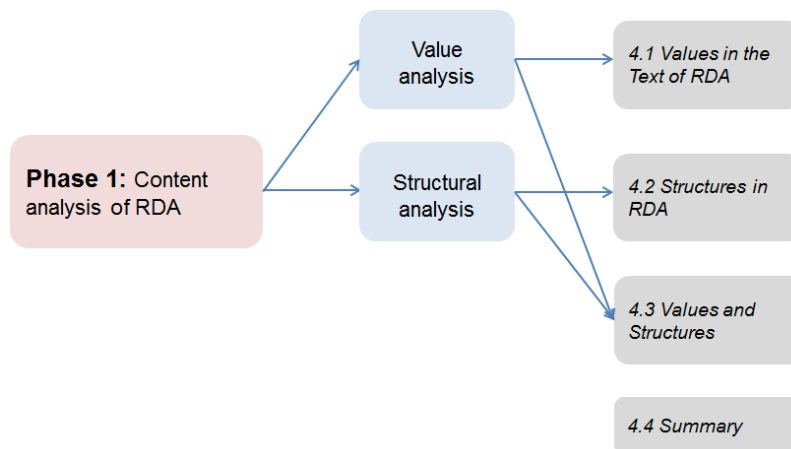


Figure 3. Overview of Chapter 4.

In selecting the data to present and the manner in which to present it, I have attempted to maintain a tight focus on the research questions for this study. The qualitative methods employed have also dictated certain aspects of the presentation of results. Content analysis results are typically characterized by the presentation of descriptive frequencies (Neuendorf, 2002). While absolute frequencies are given for both the major categories and individual codes throughout, the more important finding from the qualitative content analysis in this study is the coding frame itself. As such, greater emphasis is placed on code description through continuous text with the inclusion of tables and matrices where appropriate (Schreier, 2012). To help illustrate the relationship between value and structure codes, relative frequencies for co-occurrences are also presented and visualized.

4.1 Values in the Text of RDA

In this section I present the results of the Phase 1 value analysis of the text of RDA. The conclusion of this coding process yielded a frame of 39 distinct values. Through a process of axial coding, these values were arranged into a set of seven major categories (Figure 4).

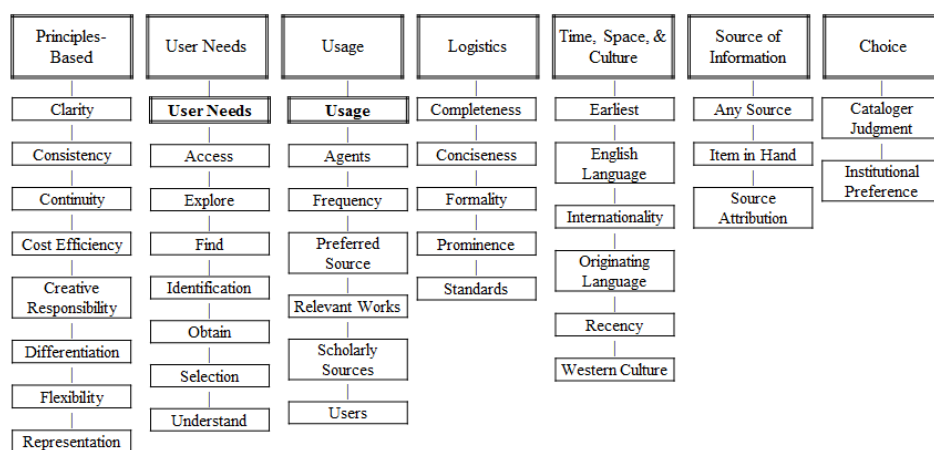


Figure 4. Values code frame following Phase 1.

My rationale during the categorization process reflected two major considerations: the origins of a set of values, and the functional relations of a set of values to common aspects of information resources and their descriptions. Though previous work has explored categorizations of values associated with libraries (Koehler, 2015), I deliberately avoided using these as inspiration in order to preserve the idiosyncratic aspects of RDA. Other existing literature, however, was useful, particularly Svenonius's (2000) presentation of well-established principles of description. These principles are closely mirrored in RDA's opening chapter exposition of objectives and principles. Thus, values corresponding to these high level principles were categorized together, with two exceptions. The first, the User Needs category, reflected the general principle of user convenience, but as realized within RDA has its origins in a different body of literature (FRBR, FRAD, FRSAD). Thus these values were grouped together based on their origin. The Usage category of values can similarly be seen as tied to the principle of common usage, but in the text of RDA I found this to be a particularly complex set of related concepts relating to various forms of information. This was best explored and explained with a devoted category.

The other categories reflected commonly recurring aspects of information resources and their description. Logistics was used to group together values associated with the logistical aspects of working with textual data. Time, Space, & Culture brought together the various perspectives on these aspects of resources. The Choice category contained values associated with explicit preferences on the part of an agent associated with cataloging. Finally, the Source of Information category reflected the preferences prescribed in RDA for a specific source of information, or in some cases, the lack of preference.

Absolute frequencies for the top level categories are presented in Table 6. Subsequent sections will more fully explain each category, as well as list and describe the individual values present in it. Given the qualitative nature of the content analysis, emphasis is placed on the codes and their meanings. However, absolute frequencies are given for each value in order to illustrate their relative extents in the text of RDA. For these statistics, the “Count” given reflects the number of sentences/sentence groups in RDA coded with each value or value category.

Value Category	Count
Principles-Based	1350
User Needs	758
Usage	262
Logistics	322
Time, Space, and Culture	360
Choice	135
Source of Information	510

Table 6. Absolute frequencies for major value categories.

4.1.1 Principles-Based Values

Values belonging to the Principles-Based category reflect the classical principles of description, that is, long standing directives for the design of descriptive standards (Svenonius, 2000; Tillett & Cristán, 2009). While these principles have been explored in the literature concerning bibliographic description, they are also recognized directly within the text of RDA itself. A set of principles and objectives is given in the introductory Chapter 0, and closely mirrors the common principles given in the literature. Values belonging to this group can thus be seen as most closely aligning with an ostensible, asserted set of values for the RDA standard. Eight distinct value codes were included in this category (see Table 7). However, two additional

value categories can also be thought to reflect the principles asserted by RDA: User Needs and Usage. Values associated with these concepts are best considered and understood through separate value categories, as explained further below.

Principles-Based Values	Count
Clarity	390
Consistency	588
Continuity	11
Cost Efficiency	2
Creative Responsibility	58
Differentiation	143
Flexibility	9
Representation	149
Total	1350

Table 7. Absolute frequencies for principles-based values.

As with all coding in this study, value codes within this group were developed inductively. Only during axial coding and grouping was consideration given to the congruency between these values and the asserted objectives and principles of RDA. As such, value code names do not always reflect the terminology used by RDA itself. Table 8 shows the correspondence between all Principles-Based values and the objectives and principles of RDA, along with code descriptions and examples. Of these codes, four were significantly more prominent and will be further explored below: *Consistency*, *Clarity*, *Representation*, and *Differentiation*.

Principles-Based Value	RDA Passage	Value Code Definition	Example
Clarity	RDA 0.4.3.5, Accuracy	Emphasizes making sure information is clear or simple and that the user understands what they see; conveying level of certainty	If transcribing punctuation as it appears on the source significantly hinders clarity, either omit or modify the punctuation, as necessary. (1.7.3)
Consistency	RDA 0.4.3.8, Uniformity	Explicit preference for doing something in a consistent manner; often in absence of any alternatives	Record the title in direct order in the plural form. (10.7.1.3)
Continuity	RDA 0.4.2.4, Continuity	Compatibility, interoperability, continuity with other standards and systems	A key factor in the design of RDA has been the need to integrate data produced using RDA into existing databases developed using AACR and related standards. (0.3.1)
Cost Efficiency	RDA 0.4.2.2, Cost Efficiency	Efficiency in usage of financial or other resources	The data should meet functional requirements for the support of user tasks in a cost-efficient manner. (0.4.2.2)
Creative Responsibility	RDA 0.4.3.6, Attribution	Recognizing and respecting the notion of creative responsibility, including that some agents are more responsible than others	If not all statements of responsibility appearing on the source or sources of information are being recorded, give preference to those identifying creators of the intellectual or artistic content. (2.4.2.3)
Differentiation	RDA 0.4.3.1, Differentiation	Clearly distinguishing entities or terms from each other	Add a term to distinguish between different texts that have the same title. (6.30.3.5)
Flexibility	RDA 0.4.2.3, Flexibility	Flexibility and extensibility, both conceptual and technical	RDA has been designed for use with a variety of encoding schemes typically used in library applications. (0.12)
Representation	RDA 0.4.3.4, Representation	Accurately reflecting the nature of an item, what is found on the item and the order in which it is found	Record diacritical marks such as accents appearing in a title for a work as they appear on the source of information. (6.2.1.6)
User Needs*	RDA 0.4.2.1, Responsiveness to User Needs; RDA 0.4.3.2, Sufficiency	Prioritizing the general needs of the user, including catalogers, end users, and institutions; needs include tasks, time, and energy	(see section 4.1.2 below for further information)
Usage*	RDA 0.4.3.7, Common Usage or Practice	Preferring forms of terms as they are generally used, commonly used,	(see section 4.1.3 below for further information)

Table 8. Correspondence and definitions for principles-based values.

Consistency is arguably the main reason that standards are created, and indeed, all instructions in RDA could be seen as exhortations toward consistency. For this study, however, only sentences containing a preference for consistency with little to no explanation, rationale, or alternatives were considered. These passages express a sentiment that may be perceived as, “Just always do this no matter what.” Even given this limited operationalization, *Consistency* remains the most frequently coded value in the present study. In its manifestations, *Consistency* often appears arbitrary, but implicitly recognizes that while there may be multiple ways to do something, only one way is prescribed. An example is seen at **A.3.2, Other Terms Associated with Title of Work**: “Capitalize the first word of each term.” For this particular passage, other capitalization conventions might have been more sensible or justifiable (e.g., capitalize based on usage, capitalize based on language conventions), but these are not considered. Rather, a consistent, “one size fits all” approach is preferred, with no further discussion. **A.3.2** is quite representative of many *Consistency* valuing passages in RDA.

Many of the *Consistency* coded passages come from Appendix A and B, which are concerned with typographical and transcription issues, as well as Appendix E which covers ISBD punctuation. Some punctuation consistency is prescribed within the main instructions of RDA, however, as in **11.2.2.19.3, Successive Legislatures**: “Separate the ordinal number of the legislature from the session number using a comma, and separate the session number from its inclusive years using a space, colon, space.” The *Consistency* code was also applied to passages prescribing controlled lists of terminology, intended to result in a small range of possible element values. An example, instruction **3.13.1.3, Recording Font Size**, is shown in Figure 5.

For manifestations with text in a font size designed for persons with visual impairments, record a font size using an appropriate term from the following list:

giant print
jumbo braille
large print

Figure 5. Consistency coded passage at 3.13.1.3.

Consistency also frequently appeared in situations in the text in which none of the preferred alternatives were available. In such passages, as a last resort, one consistent way of treating an element was prescribed. This can be seen in **6.2.2.5, Works Created before 1501**: “If there is no well-established title in a language preferred by the agency creating the data, choose the Latin title.”

Clarity was another commonly appearing value code throughout the text of RDA. *Clarity* concerns avoiding ambiguity, correcting inaccuracies, preventing misunderstanding, and clarifying the relationships between entities in an explicit manner. In RDA, this is typically achieved through the introduction of terminology not present on the resource. For example, the exception at **11.7.1.6, Other Designation Associated with Corporate Body**, is shown in Figure 6.

Exception

If:

a body has a name that does not convey the idea of a corporate body
and
type of corporate body is not recorded

then:

record a suitable designation.

Figure 6. Clarity coded passage at 11.7.1.6.

Here the cataloger is instructed to clarify within the metadata that the entity described is indeed a corporate body. Another major instance in which *Clarity* manifested concerned the recording of relationship designators. Though relationships are listed as a guiding principle of their own in **RDA 0.4.3.3**, I made the decision in the study to not code any particular metadata elements as values, and this included relationships. They were, however, strongly represented in passages coded as *Clarity*; relationships in RDA are often framed in terms of making explicitly clear the connection between two entities. The language employed in the definition at **25.2.1.1, Basic Instructions on Recording Explanation of Relationship**, is quite typical of RDA passages concerning relationships: “*explanation of relationship*: Information elaborating on or clarifying the relationship between related entities.” Thus this and many other sentences concerned with relationships were coded with the *Clarity* value in this study.

Aside from *Consistency* and *Clarity*, two other Principles-Based value codes appeared with regularity and are worth further mention. The first, *Representation*, refers to the preference for recording and representing information about a resource in the manner in which it is presented. Passages coded for this value often stressed the importance of transcribing information exactly as it was seen, even if that information was known to be incorrect. Instruction **2.20.1.5, Incorrect Identifiers**, serves as a typical example, stating, “If an identifier is known to be incorrectly represented in the item, record the number as it appears.” Subsequent instructions in this instance go on to direct the cataloger to indicate the incorrect nature of this piece of information, though this is not always the case. Passages such as these hint at a complex relationship between the values of *Clarity* and *Representation*. Finally, the *Differentiation* value code was applied to passages specifically intended to disambiguate between two similar entities (so called “conflict breaking”). The *Differentiation* value manifested with particular frequency in

chapters devoted to the FRBR entities of Work, Person, or Corporate Body. Instruction

6.16.1.3.2, Opus Number, exemplifies the *Differentiation* value when directing catalogers to record opus number and publisher name for a work when numbering between multiple works is seen to conflict (Figure 7).

<p><i>If:</i></p> <p>there is a conflict in opus numbering among works of the same title and medium of performance</p> <p><i>or</i></p> <p>the overall opus numbering of a composer's works is confused and conflicting</p> <p><i>then:</i></p> <p>add to the opus number the name of the publisher originally using the number chosen. Add the publisher's name in parentheses.</p>
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Figure 7. Differentiation coded passage at 6.16.1.3.2.

4.1.2 User Needs Values

Values coded under the User Needs category place emphasis on the general needs of users of bibliographic information. These users encompass not only traditional end users, but catalogers and managers of bibliographic data as well. The needs of users are explicitly framed as one of the key objectives of RDA in the introductory Chapter 0, and thus may be considered a set of principle-based values as well. However, given their separate origins in a different body of literature, overall prominence, and level of detail expressed throughout the text of RDA, the User Needs values are best explored through a category of their own. This category contains one general, non-inclusive top level value code, and seven more specific subcodes (Table 9).

User Needs Values	Count
User Needs	24
Access	181
Explore	1
Find	18
Identification	381
Obtain	5
Selection	142
Understand	6
Total	758

Table 9. Absolute frequencies for user needs values.

The top level value code within this category is *User Needs*. This code was applied to passages that explicitly prioritize the general needs of the user, including unspecified or indeterminate tasks. Such generic or unspecified references to user needs were relatively infrequent. An example of a general reference to *User Needs* is seen at **0.7, Access Points**, given as, “Agencies using RDA data may determine which additional elements are to be indexed based on the needs of their users and the capabilities of their data management systems.” References to indeterminate tasks were those that did not align with the FRBR/FRAD framework of user tasks as discussed below. Such passages were often framed as being “helpful” to a particular user in some set of activities, such as under **8.13.1.3, Making Cataloguer’s Note**: “Make any other notes that might be helpful to a cataloguer using or revising the authorized access point, or creating an authorized access point for a related agent.”

The majority of passages valuing user needs made mention of specific user tasks derived from the conceptual models FRBR and FRAD. A summary of the value codes corresponding to these tasks, their definitions, and exemplifying sentences from RDA are presented below in Table 10.

User Task Code	Definition	Example
Find	A task in which a user finds all entities or resources of interest	The data recorded to reflect the subject relationship should enable the user to find all works about a particular subject. (23.2)
Identification	A task in which the user confirms that the resource found is what was sought, or distinguishes a resource of interest from others	If necessary for identification, add, in parentheses, the inclusive years of the ruling executive body. (11.2.2.18.2)
Selection	A task in which a user chooses a resource most appropriate to their needs	The data describing a resource should be sufficient to meet the needs of the user with respect to selection of an appropriate resource. (0.4.3.2)
Obtain	A task in which users acquire or access a resource	The elements in chapter 4 are those used to obtain or access a manifestation or item (e.g., terms of availability, contact information, restrictions on access). (4.0)
Explore	A user task focused on exploring relationships between entities	The RDA core elements for recording subject relationships to entities were selected according to the FRSAD assessment of the value of each attribute and relationship in supporting the following user tasks... explore relationships between subjects and/or their appellations. (0.6.2)
Understand	A task in which the user understands the relationships between entities, names, and/or titles	The data recorded to reflect relationships between agents should enable the user to... understand the relationship between two or more agents (29.2)

Table 10. FRBR/FRAD user task values.

Though most of the FRBR/FRAD derived user tasks are mentioned sparingly throughout the text of RDA, two specific tasks are emphasized regularly. *Identification*, the task through which a user relates a resource to their initial query or tells apart two similar resources, and *Selection*, the task which sees a user pick the resource that most closely matches their needs, are mentioned significantly more than any other user tasks. In fact, these two tasks are frequently addressed together. One of many examples can be seen in **3.13.1.3, Recording Font Size**, which states, “Record a font size of the manifestation if considered important for identification or selection.” In such passages, the standard user is asked to determine if the inclusion of a specific

element will affect the user's ability to identify or select. This frequent pairing is seen with no other FRBR/FRAD tasks, though the *Identification* code was also commonly seen in conjunction with the last subcode in this category, *Access*.

Despite being in the title of the standard, "access" itself is never formally defined within the text of RDA. At first, it might be tempting to conflate access with the *Obtain* user task, and indeed, the text does use the term "access" to help define the term "obtain." However, *Obtain* refers to a user acquiring a resource, while the use of the term "access" seems to imply something broader in the text. For example, **11.2.3.5, Acronym/Initialism/Abbreviated Form**, contains the sentence: "If the presence or absence of full stops affects access, record the form not chosen as the preferred name as a variant name." Here, full stops could not be seen as hindering a user from physically obtaining a resource, but instead, may prevent a connection between the user and metadata that is of interest to them. Accordingly, for this study, *Access* was coded as a separate user task value, and refers to a meta-task involving the general connection between a user, a resource, and/or its representation. Given this, it falls outside of the FRBR/FRAD framework, but is closely intertwined with those tasks. In fact, the *Access* code often appeared in sentences coded for *Identification* as well, as with **2.17.11.5, Other Information Relating to a Series Statement**: "Make notes on other details relating to a series statement, if considered important for identification or access." Other passages coded for *Access* have more direct implications for indexing and user retrieval. The alternative instruction at **16.2.2.4** concerning geographic place names is an example of this: "Omit an initial article (see appendix C) unless the name is to be accessed under the article."

4.1.3 Usage Values

Common usage is given as one of the key principles of RDA in the introductory chapter, and is framed as the preference for non-transcribed data to reflect common usage or practice. Though the Usage values may thus be considered principles-based, I felt that the importance, complexity, and heterogeneity of this set of values would be better understood through the use of a devoted category. The Usage category contains values focused on different kinds of usage. One top level, non-inclusive value was specified here, simply called *Usage*, and was used to code passages that prefer generally or commonly used forms without any further specification. Appendix A, Capitalization, contains an example at **A.2.1, General Guideline**, as follows: “For names with unusual capitalization, follow the capitalization of the commonly known form.” How exactly this is to be determined is left unspecified here.

Usage Values	Count
Usage	39
Agents	37
Frequency	9
Preferred source	15
Relevant works	64
Scholarly sources	90
Users	8
Total	262

Table 11. Absolute frequencies for usage values.

More commonly, passages concerned with use showed valuation of a very particular kind of usage. To capture these nuanced meanings of usage, six additional subcodes were created under the Usage code (see Table 11). The first three of these concern the usage within specific textual sources: *Scholarly Sources*, *Relevant Works*, and *Preferred Source*. The *Scholarly Sources* value placed emphasis on usage within formal scholarly or reference sources. Passages

coded at this value rarely specified which exact sources though, for example, **16.2.2.2**, concerning preferred names for geographic places: “Record as a preferred name for place the form most commonly found in gazetteers or other reference sources.” *Relevant Works* represented the valuation of usage within a specific set of works relevant to a particular agent. An example is seen at **0.4.3.4, Representation**, as shown in Figure 8.

<p>The name or form of name chosen as the preferred name for an agent should be:</p> <ul style="list-style-type: none"> a) the name or form of name most commonly found in resources associated with that agent <i>or</i> b) a well-accepted name or form of name in a language and script preferred by the agency creating the data.
--

Figure 8. Relevant Works coded passage at 0.4.3.4.

As in this example, *Relevant Works* passages typically employed the phrase, “resources associated with that agent.” Finally, the *Preferred Source* value refers to the prioritization of usage within a “preferred source of information,” a term the text of RDA employs to indicate the best source of information within a resource. Within a book, for example, the preferred source would be the title page. Though preferred sources are highly valued sources of information throughout, the concept of usage within a preferred source is explicitly addressed surprisingly infrequently.

Three other kinds of usage were noted during analysis and represented with distinct value codes. The first, *Agents*, depicts the usage preferred or intended by a specific agent. Passages coded with this value typically defer to an agent’s preferred usage of their own name; for example, in determining the preferred name for a family, instruction **10.2.2.4** provides the following exception: “If a family’s preference is known to be different from normal usage,

follow that preference when choosing the part of the name to be recorded as the first element.”

Next, the *Users* code was applied to passages valuing presumed usage reasonably expected of an end user. This form of usage was explicitly valued infrequently, though an example can be seen at **F.8.1, Additional Instructions on Roman Names**: “Record as a variant name a form using a different part of the name as the first element if the name might reasonably be searched by that part.” The last of the six Usage subcodes, *Frequency*, was also rare, and referred simply to the valuation of the most frequently used form of a name, title, or term, with no further qualification.

4.1.4 Logistics Values

Values in the Logistics category are related to the practicalities of understanding, recording, or transcribing textual data. Such logistical issues include capitalization, punctuation, repetition, and formatting. Passages addressing these issues may or may not also address *Consistency*, and as such, the Logistics values were coded separately. This category thus contains the contrasting values of *Completeness* and *Conciseness*, along with *Formality*, *Prominence*, and *Standards* (see Table 12).

Logistics Values	Count
Completeness	38
Conciseness	126
Formality	12
Prominence	62
Standards	84
Total	322

Table 12. Absolute frequencies for logistics values.

Conciseness refers to the valuation of recording information as concisely as possible, or with the least amount of redundancy. *Conciseness* is often explicitly stressed throughout the text

of RDA, as in **23.5.1.3**, which concerns recording the relationship between a work and a subject, and states, “If none of the terms listed in appendix M is appropriate or sufficiently specific, use another concise term to indicate the nature of the relationship.” Catalogers are given the freedom to be specific, but with the caveat that the results should be brief; this stipulation is common throughout the text. Elsewhere, *Conciseness* is couched in slightly more implicit terms, often when addressing elements that may contain large amounts of and/or redundant data. One of the many examples of this is seen in the alternative instruction to **2.10.1.5.1**, dealing with changes in manufacture for multipart monographs. Rather than noting each change, the following allowance is made: “If the changes have been numerous, make a general note (see 2.17.9.4.1).” In contrast to this value, *Completeness* represented the valuation of recording all possible information, or recording information in its fullest form. This value was found to be less prevalent throughout the text. Passages coded for *Completeness* often directly instructed catalogers to record as much information as possible. Instruction **6.9.1.3, Recording Content Type**, exemplifies this value: “Record as many terms as are applicable to the resource being described.”

Formality and *Prominence* are a pair of closely related but distinct values belonging to the Logistics category as well. *Formality* is solely concerned with the formal or official presentation of data. While this term is only defined in the Glossary of RDA, it is prioritized in the main text on a number of occasions, such as in **2.2.2.2**, concerning sources of information for resources made of pages, sheets, or cards: “Give preference to a source in which the information is formally presented.” The *Prominence* value is also concerned with the ways in which information is presented, here valuing that which is displayed more prominently or predominantly. For example, in addressing the conventional name of local places of worship, instruction **11.2.2.5.4** contains the following: “If this name appears in different forms in the

preferred source of information of manifestations associated with the body, choose the predominant form.” Passages valuing the first presentation of information were also coded for the *Prominence* value. One such passage appears under **2.4.2.3**, concerning multiple statements of responsibility relating to the title proper, and states, “In case of doubt, record the first statement.” Both *Formality* and *Prominence* may be seen to signal a kind of intentionality on the part of the publisher that is of interest to the cataloger.

Finally, the value of *Standards* refers to the preference for information from or formatted according to an external formal standard, or the general consideration of such a standard. Many passages coded for this value appeared in the introductory chapter or in the Appendices. Standards receiving specific attention or consideration in the text of RDA included FRBR, FRAD, FRSAD, ISBD, AACR2, MARC21, ONIX, and the *Chicago Manual of Style*.

4.1.5 Time, Space, and Culture Values

Values in the Time, Space, and Culture category reflect various cultural and time-oriented aspects of information resources or the information resource description process. Passages of RDA coded with these values were those that showed an explicit preference for a specific linguistic, cultural, or temporal perspective. This category contains three pairs of contrasting values: *English Language* and *Originating Language*, *Western Culture* and *Internationality*, and *Earliest* and *Recency* (Table 13).

Time, Space, and Culture Values	Count
Earliest	30
English Language	111
Internationality	5
Originating Language	99
Recency	48
Western Culture	67
Total	360

Table 13. Absolute frequencies for time, space, and culture values.

Passages coded as valuing *English Language* showed a clear prioritization of English terminology over terminology from any other languages. In **9.6.1.4**, in a passage concerning the designation of a person considered a saint, the instructions state, “For a Christian saint, record *Saint*.” Regardless of the language of the saint’s name, the English version of the qualifier is always used. Some further clarification, however, is required regarding this code. As coding took place on only the English version of RDA, many passages valuing *English Language* may value a different language in different translations. For example, in the French translation, instruction **9.6.1.4** prescribes the corresponding French term “*sainte*.” This is not true of all such passages though. For example, the opening of Appendix A, Capitalization begins with, “This appendix provides guidelines on capitalization for English and a selected number of other languages.” The corresponding passage in the French version is a direct translation, referring primarily to “*anglais*” with other languages, including French, referred to as “*d’autres langues*.” Contrasting with the *English Language* value is that of *Originating Language*, which prioritized the original or preferred original language of an element of information. For example, when recording the preferred name for a family under **10.2.2.4**, the instructions state, “If the name consists of several parts, record as the first element that part of the name under which the family would normally be listed in authoritative alphabetic lists in its language, place of residence, or place of activity.”

The second opposing pair of values concerned Western versus international perspectives. Passages coded with the *Western Culture* value gave prioritization or particular attention to aspects of Western culture with no corresponding alternative representing other cultures or places. The most notable manifestation of this value is in Appendix H, Dates in the Christian Calendar; there are no corresponding appendices for dates in any other calendar. Despite its origins in the Anglo-American tradition of cataloging, RDA professes to represent a more international approach to resource description. The number of times internationality is explicitly mentioned, however, is relatively few. Most passages coded with the Internationality value appear in the introductory Chapter 0, under section **0.11, Internationalization**. Further aspects of internationalization are assumed to be much more implicit in the text than could be elicited in this value analysis; speculation on this is continued in the Discussion chapter of this document.

Finally, temporal aspects of information resources are alternately prioritized with the opposing values of *Earliest* and *Recency*. Passages coded as *Earliest* displayed a preference for information in its earliest form or from its earliest source. This valuation can be seen in **11.2.2.5.1**, concerning the spelling of a preferred name for a corporate body: “If variant spellings of the name appear in manifestations associated with the body, choose the form found in the first manifestation received.” Slightly more prevalent in the text of RDA was the valuation of *Recency*, preferring the most recent form or source of information. An example is seen at **2.3.2.12.3**, regarding title changes for integrating resources such as websites: “Change a title proper to reflect the current iteration of an integrating resource if there is a change of a title proper on a subsequent iteration.”

4.1.6 Choice Values

Choice values place emphasis on the discretion of the standard enactor, being the individual cataloger or the institution assuming responsibility for the cataloging. Though a cataloger is tasked with making numerous decisions as they progress through RDA, passages coded as expressing a Choice value are those which explicitly introduced the enactor into the text. In such passages, the text of RDA distinguishes between two types of enactors and their respective choices: catalogers and agencies. This distinction is reflected in the two values present in this category (see Table 14).

Choice Values	Count
Cataloger Judgment	5
Institutional Preference	130
Total	135

Table 14. Absolute frequencies for choice values.

Of the two Choice values, *Institutional Preference* occurred far more frequently. Sentences coded for this value prioritized an institution's preference, usually regarding the language or formatting of an element. For example, instruction **10.8.1.3, Recording Language of Family**, contains the following: "Use an appropriate term or terms in a language preferred by the agency creating the data." Here, an agency is allowed to choose which language to use when recording the names of specific languages used by a family. Other passages expressing this value emphasized institutional discretion regarding other aspects of the cataloging process, such as the selection or creation of in-house guidelines. An example can be seen in the General Guidelines of Appendix A, Capitalization, in the following alternative passage: "However, the agency creating the data can choose to establish in-house guidelines for abbreviations or symbols for

units of measurement, or choose a published style manual, etc., as its preferred guide (see the alternative at 1.10.2).” Finally, some passages valuing *Institutional Preference* framed choices in terms of what is appropriate for the needs of a specific agency. For example, in **K.1, General Guidelines on Using Relationship Designators**, institutions are given a choice as follows, “Use relationship designators at the level of specificity that is considered appropriate for the purposes of the agency creating the data.”

A second Choice value, *Cataloger Judgment*, occurred relatively infrequently, and was often presented in relation to *Institutional Preference*. A clear example can be seen in instruction **17.3, Core Elements**, which states, “Include additional elements covered in this chapter according to the policy of the agency creating the data, or according to the judgment of the cataloguer.” Here, the choice of the agency or the cataloger may be considered important. The concept of “cataloger’s judgment” is important in cataloging discourse, and indeed, working with any set of cataloging guidelines requires a number of choices or judgments on the part of the individual cataloger. Instances in which this individual judgment was explicitly acknowledged in the text of RDA, however, were quite rare. As was the case with *Internationality*, *Cataloger Judgment* may be more implicit in the text than this value analysis was suited to explore.

4.1.7 Information Sources Values

Values in the Information Sources category reflect the prioritization of particular sources of information relevant to the cataloging process. Though RDA itself is structured around a heavily conceptual framework of abstract entities, the materiality of the cataloging process is clear. Catalogers are working with tangible resources, whether physical or digital, and must turn to other tangible sources of information for assistance when creating or modifying descriptions.

The text of RDA recognizes these tangible information sources, though prioritizes these sources differently under different circumstances. Three specific values were documented under the Information Sources category (see Table 15).

Information Sources Values	Count
Any Source	243
Item in Hand	165
Source Attribution	102
Total	510

Table 15. Absolute frequencies for information sources values.

As in other major value categories, the Information Sources category contained a pair of contrasting values. The first, *Item in Hand*, places priority on the information contained in the resource “in hand,” that is, the physical or digital resource that the cataloger is attempting to describe. That a resource would serve as its own primary source of information may seem common sense, though this prioritization is made explicit at various points in the text of RDA. For example, in a passage concerning mathematical cartographic data, **7.5, Equinox** prescribes only the following concerning information sources: “Take information on an equinox from any source within the manifestation.” No external sources or personal estimations are considered. The contrasting and more explicitly prevalent value is *Any Source*, which values any possible source and the information it contains. Though *Any Source* was valued in passages in which the resource in question is less immediately material (**16.2.1.2** on naming a geographic location, **10.2.1.2** on naming a family), it also occurred in conjunction with aspects of tangible resources. For example, under **2.11, Copyright Date**, sources of information are given as, “Take information on a copyright date from any source.” Passages valuing *Any Source* allow the

cataloger to move beyond the item in hand and consult any potentially helpful source of information.

A third value, *Source Attribution*, places emphasis on clearly attributing recorded information to the source from which it was taken. Though this often occurred following *Any Source* passages, it occurred under other circumstances as well. An example can be seen in **2.17.13.5, Date of Viewing of an Online Resource**, “For online resources, make a note identifying the date on which the resource was viewed for description.” Given the continuous and dynamic nature of web resources, *Source Attribution* is emphasized here in recording the specific version of the website consulted. Attributing a source of information is not taken for granted, but instead, valued explicitly at certain points throughout the text.

4.1.8 Value Co-Occurrences

During value analysis, it was noted that certain values tended to appear together frequently. To more systematically investigate this tendency, I conducted a co-occurrence of values; co-occurrences here represent instances where two value codes have been applied within the same unit of analysis. Value co-occurrences were determined using the NVivo analysis software, and are presented here as relative proportions, meaning that they represent the portion of all value co-occurrences for a particular value, not the portion of overall observed appearances of that value. Value co-occurrences are examined here using bar charts and continuous text. Data presented in this section is intended to illuminate meaningful relationships between values and supplement findings concerning the presence and extent of values in RDA. While further value co-occurrence data is available in Appendix I, I have chosen to highlight here a handful of value relationships that I feel to be most effective in further understanding trends in the data.

The first such relationship concerns *Continuity*, the Principles-Based value emphasizing compatibility with other data models and systems. *Continuity* had an absolute frequency of 11 occurrences in the text. From these, seven co-occurrences were determined, all of which were with the value *Standards*. In such passages, *Continuity* with specific standards are highlighted and valued. For example, the passage at **0.4.2.4** describes one of the goals of RDA data, stating, “The data should be amenable to integration into existing databases (particularly those developed using AACR and related standards).” Here, compatibility with pre-existing databases is prioritized, with an explicit prioritization of the AACR standards. In RDA, *Continuity* is a general goal, but is frequently defined in terms of specific, pre-existing standards.

Most values had more complex co-occurrence patterns, however. For example, Figure 9 shows the relative proportion of value co-occurrences for the value *Clarity*.

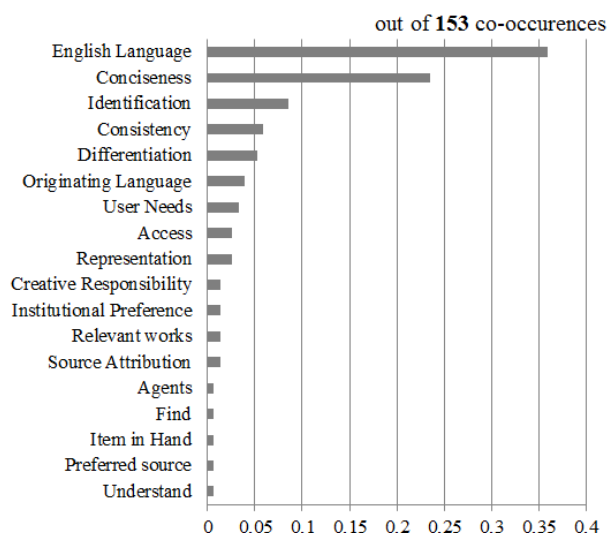


Figure 9. Relative proportions of value co-occurrences for Clarity.

Clarity appeared in the text with an absolute frequency of 390 occurrences. From these, 153 co-occurrences were noted with 18 other values. Of these, *Conciseness* and *English Language* were

the most frequently co-occurring. Co-occurrences with *Conciseness* often took the form of passages instructing the cataloger to supplement information with a brief phrase. Wording at **3.6.1.3, Recording Base Material**, is very representative of this pattern: “If none of the terms in the list is appropriate or sufficiently specific, use another concise term or terms to indicate a base material.” Catalogers are to make things clear, but be brief about it. Co-occurrences with the *English Language* value typically appeared as instructions prescribing specific English terminology in order to assist users in clearly understanding metadata. For example, **E.1.2.2, Access Points Representing Persons**, states, “If a date of death is not preceded by a date of birth, precede the date of death by a hyphen or by the word *died*.” Here, in order to prevent misunderstanding, specific English words are inserted into the data. These words do vary, however, based on the translation of RDA that is being consulted.

Examination of the co-occurrences associated with the *English Language* value further highlight the interconnected nature of *English*, *Clarity*, and *Conciseness* in RDA (Figure 10).

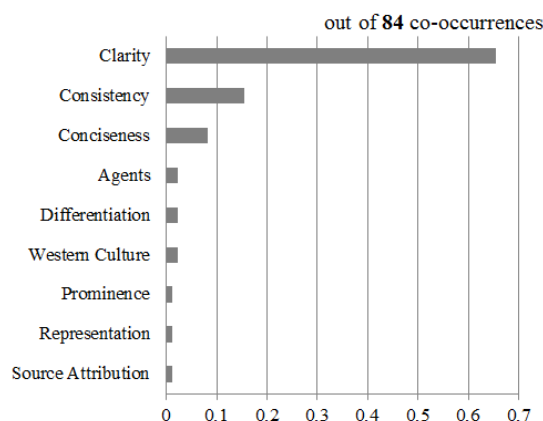


Figure 10. Relative proportions of value co-occurrences for English Language.

English Language appeared in the text with an absolute frequency of 111; from these instances, 84 co-occurrences were determined. *Clarity* co-occurred with a relative proportion of .65,

followed by the values of *Consistency* and *Conciseness*. Though the valuation of *English Language* in RDA is complex and carries significant historical ties, co-occurrence data suggests the functional aspects of this valuation. The prescription of English terminology is associated with being clear, concise, and consistent. Rather than being a terminal value prioritized for its own sake, *English Language* may act as an instrumental value meant to support *Clarity*, and ultimately, the understanding of the assumed users.

One final co-occurrence pattern worth highlighting here concerns the recurrent association of user task values, specifically *Identification*, *Selection*, and *Access*. Co-occurrence data for Identification is presented first in Figure 11.

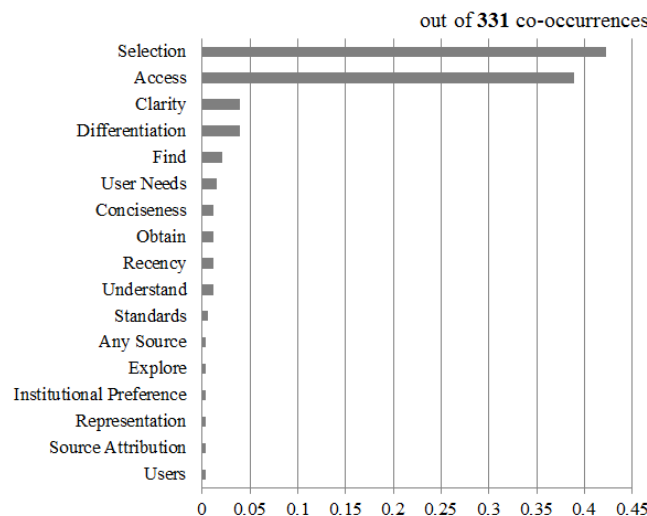


Figure 11. Relative proportions of value co-occurrences for Identification.

Identification appeared in the text of RDA with an absolute frequency of 381 occurrences; from these, 331 co-occurrences were determined. The other user task values of *Selection* and *Access* co-occurred far more frequently than other values, with relative proportions of .42 and .39 respectively. This higher rate of co-occurrence is due in part to recurrent statements in the text of

RDA that instruct the cataloger to consider several user tasks together. For example, a passage at **11.2.3.7, Other Variant Name**, was coded for both *Identification* and *Access*: “Record other variant names and variant forms of the name not covered by 11.2.3.4–11.2.3.6, if considered important for identification or access.” Conditional statements such as this one, asking catalogers to consider two or more user tasks, were common. *Identification* and *Selection* are prioritized together in passages such as **3.13.1.3, Recording Font Size** (“Record a font size of the manifestation if considered important for identification or selection”), while **2.4.1.5, Statement Naming More Than One Agent**, emphasizes all three of these tasks (“If they are considered important for identification, access, or selection, record them in a note on statement of responsibility...”).

While both *Access* and *Selection* co-occur frequently with *Identification*, they co-occurred with other values, including each other, much less frequently (Figure 12, Figure 13).

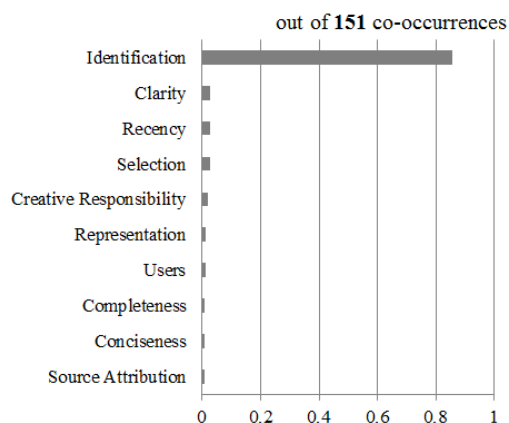


Figure 12. Relative proportions of value co-occurrences for Access.

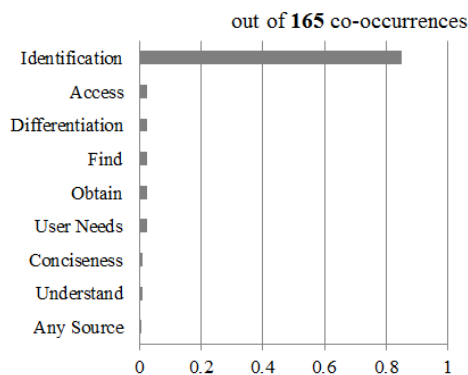


Figure 13. Relative proportions of value co-occurrences for Selection.

The relative mutual exclusivity of *Access* and *Selection* may stem from a larger pattern concerning their appearances in the text of RDA, particularly in Chapters 2 and 3. *Access* occurs a total of 111 times in Chapter 2, which concerns manifestation metadata, and does not occur at all in Chapter 3, which concerns carrier metadata. *Selection* displays the opposite pattern, occurring 5 times in Chapter 2, but 103 times in Chapter 3. In both cases, many of these instances co-occur with *Identification*. Taken together, this overall trend suggests that *Access* is more dependent upon manifestation metadata while *Selection* is more dependent on carrier metadata, with *Identification* being dependent on both. Whether this is intentional or a result of idiosyncrasies in the writing of these chapters is unclear.

Value co-occurrence data presented here highlighted three noteworthy trends: the relationship between *Continuity* and named *Standards*, the interconnection between *English Language*, *Clarity*, and *Conciseness*, and the frequent association of user tasks values *Identification*, *Access*, and *Selection*. These patterns are useful in further understanding valuation in the text of RDA, while at the same time illuminating the relationships between specific values and offering evidence for the underlying reasons behind their presences. Further consideration of

the functional relationships between values is explored in the Discussion chapter of this document.

4.1.9 Discussion

Value analysis of the text of RDA yielded a frame of 39 distinct values, which may appear to be a rather large amount. While furthering collapsing and condensing of these values may be possible, given the exploratory nature of the present study I felt it best to retain a more fine-grained approach. Future work examining RDA or other knowledge organization standards may produce a more condensed frame of values. Similarly, the categorization of values performed in Phase 1 serves as just one possible way to conceptualize the varying priorities and preferences embedded in the text of RDA. While I feel this categorization to be useful and insightful in the present study, other categorizations may be worth exploring.

Of the value categories presented here, the Principles-Based group was the most represented through valuations in the text. The presence and prominence of these values is congruent with RDA's opening statements of objectives and principles. Value analysis demonstrates that the text of this standard does indeed emphasize the concepts that it claims to. Findings thus support the view that there is a meaningful correspondence between the RDA's asserted values and the functional values found in the text.

Questions remain, however, concerning the purpose of the Principles-Based values. The *Consistency* value offers one example. *Consistency* corresponds closely to RDA's asserted principle of uniformity, presented in **RDA 0.4.3.8**. This brief passage stresses the importance of uniform data presentation through practices such as capitalization, abbreviation, and other considerations given in the appendices. The deeper importance or rationale behind this

uniformity, however, is not given. Are catalogers to be uniform for uniformity's sake? While it may be assumed that uniformity of data is instrumental in supporting a more terminal goal such as user convenience, this is not made clear. There may in fact be other means of achieving user convenience besides universal instructions. Is uniformity simply an implicit value in all standards? Not all standards have direct bearing on end users and their convenience. As such, it would seem that uniformity may function as a terminal value in its own right, independent of goals such as user convenience. The function of some Principles-Based values in RDA may thus be both instrumental and terminal at the same time.

The relative priorities and potential conflicts between Principles-Based values also pose further questions. *Clarity* and *Representation* may be the Principles-Based values most directly at odds with each other. While *Representation* reflects the value of depicting a resource as it presents itself, *Clarity* reflects the importance of modifying or qualifying information to improve user understanding. Is it possible to value a resource's depiction of itself while correcting misleading representations? This balancing act places the cataloger in the position of deciding what is misleading about an item and understanding the potential effects of misinformation. Further examination of the purpose of these values may again be useful; what are they instrumental in achieving? *Clarity* would seem closely tied to user needs and convenience, though *Representation*'s function is less clear. Is it instrumental in user needs or cataloger needs? Is it purely an academic principle, or a logistical consideration of the materiality of resource description? It may not be clear to catalogers what they are ultimately being asked to balance when negotiating conflicts between these two values. Ranganathan (1931) would of course prefer saving the time of the user. *Clarity* was indeed the more prevalent of the two values during value analysis.

Relative priorities are also of interest for other value categories. Within the User Needs value category, *Identification* and *Selection* were far more prominently represented than other FRBR user tasks. In the text of RDA, catalogers are often asked to make decisions based on *Identification* or *Selection*, while *Find* and *Obtain* are rarely mentioned. No justification for this discrepancy is immediately apparent. In fact, the FRBR document that first established these tasks does not suggest that *Identification* or *Selection* to be dependent on more metadata than any other tasks (IFLA Study Group on the Functional Requirements for Bibliographic Records, 1998). Does the text of RDA simply use user task terminology inconsistently, or are *Identification* and *Selection* considered more complex or reliant upon judgment?

This discrepancy may be related to issues concerning another User Needs value, *Access*. Despite being in the title of the standard and mentioned frequently throughout the text, *Access* is at no time formally defined. While its frequent co-occurrence with *Identification* may rule out the possibility that it encompasses all user tasks, *Access* would still appear to serve the role of a meta-task reflecting connections between a user, a resource, and its surrogate. Though *Access* may possibly be the ultimate, final value of RDA cataloging practices, its meaning and implications are taken for granted. How can the text of a standard value something so ill-defined? It is perhaps assumed that the cataloger already understands this concept before undertaking resource description.

Value analysis findings also raise questions about the presence and purpose of potential legacy values—that is, values inherited from previous standards in the Anglo-American cataloging tradition. *Conciseness* was the most prominent of the Logistics category of values. Though it is stressed throughout the text, no rationale is ever given. This value may have its origins in the physical limitations under which RDA's predecessors were created, for instance,

the card catalog format. Is *Conciseness* a legacy value with less relevance in digital environments, or is it tied to an unstated emphasis on efficiency?

Of greater import, however, are the potential legacy values of *English Language* and *Western Culture*. RDA's predecessors were limited to Anglo-American settings, which justified the presence of these perspectives. Given the international ambitions behind RDA, however, are preferential treatments of *English Language* and *Western Culture* still justified? Though *Internationality* is an explicit intention of the standard, outlined in RDA **0.11**, its presence in the text may be far more implicit. Even in places in which *Internationality* would appear to be highlighted, it is often accomplished through "othering." For example, Appendix F is dedicated to conventions of non-English names; this is because English conventions are covered in the main instructions in Chapter 9. Some of the focus on English terminology is only present in the English version of RDA, which was the only version consulted in the present study. Other translations would expectedly put more emphasis on terminology in their respective languages. However, the valuation of *English Language* may go beyond variant terminology, and exist at a more structural level apparent even in other translations. Specific passages devoted to or highlighting considerations of English remain present in other translations, for example, the opening of Appendix A. Simply translating the text of RDA away from English does not remove the more deeply set, legacy valuation of English and Western perspectives.

Visible among the many considerations given in this discussion section is an emergent, broader question: why these values? Why are these particular concepts valued in this text, and why are some more valued than others? This question may not be fully answerable within the context of this study, but further consideration is presented in the Discussion chapter.

4.2 Structures in RDA

This section contains the results of the Phase 1 content analysis of the text of RDA that focused on communicative and rhetorical structures. The purpose of this content analysis was to reveal the ways in which the text of RDA communicates. The conclusion of the coding process yielded a frame of 18 distinct structures utilized in the text (Table 16).

Structure	Count	Structure	Count
Alternative	127	Footnotes	46
Choice List	79	If Important	338
Commentary	1044	If Possible	49
Deleted	76	If Then	1385
Do Not	249	Internal Reference	2108
Do/Must/Should	2407	May	17
Example	1712	Option	86
Exception	133	Priority List	69
External Reference	113	To Be Developed	18

Table 16. Absolute frequencies for structures.

Before going into further detail concerning the individual codes, a few notes concerning the coding process itself are called for. As discussed in the Methodology chapter of this document, the unit of analysis for this phase was the sentence or sentence group. While this approach was the most conducive to analyzing the text of RDA, several recurring structures were coded differently due to their inherent natures. *Choice Lists* and *Priority Lists* were not typically given in formal sentence formats; as such, each complete list was coded as one distinct structure. Passages marked in the text of RDA as *Option*, *Alternative*, or *Exception* often contained multiple sentences of instruction. Therefore, when coding these passages with the respective structure codes, I coded at the passage level (i.e., the entire block of text marked as optional, etc.). Individual sentences within these passages were also coded for any other structures

utilized. Throughout the entire coding process, structure codes were not mutually exclusive; each sentence, sentence group, or passage received as many structure codes as applicable.

Also, at certain points in this section, information is provided concerning the number of occurrences of a certain structure within specific chapters of the RDA document. While these observations are meant to provide further context in understanding how RDA communicates, it is important to keep in mind the relative disparity in size among the 51 chapters and appendices. While some chapters contain as little as a single sentence, the lengthiest, Chapter 2 and Chapter 6, each contain over 45,000 words. To help put these differences in perspective Table 17 provides a total count of the number of coding units (i.e., sentences, sentence groups, or other) observed within each chapter during this analysis. Each unit received as many structure codes as applicable.

Chapter	Units Coded	Chapter	Units Coded	Chapter	Units Coded
Appendix A	393	Chapter 4	39	Chapter 21	29
Appendix B	29	Chapter 5	63	Chapter 22	18
Appendix C	8	Chapter 6	1234	Chapter 23	36
Appendix D	6	Chapter 7	361	Chapter 24	57
Appendix E	76	Chapter 8	79	Chapter 25	13
Appendix F	177	Chapter 9	521	Chapter 26	13
Appendix G	4	Chapter 10	134	Chapter 27	7
Appendix H	6	Chapter 11	547	Chapter 28	7
Appendix I	23	Chapter 12	1	Chapter 29	43
Appendix J	20	Chapter 13	1	Chapter 30	12
Appendix K	27	Chapter 14	1	Chapter 31	11
Appendix L	1	Chapter 15	1	Chapter 32	12
Appendix M	12	Chapter 16	112	Chapter 33	1
Chapter 0	191	Chapter 17	69	Chapter 34	1
Chapter 1	158	Chapter 18	37	Chapter 35	1
Chapter 2	1346	Chapter 19	119	Chapter 36	1
Chapter 3	920	Chapter 20	20	Chapter 37	1

Table 17. Total count of units coded per chapter.

Below, further information describing and exemplifying the 18 structure codes is provided. For the sake of convenience within this document, these codes have been arranged into six groups. This arrangement was done primarily for convenience in the presentation of results. Grouping was not arbitrary, however, but was guided by the concept of rhetorical force—that is, the perceived force upon the reader to act or follow, or the power of the wording to elicit a controlled response. In arranging these structures, I was guided by my own perceptions while also taking previous literature into account. Farkas (1999) argued that procedural discourse is inherently rhetorical in nature, and in doing so, recognized three common rhetorical structures: imperatives, options, and conditions. Bradbury and Schröder (2012) examined accounting standards and found important rhetorical structures such as rules, justifications, examples, definitions, and references. I took these previous findings as inspiration in arranging the structures in this study into groups that reflect their rhetorical force and function while also recognizing the idiosyncratic ways in which the RDA document communicates. For example, the Conditionals group contains conditional structures that prescribe actions dependent upon the specifics of the situation. The full grouping of structures for this study is shown below in Table 18.

Group	Definition	Structures
Directives	Structures directing action with imperatives, modals	Do/Must/Should, Do Not, May
Conditionals	Structures prescribing actions dependent upon the specifics of the situation	If Then, If Possible, If Important
Alternates	Structures that qualify preceding instructions with alternate instructions	Option, Exception, Alternative
Placeholders	Structures signifying a passage does not exist	Deleted, To Be Developed
Lists	Structures presenting lists for cataloger use	Priority List, Choice List
Supporting Guidance	Structures that do not prescribe action but further support understanding	Example, Commentary, Internal Reference, External Reference, Footnotes

Table 18. Major groups of structures.

While important similarities exist among the structures represented in each group, these 18 structures were considered distinct during analysis. These six groups were not treated as types or categories, and instead, are used here primarily to facilitate the presentation and understanding of results. Few conclusions are drawn on the nature of these groups at this time, though further consideration is taken up in the Discussion chapter.

4.2.1 Directives

The most prevalent structures throughout the text of RDA are directives which place strong rhetorical force on the cataloger to do something. This is unsurprising considering the procedural nature of this standard. Many such passages were coded with the *Do/Must/Should* code as they typically stated that the following is to be done, must be done, or should be done. These structures make it clear to the cataloger that the instruction is a requirement. Often this is accomplished through the use of an imperative verb within an instruction. For example, **7.2.1.2**,

Sources of Information, here concerning the nature of content, states, “Take information on a nature of content from any source.” This instruction tells the cataloger what to do in an unambiguous way. Less commonly, certain passages used the term “should” to describe an end state of affairs that the cataloger is required to accomplish. These were also coded as *Do/Must/Should* structures given the force they place on the reader. An example may be seen at **23.2** regarding recording relationships between works and subjects: “To ensure that the data created using RDA meet that functional objective, the data should reflect all significant subject relationships.” *Do/Must/Should* passages were prevalent throughout the majority of chapters of RDA.

Opposing the *Do/Must/Should* passages but exhibiting a similarly forceful tone were those coded as *Do Not*. These structures took the form of directives in which the cataloger was forbidden from doing something. Such passages typically invoked the phrase “do not.” An example of this kind of structure occurs at **2.3.1.6, Introductory Words, Etc.**, as, “Do not transcribe words that serve as an introduction and are not intended to be part of a title.” With this instruction, the cataloger is prevented from taking action they might otherwise typically take. Aside from “do not,” other terms could also be identifiers for the *Do Not* structure as well, including “omit,” “is not recorded,” “disregard,” and “ignore.” For example, instruction **11.8.1.3, Recording Language of Corporate Body** simply states, “Language is not recorded as part of an access point.” In effect, this tells the cataloger who may have recorded this information to not include it in the access point.

Finally, passages utilizing the verb “may” occurred rarely, and exhibited slightly less rhetorical force than *Do/Must/Should* or *Do Not* passages; these were coded separately under the *May* code. Of 17 occurrences of this code, 5 are in Chapter 0, which primarily consists of

preliminary matter as opposed to cataloging instructions. For example, **0.12, Encoding RDA Data** states, “For those elements, data may be encoded using a substitute vocabulary encoding scheme, provided the encoding scheme is identified.” Such passages are essentially granting the cataloger or agency permission to pursue something. Within actual instructions, the *May* structure was used to imply that a specific action may or may not occur, hinging on the enactment of a separate rule. This can be seen at instruction **11.2.1.3, General Guidelines on Recording Name of Body**: “Names and forms of the name not chosen as the preferred name may be recorded as variant names (see 11.2.3).” In this case, whether or not these names are recorded depends on the outcome of a separate instruction.

4.2.2 Conditionals

The text of RDA is marked by the presence of conditional instructions throughout, generally following an “if this, then do that” pattern. Three different types of conditional structures were noted, with the first, signified by the *If Then* code, being the most numerous. *If Then* structures indicate specific information conditions, and prescribe certain actions when these conditions are met. In many instances, multiple conditions are laid out for a specific instruction. This is the case with instruction **16.2.2.6, Different Forms of the Same Name**, referring here to geographic names (Figure 14).

<p><i>If:</i></p> <p>there is no form in general use in a language preferred by the agency creating the data</p> <p><i>and</i></p> <p>the jurisdiction has more than one official language</p> <p><i>then:</i></p> <p>choose the form most commonly found in sources in a language preferred by the agency.</p>

Figure 14. If Then structure at 16.2.2.6.

Linguistically, *If Then* structures appear as sentences with multiple clauses, although pairs of sentences are sometimes utilized to describe the condition and the resulting action. These structures are usually signified by use of the term “if,” although the term “when” is occasionally used instead. An example appears at **19.2.1, Basic Instructions on Recording Creator:**

In some cases, the modification of a previously existing work substantially changes the nature or content of the original and results in a new work. When this occurs, the agent responsible for compiling the aggregate work may be considered to be the creator of the compilation.

The end result is the same: if this specific information condition is met, then do the following.

Two other conditional structures were recognized during analysis, though rather than dealing with specific information conditions, these structures require the cataloger to make other kinds of judgments. The first, *If Possible*, typically prescribed a specific element to be recorded if certain information exists or is ascertainable. These information conditions were seen as too unspecific to fall into the *If Then* category, and appear to require a different kind of judgment. For example, **3.18.6.3** contains the following *If Possible* sentence concerning playback channels for audio resources: “Record a configuration of playback channels if the information is readily ascertainable.” While *If Possible* structures were not common, the final conditional structure, *If Important*, appeared more regularly, particularly throughout Chapters 2 and 3. *If Important* structures prescribed a specific action to be done if the cataloger decides it to be important for some stated reason. Instruction **10.2.3.6**, dealing with variant forms of a family name, offers a

very typical example, stating, “Record other variant names and variant forms of the name not covered by 10.2.3.4–10.2.3.5, if considered important for identification or access.” In this case, catalogers are asked to judge if this additional information is important for the user tasks of identification or access. Passages containing these structures do not give any guidelines for determining importance, and thus present these as decisions that all catalogers are capable of making.

4.2.3 Alternates

Although RDA contains many procedural options, the *Option* code was developed to reflect only passages explicitly marked as optional. The text of RDA distinguishes these passages typographically through bold, italic green font headings using the word “Option” or “Optional” paired with either “Addition” or “Omission” depending on the nature of the option. Text following this heading remains indented until the optional passage has ended. Passages coded as *Option* generally added or subtracted information from the results of the immediately preceding instruction. For example, base instructions at **6.15.1.6.3, Number of Ensembles**, prescribe recording the number of each type of ensemble in a multi-ensemble work. This is followed by the optional omission shown in Figure 15.



Figure 15. Option coded passage at 6.15.1.6.3.

This particular example also utilizes an *If Then* structure. It was quite common for *Option* passages to be coded for other structures as well given their highly specific nature.

Exception passages were also marked off in a similar typographical manner in the text of RDA, with a bold, italic green font heading of “Exception” followed by indented text. These passages were coded with the *Exception* code during analysis. In RDA, exceptional passages tended to provide a condition under which the previous instruction should be altered in a consistent, required way. Many examples of *Exception* passages can be found in Chapter 6, a relatively long chapter concerned with naming and identifying works. One such passage appears at 6.14.2.5.2.1, where the base instruction states that for a musical work known solely by its type of composition (e.g., Concerto grosso), to use the name for this type in a language preferred by the agency. The exception following this instruction is shown in Figure 16.

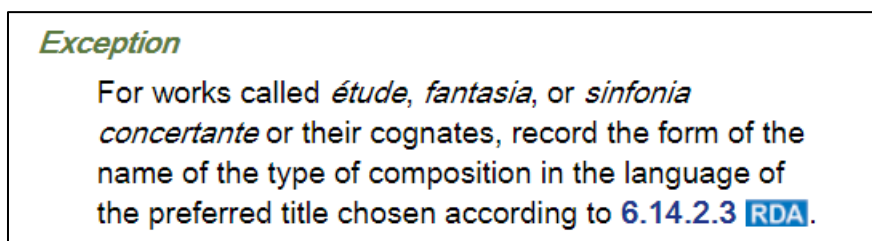


Figure 16. Exception coded passage at 6.14.2.5.2.1.

At first glance, many *Exception* passages seem intended to preserve aspects of previous, well-entrenched bibliographic practice that would otherwise be altered by RDA’s instructions, especially regarding work titles. Of 133 *Exception* passages coded, 44 of these occurred in Chapter 6.

As with the preceding two structures, those coded as *Alternative* in this study were set forth in the text through italic, bold green font headings, labelled here “Alternative.” Within the

text of RDA, these passages were meant to provide a completely alternate instruction to the one immediately preceding it, rather than just adding or subtracting information as the *Option* structures do. As such, *Alternative* passages may be quite complicated and composed of a number of other structures as well. Such an example is found at **6.29.1.8, Laws and Derived Regulations, Etc., Issued Together**. The base instructions here prescribe that the access point should be given to whatever is listed first, whether it is a law or a regulation. The *Alternative* following it provides a different possibility, as shown in Figure 17.

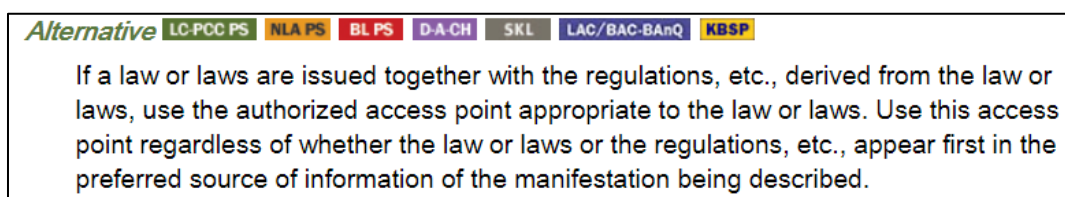


Figure 17. Alternative coded passage at 6.29.1.8.

As with *Exceptions*, *Alternatives* are commonly found in Chapter 6, along with Chapter 2 as well.

4.2.4 Placeholders

Various portions of RDA have not yet been written or inserted into the official document. These range from individual instructions to entire chapters. In such cases, placeholder text appears within square brackets indicating a particular passage is yet to be developed. Such passages were coded as *To Be Developed*. An example can be seen in Chapter 34, Related Concepts, where the entirety of the chapter reads: “[To be developed after the initial release of RDA].” In fact, all of Chapters 12-15 and 33-37 are yet to be developed; these chapters concern

the FRBR “Type 3” subject entities, and have been planned for inclusion in RDA at a later date. Beyond these chapters, individual instructions within Chapter 16 are also yet to be developed.

The *Deleted* code was applied to any passages that had been marked as recently deleted. In such instances, the original, now deleted text was no longer present. Instead, placeholder text within square brackets was inserted, indicating the instruction had been deleted, and pointing to further information. An example of this can be seen in Chapter 18, dealing with general guidelines on relationships, specifically at 18.1.3: “[This instruction has been deleted as a revision to RDA related to clarification of terminology; see RSC/Sec/6].” This structure was found 76 times throughout the text, though it is assumed that it is only used for the most recent deletions, not all of them.

4.2.5 Lists

Two kinds of list structures were noted during analysis. The first kind is reflected in the *Priority List* code, which was applied to passages instructing a cataloger to choose from several listed options, but to do so in a predefined order. For example, instruction **20.1.1** addresses the scenario where a preferred source of information is insufficient in delineating the relationships between an agent and an Expression (Figure 18).

- If those statements are ambiguous or insufficient, use the following sources of information, in order of preference:

 - a) other statements appearing prominently in the manifestations
 - b) information appearing only in the content of the resources (e.g., the text of a book, the sound content of an audio recording)
 - c) other sources.

Figure 18. Priority List coded passage at 20.1.1.

As in **20.1.1**, *Priority List* passages make the order of preference clear through explicit indication (“in order of preference”) and sequential lettering or numbering of the choices.

Passages coded as *Choice List* were similar, but provided the cataloger with a list of equally weighted options to choose from. Such passages were typically lists of controlled vocabulary terms, presented in alphabetical order, from which the cataloger should choose the most appropriate value for a particular element. The majority of passages in Appendices I through M are choice lists concerning the various types of bibliographic relationships and the designators that may be used to record them. Other choice lists appeared at individual instructions throughout the text, providing terminological choices for specific elements. In the set of instructions regarding map scales, an example of a choice list can be seen at **7.25.6.3** (Figure 19).

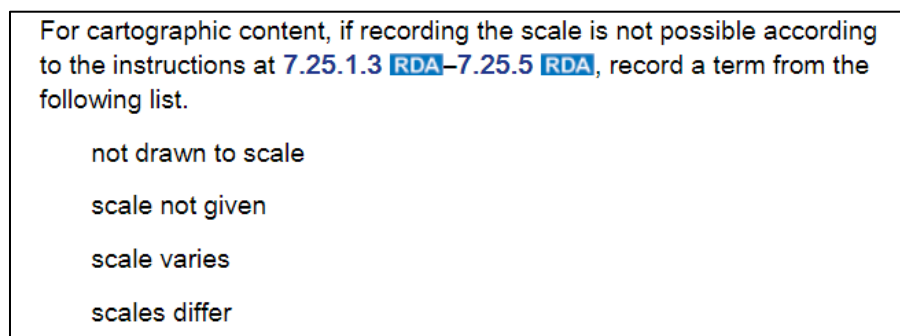


Figure 19. Choice List coded passage at 7.25.6.3.

Less frequently, additional instructions following choice lists are given in the event that none of the prescribed choices are applicable. These instructions were coded separately with the appropriate structure code.

4.2.6 Supporting Guidance

Examples are a very prevalent structure throughout RDA, often meant to illustrate the immediately preceding instructions and their outcomes. Typographically, example passages are framed within yellow shaded boxes under the capitalized heading “EXAMPLE.” In these cases, everything within one labelled box was considered one structure, and coded with one *Example* code. For example, in Appendix A, **A.6, Numbering of Serials**, the main instructions prescribe capitalization dependent on the type of numbering used, illustrated with an example as shown in Figure 20.

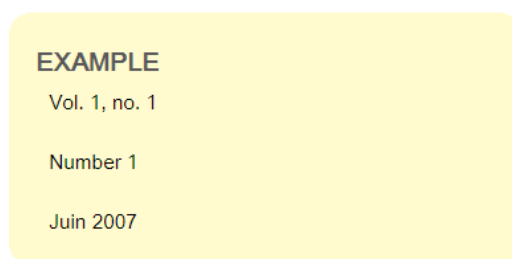


Figure 20. Example coded passage at A.6.

This entire list of text was coded as one *Example* instance. On certain occasions, examples within RDA offered some explanation of their own for what was being shown, often through text immediately following an example but still within the yellow box. Instruction **11.2.2.5, Different Forms of the Same Name**, contains some explanation within an *Example* passage concerning what to do if a brief form of a name is not specific enough. Figure 21 is presented to illustrate the exact typographical conventions used.

EXAMPLE

Metropolitan Applied Research Center

Official name. Brief form sometimes used by the center, MARC Corporation, is the same as the name of another body located in New York

Figure 21. Example with explanation at instruction 11.2.2.5.

References were a very common structural device employed within the text of RDA and were addressed with two different codes: *Internal Reference* and *External Reference*. The first and far more numerous, *Internal Reference*, was applied to sentences that made reference to another portion of the RDA document. This was typically denoted by a hyperlinked instruction number or range, sometimes within parentheses. For example, instruction **0.3.4, Alignment with MARC21**, contains an *Internal Reference* sentence, stating, “For mappings of the RDA element set to MARC 21, see appendix D (D.2) and appendix E (E.2).” Though multiple internal references are given here, in keeping with the units of analysis for this study, **0.3.4** was coded as one instance of the *Internal Reference* code. Other *Internal Reference* sentences pointed to a range of instructions rather than a specific point. This can be seen at **2.3.2.2, Source of Information**: “Take a title proper from the preferred source of information as specified at 2.2.2–2.2.3.” This again was considered one *Internal Reference* instance. Even at this sentence level of analysis, *Internal Reference* passages were incredibly numerous throughout the document; Chapter 2 alone contained 504 instances of this code.

The other kind of reference code, *External Reference*, was applied to passages that referenced a document external to RDA through the use of a title, URL, or bibliographic citation. Instruction **6.23.2.8**, addressing titles of Jewish liturgical works, references an external resource by title with the following: “For a Jewish liturgical work, choose the title found in the *Encyclopaedia Judaica* as the preferred title.” *External References* were provided for a range of

reasons, from assisting the cataloger in determining the value for an element, to providing further background information outside the scope of the RDA document. *External References* were also used to point to documentation from the RDA Joint Steering Committee (JSC) concerning RDA but not contained within the standard. Out of 113 *External Reference* passages coded, 40 were used to point to JSC documentation.

Footnotes were a structure that was rarely observed during analysis, but did occur occasionally. In the text of RDA, the presence of a footnote was indicated by a superscript number following a sentence in the main instructions. This number led to footnote text at the bottom of the current web page; this is the text that was coded as *Footnote*. *Footnote* passages usually pointed to external references or provided further information at a very fine level of detail. Some *Footnote* passages did provide further instruction, however, as was the case in **9.2.2.10.2, Established Usage**: “Disregard reference sources that list compound surnames in a uniform style regardless of preference or customary usage.” Of the 46 *Footnote* passages observed, 29 were internal or external references, 9 provided further information, and 8 provided instruction.

Finally, the *Commentary* code was developed for passages that did not provide any instruction, but rather, explicit commentary as well as definitional passages meant to explain certain terms, concepts, or practices to the reader. For example, instruction **11.4.3.1** exemplifies the *Commentary* structure in providing the following terminological definition: “*date of establishment*: A date on which a corporate body was established or founded.” Other *Commentary* passages are focused on further explaining a specific concept. This can be seen at instruction **7.16.1.1, Basic Instructions on Recording Supplementary Content**, which states, “Supplementary content may include an index, a bibliography, or an appendix.” Though there

are implications for the cataloger in such passages, there are no direct actions prescribed.

Commentary passages are never explicitly indicated in the text like *Options* or *Exceptions* are, but rather, occur as sentences within instructional passages or footnotes.

4.2.7 Discussion

Structural content analysis of RDA revealed that 18 recurring communicative and rhetorical structures could be used to understand the entirety of the text. RDA can thus be seen to communicate through a well-defined set of conventions. In recognizing and classifying these conventions, I relied on several aspects of the text: the presence of keywords such as “if,” typographical conventions, and physical layouts. While the meaningful structures in RDA are defined by more than just keywords and may be dependent on more idiosyncratic textual practices, the structures identified in this analysis do overlap with findings from previous related literature.

Directive statements place the most rhetorical force on the reader, and given that the directive structure *Do/Must/Should* is its most prevalent structure, RDA may be seen as a rhetorically forceful document. This structure equates closely to the imperative structure recognized by Farkas (1999) and the “requirement” verbal form of expression prescribed for ISO standards (ISO/IEC Joint Directives Maintenance Team, 2016). Requirements in ISO standards utilize imperative verbs to indicate that a provision is necessary for compliance with the standard. ISO explicitly forbids use of the word “must” in such structures, which may be seen as confusing or less forceful. In analyzing RDA, which is not an ISO standard, I felt these modal forms to carry equivalent rhetorical force in the document, grouping them together with purely

imperative expressions. Further examination of linguistic variation within the *Do/Must/Should* structure may reveal if these distinctions are indeed meaningful within the text of RDA.

Conditional structures in RDA come in three varieties, and require the cataloger to assess situations along various lines. *If Then* structures were the most common conditional structure, and also the most explicit about specific conditions and actions. *If Possible* structures were non-specific, simply asking the cataloger to decide if something is feasible or not. With the final conditional structures, *If Important*, catalogers are asked to take a specific action if the resulting metadata is seen as important. These structures carry a number of assumptions with them, relying heavily on cataloger understanding of concepts and the belief that catalogers already know how to make such decisions in the absence of further guidance. In instructing catalogers to determine importance, the *If Important* structure seems more innately valuating than the other conditionals. While conditional structures are not addressed in ISO/IEC (2016) documentation, Farkas (1999) does recognize them as one of three major types of communication in procedural discourse.

The text of RDA relies on distinct typographical and layout conventions to present *Option*, *Alternative*, and *Exception* structures. All three of these structures serve to qualify the preceding instruction for different reasons. Of the three, *Exceptions* carry the most rhetorical force; they are presented as required treatments of very specific situations that must deviate from the main instruction. *Alternatives* and *Options* are ultimately up to the decision of the cataloger or cataloging institution, and are not necessary for compliance. Of these three, Farkas (1999) only identified *Options* as a key structure in procedural documents; *Alternatives* and *Exceptions* may be more specific to RDA and other similar standards.

Another more idiosyncratic set of structures found in RDA are lists. The two types of lists in this document, *Priority Lists* and *Choice Lists*, serve different functions, though ultimately,

both are intended to control the range of responses from a cataloger. *Choice Lists* are intended to control terminology, and limit the range of element values that the cataloger may record. *Priority Lists* are used to control other aspects of the cataloging process, and reflect varying degrees of acceptableness among a range of alternatives. Much as with the *If Important* structure, the *Priority List* structure carries innately valuating aspects. In assigning priority, these lists indicate the relative values of the various alternatives.

In Bradbury and Schröder's (2012) review of accounting standards, a number of supporting structures beyond actual rules were identified, including examples, definitions, and references. Similarly, I found RDA to utilize a number of more supportive structures that serve to inform or guide rather than prescribe action. Structures such as *Commentary*, *Examples*, *Footnotes*, and *External References* are common conventions used in many types of documents; in the text of RDA, they serve to support the procedural instructions and provide further context for the cataloger. RDA's particular reliance upon *Internal References* is worth noting here though. After *Do/Must/Should*, *Internal References* were the most commonly occurring structure in the text. While this heavy reliance on redirection may not carry immediate implications for valuation in the document, the convention does carry assumptions about catalogers and ultimately reflects RDA's design as an online, interactive, nonlinear document.

Other structures also spoke to more underlying aspects of RDA and its design. Both *To Be Developed* and *Deleted* structures served as placeholders within the text. These conventions provide a level of transparency and may help the cataloger understand past and future content of the document. While these structures are assumed to be temporary, they highlight the status of RDA as a living document meant to embody a standard that is in a constant state of change.

Findings from this structural content analysis already suggest that some communicative conventions in the text of RDA may be more inherently affording of valuations. In the next section, the intersection of values and structures in RDA will be examined more closely through the combination of all data presented thus far.

4.3 Values and Structures

In this section, I present the combined results of the Phase 1 value analysis and structural content analysis. Taken together, the results from the two preceding sections can offer evidence related to RQ3 for this study (How are values communicated by standards for knowledge organization). The purpose of the combined analysis presented in this section, therefore, is to examine the relationship between structural devices and value expressions in the text of RDA. This analysis offers one means of approaching the ways in which standards communicate values.

In order to understand the relationship between structures and values, relative co-occurrence frequencies and proportions are utilized. There are several reasons why co-occurrences are more appropriate than correlations or statistical hypothesis testing for the purposes of this study. First, though coding borrowed from frames initially developed in preliminary studies, the overall approach was qualitative and emergent in nature. Coding was meant to be exploratory rather than confirmatory. Second, as coding progressed on structures, varying units of analysis emerged, ranging from single sentences to lengthy lists. Due to this variation, more in-depth statistical analysis could be problematic and misleading. Finally, in keeping with the overall qualitative approach in this study, results here are intended to illuminate and explore relationships of interest. This is best accomplished through the use of co-occurrence data and continuous text.

In the following results, co-occurrences represent instances of overlapping coding where one value code and one structure code have been applied within the same unit of analysis. Because of this, a structure co-occurring with multiple values was counted as multiple value co-occurrences. It is also important to keep in mind that each unit of RDA text was coded with at least one structure, whereas values coding was completely dependent on the content of the units, with some units expressing no values. Relative frequencies for co-occurrences were determined using the NVivo analysis software. Proportions represented in the visualizations below are relative rather than absolute, meaning that they represent the portion of all value co-occurrences for a particular structure, not the portion of overall observed appearances of that structure. Results are broken into two major subsections below. The first offers consideration of each of the observed structures and their patterns of value co-occurrence, while the second provides further consideration of emerging trends concerning the communication of specific values.

4.3.1 Value Co-Occurrences by Structure

Table 19 shows the complete data set for value co-occurrences by structure. When read column by column, this data provides the relative proportions of each structure's value co-occurrences for each value. Structures are given in the same order provided in section 4.2, while values are listed by category in the same order as presented in 4.1. Gradient shading demonstrates where higher proportions occur. Though this matrix provides an initial look at major trends in this data set, a structure by structure approach will be adopted throughout this section to further explore trends of interest in this data.

	Do Must Should	Do Not	May	If Then	If Possible	If Important	Option	Exception	Alternativ e	Deleted	To Be Developed	Priority List	Choice List	Example	Commenta ry	Internal Reference	External Reference	Footnotes
Clarity	0.066	0.062	0.000	0.183	0.271	0.016	0.126	0.135	0.070	0.000	0.000	0.044	0.000	0.231	0.125	0.095	0.000	0.000
Consistency	0.280	0.776	0.000	0.062	0.000	0.002	0.029	0.144	0.055	0.000	0.000	0.000	0.974	0.154	0.023	0.097	0.000	0.250
Continuity	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.031	0.000	0.000	0.000
Cost Efficiency	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.006	0.000	0.000	0.000
Creative Responsibility	0.013	0.000	0.000	0.027	0.000	0.005	0.000	0.045	0.008	0.000	0.000	0.000	0.000	0.000	0.026	0.039	0.000	0.000
Differentiation	0.016	0.006	0.000	0.045	0.021	0.002	0.078	0.036	0.000	0.000	0.000	0.000	0.000	0.231	0.165	0.034	0.000	0.000
Flexibility	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.028	0.000	0.000	0.000
Representation	0.042	0.019	0.000	0.061	0.000	0.003	0.010	0.090	0.031	0.000	0.000	0.000	0.000	0.000	0.037	0.026	0.000	0.000
User Needs	0.003	0.000	0.100	0.005	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.011	0.000	0.000	0.037	0.002	0.000	0.000
Access	0.003	0.012	0.000	0.041	0.021	0.257	0.087	0.018	0.031	0.000	0.000	0.000	0.000	0.000	0.000	0.105	0.000	0.000
Explore	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.003	0.000	0.000	0.000
Find	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.048	0.005	0.000	0.000
Identification	0.007	0.025	0.000	0.085	0.208	0.488	0.194	0.090	0.023	0.000	0.000	0.000	0.000	0.077	0.074	0.172	0.000	0.000
Obtain	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.014	0.001	0.000	0.000
Selection	0.000	0.000	0.000	0.014	0.208	0.210	0.010	0.027	0.000	0.000	0.000	0.000	0.000	0.000	0.023	0.041	0.000	0.000
Understand	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Usage	0.009	0.000	0.000	0.017	0.000	0.000	0.000	0.009	0.008	0.000	0.000	0.000	0.000	0.000	0.011	0.005	0.000	0.000
Agents	0.006	0.025	0.000	0.018	0.000	0.000	0.000	0.054	0.008	0.000	0.000	0.022	0.000	0.000	0.009	0.005	0.000	0.000
Frequency	0.001	0.000	0.000	0.005	0.000	0.000	0.000	0.000	0.008	0.000	0.000	0.022	0.000	0.000	0.003	0.001	0.000	0.000
Preferred source	0.003	0.000	0.000	0.008	0.000	0.000	0.000	0.018	0.000	0.000	0.000	0.022	0.000	0.000	0.000	0.007	0.000	0.000
Relevant works	0.019	0.000	0.000	0.022	0.000	0.000	0.000	0.009	0.008	0.000	0.000	0.055	0.000	0.000	0.028	0.019	0.000	0.250
Scholarly sources	0.031	0.000	0.000	0.028	0.000	0.000	0.000	0.045	0.031	0.000	0.000	0.077	0.026	0.000	0.034	0.015	0.556	0.000
Users	0.003	0.000	0.000	0.002	0.021	0.002	0.000	0.009	0.000	0.000	0.000	0.000	0.000	0.000	0.003	0.000	0.000	0.000
Completeness	0.012	0.012	0.000	0.015	0.000	0.000	0.019	0.036	0.023	0.000	0.000	0.000	0.000	0.000	0.003	0.010	0.000	0.000
Conciseness	0.009	0.025	0.000	0.085	0.000	0.003	0.039	0.027	0.336	0.000	0.000	0.044	0.000	0.000	0.003	0.042	0.000	0.000
Formality	0.003	0.000	0.000	0.006	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.022	0.000	0.000	0.000	0.000	0.000	0.000
Prominence	0.002	0.000	0.000	0.045	0.000	0.000	0.019	0.027	0.023	0.000	0.000	0.011	0.000	0.077	0.006	0.012	0.000	0.000
Standards	0.013	0.000	0.300	0.003	0.208	0.000	0.000	0.000	0.039	0.000	0.000	0.000	0.000	0.154	0.120	0.016	0.444	0.000
Earliest	0.004	0.000	0.000	0.015	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.044	0.000	0.000	0.017	0.009	0.000	0.000
English Language	0.035	0.000	0.000	0.045	0.021	0.000	0.010	0.063	0.070	0.000	0.000	0.011	0.000	0.000	0.017	0.020	0.000	0.000
Internationality	0.000	0.000	0.000	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.011	0.001	0.000	0.000
Originating Language	0.028	0.006	0.000	0.045	0.000	0.000	0.019	0.018	0.008	0.000	0.000	0.055	0.000	0.000	0.006	0.020	0.000	0.000
Recency	0.012	0.006	0.000	0.022	0.000	0.007	0.000	0.009	0.000	0.000	0.000	0.044	0.000	0.000	0.000	0.011	0.000	0.000
Western Culture	0.026	0.019	0.000	0.014	0.000	0.000	0.087	0.027	0.000	0.000	0.000	0.000	0.000	0.000	0.014	0.023	0.000	0.000
Cataloger Judgment	0.003	0.000	0.100	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.003	0.003	0.000	0.000
Institutional Preference	0.045	0.006	0.500	0.035	0.021	0.003	0.058	0.054	0.172	0.000	0.000	0.066	0.000	0.077	0.046	0.010	0.000	0.500
Any Source	0.162	0.000	0.000	0.006	0.000	0.002	0.000	0.000	0.000	0.000	0.000	0.022	0.000	0.000	0.009	0.001	0.000	0.000
Item in Hand	0.079	0.000	0.000	0.039	0.000	0.000	0.010	0.009	0.008	0.000	0.000	0.429	0.000	0.000	0.009	0.055	0.000	0.000
Source Attribution	0.066	0.000	0.000	0.003	0.000	0.002	0.204	0.000	0.039	0.000	0.000	0.000	0.000	0.000	0.009	0.096	0.000	0.000

Table 19. Relative proportions of value co-occurrences by structure.

The most prevalent structure observed within RDA in this study was the directive *Do/Must/Should* structure. This structure occurred 2,047 times in coding, and from this, had 1,438 value co-occurrences in total. The distribution of expressed values within these 1,438 co-occurrences is depicted in Figure 22.

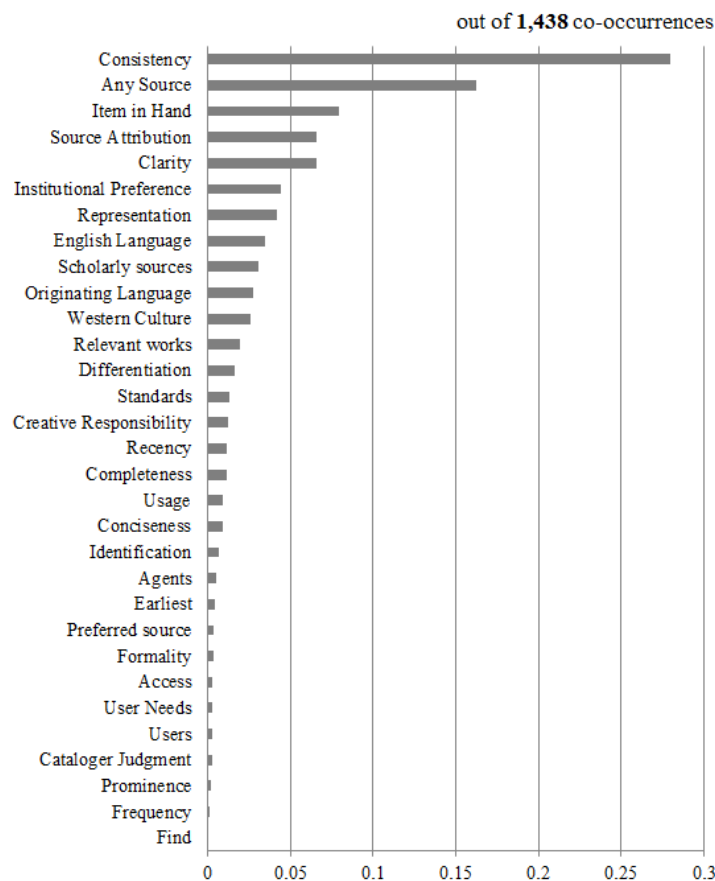


Figure 22. Relative proportions of value co-occurrences for Do/Must/Should.

The most commonly co-occurring value within *Do/Must/Should* passages was *Consistency*, followed by the three values from the Information Sources group. A number of other values also occurred within this frequently observed structure. Another directive-based structure, *Do Not*, showed an even more dramatic trend toward co-occurring with *Consistency* above all other values (Figure 23). Consistency represented a .77 proportion of the 162 value co-occurrences.

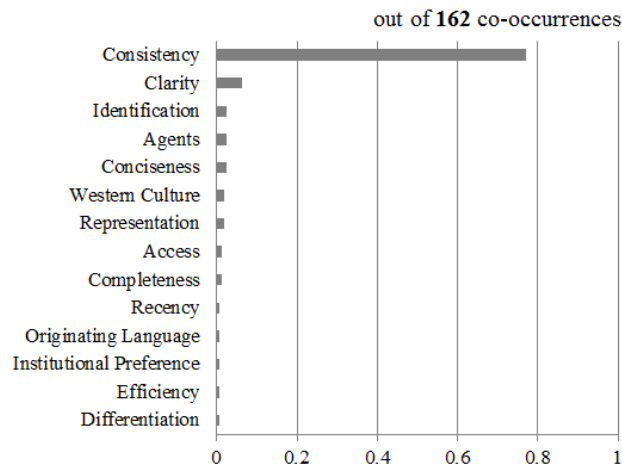


Figure 23. Relative proportions of value co-occurrences for Do Not.

Conditional structures observed in this study included *If Then*, *If Important*, and *If Possible*. The first of these, *If Then*, showed a significantly more complex and varied pattern of value co-occurrences than the remaining two. *If Then* has an absolute frequency of 1,385 instances within the text of RDA; from these, 1,239 value co-occurrences were identified (Figure 24).

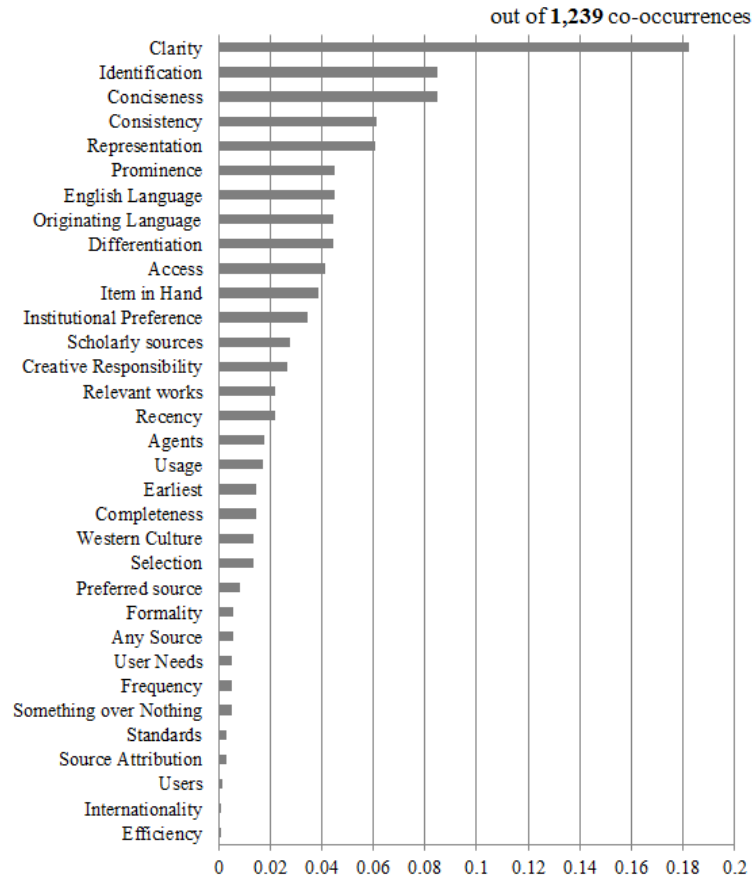


Figure 24. Relative proportions of value co-occurrences for If Then.

If Then structures co-occurred with many different values, reflecting the variety of conditions that these structures are intended to navigate. Despite this variation, values from the Principles-Based group, including *Clarity*, *Conciseness*, *Consistency*, and *Representation*, account for a combined relative proportion of .39 of value co-occurrences. As with *Do/Must/Should* structures, *If Then* structures were observed frequently throughout the text, and were seen to co-occur with many different values. The distributions of these co-occurring values, however, are markedly different between the two structures.

Trends in value co-occurrence for the other two conditional structures, *If Important* and *If Possible*, were much less varied. The relative proportions of value co-occurrences for these

structures can be seen in Figure 25 and Figure 26. It should be noted that the *If Important* structure was much more common in general, with an absolute frequency of 338 occurrences and a total of 615 value co-occurrences. By contrast, *If Possible* had an absolute frequency of 49 occurrences, with 48 value co-occurrences.

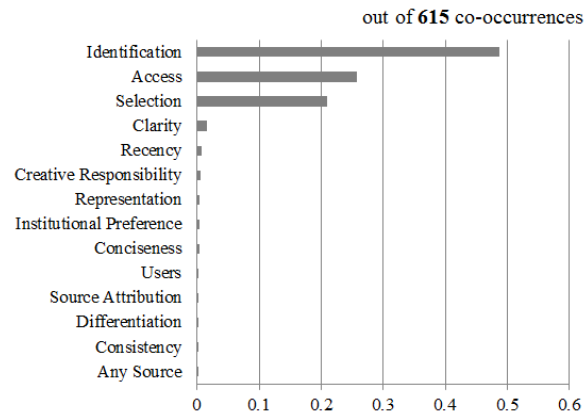


Figure 25. Relative proportions of value co-occurrences for If Important.

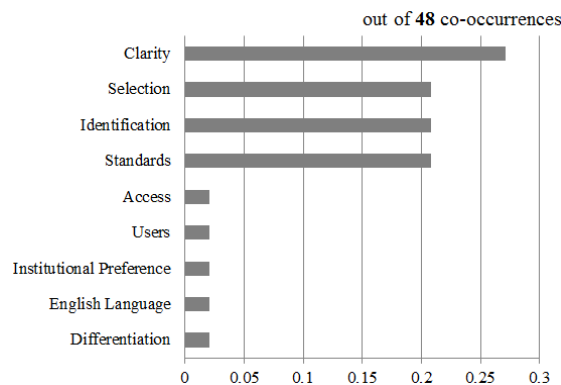


Figure 26. Relative proportions of value co-occurrences for If Possible.

Within value co-occurrences for *If Important* and *If Possible* structures, key User Needs values are prominently represented, particularly *Identification* and *Selection*. Beyond this, *If Important* structures co-occurred frequently with another User Needs value, *Access*. In comparison, *If*

Possible structures co-occurred with the *Access* value just once. Rather, two other values co-occurred more prominently with *If Possible: Clarity* and *Standards*. While *If Important* and *If Possible* co-occurrences differed in important ways, they were much more similar than either was to *If Then*'s pattern of co-occurrences. The *Identification* value, however, was prominent in all three.

Options, *Exceptions*, and *Alternatives* all occur within a variety of quite specific situations in the text of RDA. Due to this, all three structures were seen to co-occur with diverse distributions of values. For example, Figure 27 shows the relative proportions of value co-occurrences for the *Option* structure.

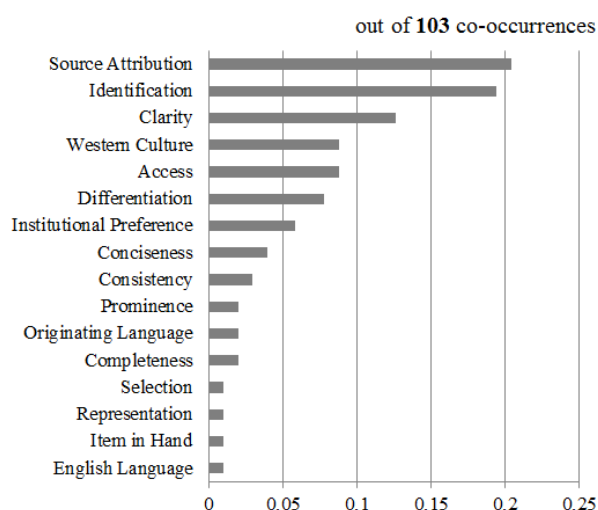


Figure 27. Relative proportions of value co-occurrences for Option.

The top four values representing the .61 relative proportion of all value co-occurrences each represent a different value category (i.e., Sources of Information, User Needs, Principles-Based, and Time, Space, & Culture). The remainder of the distribution is similarly varied. Despite this variety, we can see that *Option* structures had a particular value emphasis on attributing information, as well as *Identification* and *Clarity*.

While the distribution of value co-occurrences for *Exceptions* is even more varied (see Figure 28), trends within the value co-occurrences for *Alternatives* are slightly more marked (Figure 29).

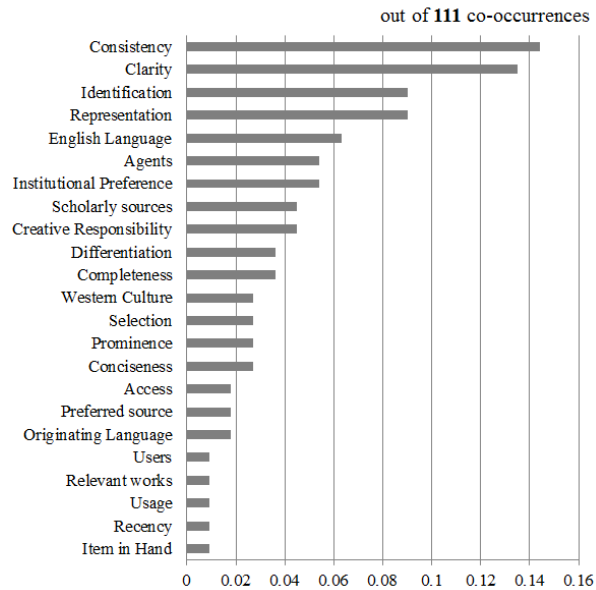


Figure 28. Relative proportions of value co-occurrences for Exception.

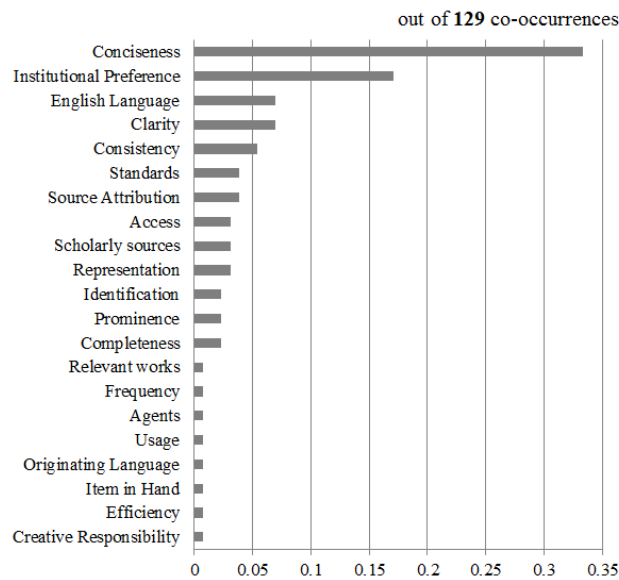


Figure 29. Relative proportions of value co-occurrences for Alternative.

Passages coded as *Alternatives* occurred with an absolute frequency of 127 instances within the text of RDA; from this, 129 value co-occurrences were observed. As shown in Figure 28, the value of *Conciseness* accounted for a .33 proportion of those co-occurrences. *Institutional Preferences* were also well-represented. This suggests that while *Alternative* passages provided for many kinds of accommodations within RDA, briefer data and respecting the choices of institutions were among the most valued.

The *Priority List* structure had an absolute frequency of 69 occurrences, and from these, 91 value co-occurrences were observed. While *Priority Lists* were a rarer structure, their inherently preferential nature may be responsible for the relatively high number of value co-occurrences. The nature of these co-occurrences is visualized in Figure 30.

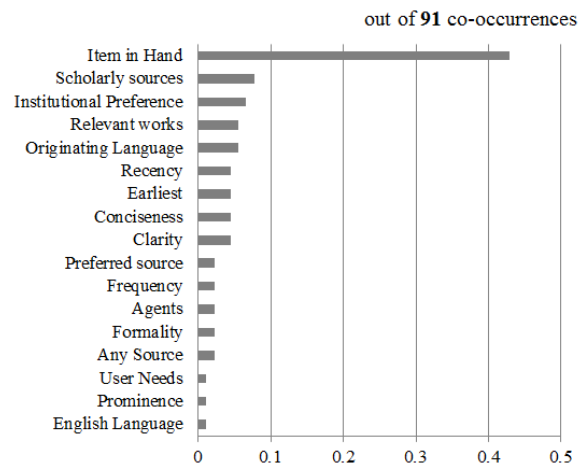


Figure 30. Relative proportions of value co-occurrences for Priority List.

Though a number of values are represented, the *Item in Hand* value is most prevalent, accounting for a .43 proportion of the 91 value co-occurrences. Other well-represented values are associated

with the Usage category (*Scholarly Sources, Relevant Works*) or the Time, Space, & Culture category (*Originating Language, Earliest, Recency*). Together, these trends differ from those associated with other structures and suggest that priority lists in RDA are often used to value specific sources of information, with the actual item in hand receiving particular consideration.

Finally, two other structures have quite complex value co-occurrence distributions but are worth consideration here. The first, *Commentary*, refers to structures intended to define or explain rather than provide procedural guidance of any kind. As such, *Commentary* passages co-occurred with a diverse assortment of values from all categories (Figure 31).

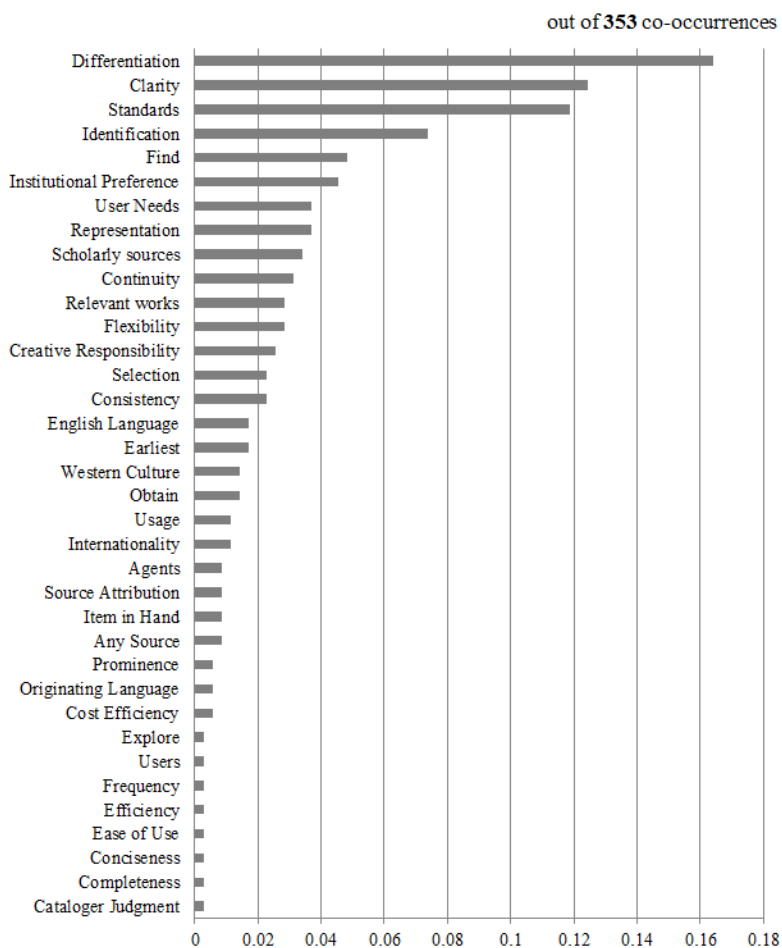


Figure 31. Relative proportions of value co-occurrences for Commentary.

Of the values represented here, *Differentiation* is the most prominent. In fact, *Differentiation* co-occurred with *Commentary* passages more often than it co-occurred with any other structure.

Given that *Differentiation* is a complex concept with a long-standing importance in the bibliographic universe, its valuation in definitional and explanatory passages is understandable.

Other commonly expressed values in *Commentary* passages included *Clarity*, *Standards*, and the User Needs of *Find* and *Identification*.

The final structure considered here is *Internal Reference*. *Internal References* occurred within the text of RDA almost as frequently as *Do/Must/Should* directives. Given the publication of RDA as an electronic text, hyperlinked references to preceding or subsequent instructions are commonplace, and occur in practically all situations throughout. As such, *Internal Reference* passages co-occurred with a wide variety of values, as shown in Figure 32.

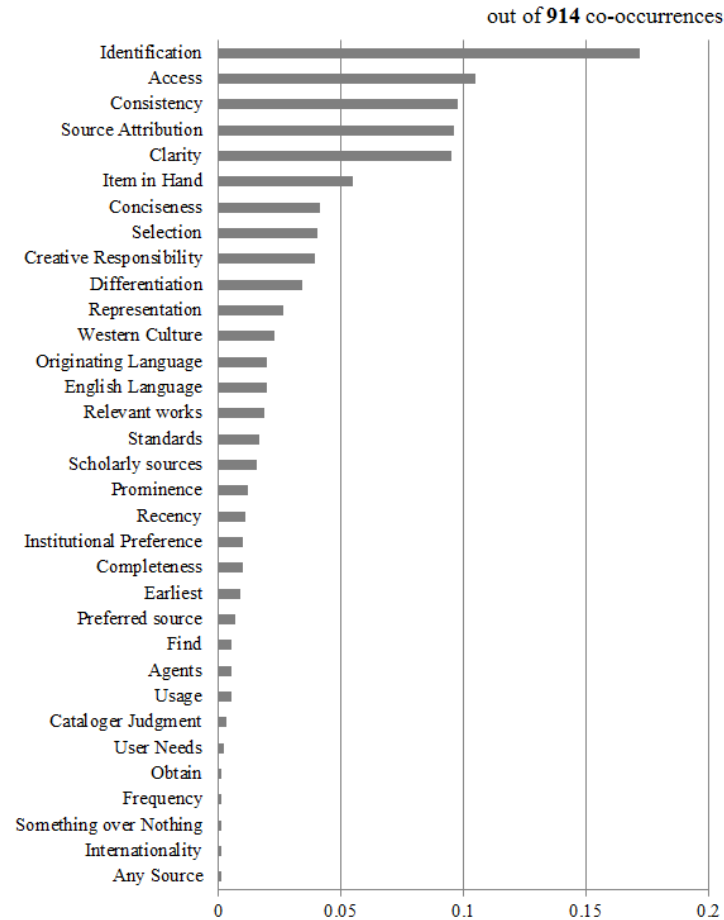


Figure 32. Relative proportions of value co-occurrences for Internal Reference.

Expressed values in *Internal Reference* passages are more likely attributed to other co-occurring structures than any aspect of the referencing structure itself. Still, *Identification* and *Access* are the most prominently co-occurring values, mirroring the highest ranking co-occurrences for the *If Important* structure.

4.3.1.1 Structures with Few or Unvaried Value Co-Occurrences

Of the 18 observed structures in this study, 7 had either few to no value co-occurrences, or had limited co-occurrences dominated by one specific value. To put these findings in further

context, Table 20 presents two statistics for each of these structures: the absolute frequency of observed occurrences during coding, and absolute frequency of value co-occurrences that were found from those occurrences. These seven structures are briefly considered in this section.

Structure	Total Occurrences	Value Co-Occurrences
Choice List	79	39*
Deleted	76	0
Example	1712	13
External Reference	113	9
Footnotes	46	4
May	17	10*
To Be Developed	18	0

Table 20. Structures with few or unvaried co-occurrences.

Units coded as *Deleted* or *To Be Developed* took the form of very brief placeholder text. It is not surprising, therefore, that they showed no co-occurrence with any value codes in this study. Three other structures (*Example*, *External Reference*, and *Footnotes*) showed relatively few value co-occurrences compared to their total observed occurrences. Functionally, *External References* and *Footnotes* served as pointers to additional resources, often with little to no text beyond a URL or bibliographic citation. While *Examples* occasionally offered commentary, most *Example* passages were limited to simple lists illustrating a particular element or instruction.

Despite their value co-occurrences, two additional structures are grouped here due to the lack of variety within these co-occurrences. The first, *Choice List*, co-occurred with the value of *Consistency* in 38 out of its 39 value co-occurrences; the remaining co-occurrence was with *Scholarly Sources*. The second, *May*, co-occurred with *Institutional Preference* in 5 out of its 10 value co-occurrences. Other value co-occurrences with the *May* structure included *Cataloger Judgment* (1), *Standards*, (3), and *User Needs* (1). These results show that while these two

particular structures co-occur with values, they are predominantly associated with one value each within the text of RDA.

Overall, results concerning these seven structures suggest that some structural devices within standards may be inherently less values-laden than others. Within the text of RDA, structures corresponding to non-procedural aspects of the document, including *Examples*, *Footnotes*, and *External References* showed few to no value co-occurrences.

4.3.2 Value Communication Trends

While previous sections examined the co-occurrences between values and structures on a structure-by-structure basis, this section attempts to highlight trends among these same relationships but from the perspective of specific values or value categories. Three noteworthy trends are further explored here concerning *Consistency*, the User Needs value category, and the Sources of Information value category. Although a number of trends may be seen in the preceding data, these three trends in particular were chosen due to their potential implications for knowledge organization standards in general. Counts and percentages presented here are based on the same co-occurrence data as the previous sections. As previously stated, a co-occurrence is counted when one value code and one structure code are present in the same unit of analysis. A unit of analysis expressing one value and exhibiting multiple structures would therefore be counted as multiple co-occurrences.

Consistency was the most commonly expressed value in the text of RDA, with a total of 588 observed occurrences. Structurally, expressions of *Consistency* co-occurred with 768 structures. Of these, *Consistency* most commonly co-occurred with the rhetorically forceful directive structures of *Do/Must/Should* and *Do Not*; together, these accounted for 68% of

Consistency co-occurrences. Beyond these, the next most frequently co-occurring structures were *Internal Reference* (11%) and *If Then* (10%). *If Then* structures prescribe procedural guidance, albeit conditionally, making their role in expressing *Consistency* understandable. *Internal References*, on the other hand, commonly co-occur with all other structures, including the very frequent *Do/Must/Should* structure, which may explain their prominence here. Overall though, these findings show that *Consistency* was often expressed through the structures placing the most rhetorical force on the reader.

While *Consistency* was the most prevalent value in structures providing the most direct procedural guidance, values concerning User Needs demonstrated a very different trend. Values in the User Needs category occurred a combined 763 times in the text of RDA, co-occurring with 1241 structures. Of these co-occurrences, only 2% involved *Do/Must/Should* or *Do Not* passages. User Needs values, however, were much more likely to co-occur with conditional structures; 47% of the structural co-occurrences for this category were with the *If Important* structure, while if all three conditionals are included (*If Then*, *If Important*, *If Possible*), 63% of co-occurrences may be accounted for. This trend is similar for the three most commonly occurring User Needs values when considered individually. The three conditional structures account for 64% of *Access* co-occurrences, 64% of *Identification* co-occurrences, and 76% of *Selection* co-occurrences. These trends suggest that direct instructions and conditional instructions express different values in RDA, and that values concerning User Needs take a forefront in less directive, more decision-oriented passages.

Differing trends were also observed with values within the Sources of Information category, particularly concerning the role of the *Priority List* structure. The *Any Source* value, which denoted a preference for information from any possible source, co-occurred almost

exclusively with the *Do/Must/Should* structure (94% of co-occurrences). *Any Source* co-occurred with *Priority Lists* in less than 2% of its co-occurrences, while the *Source Attribution* value had no co-occurrences with *Priority Lists*. The third Sources of Information value, *Item in Hand*, demonstrated a different pattern though. Fifteen percent of its co-occurrences were with the *Priority List* structure. As noted above, *Priority Lists* co-occurred with a number of values revolving around sources of information. While *Item in Hand* is most prevalent co-occurring value for *Priority Lists*, a word of caution is required here. The co-occurrence data doesn't say anything about the order of priority for items in hand within any given list, just that items in hand are valued in priority lists most often.

Overall, results highlighted here demonstrate that different values were observed to have different communication patterns within the text of RDA as realized through structural devices. While *Consistency* was most frequently conveyed in directive passages, User Needs values co-occurred more commonly with conditional passages in which the cataloger must assess certain conditions while making a decision. As a source of information, *Item in Hand* was valued in *Priority List* structures much more frequently than any other value. These trends suggest that while basic directives in knowledge organization standards work to maintain consistency, more idiosyncratic values are exposed at decision points. In all cases, value expression depends on more than just the structure of a sentence; it depends on its content. Results in this section, however, suggest that certain structures are more conducive to conveying certain types of values.

4.3.3 Discussion

As documents, standards are written in such a way as to enforce order in practice, and they do so through the use of specific conventions. Are these conventions inherently valuating in

some ways, and what are the effects on how standards such as RDA express values? While traditional value analysis reveals the priorities embedded within the content of a document, the data and analysis presented here attempts to move beyond content and examine the ways in which repeating structural conventions may be related to value expression.

Given the role of standards in bringing order to practice, the value of *Consistency* may be a basic, underlying assumption in this genre of document. In the text of RDA, *Consistency* was highlighted and enforced through the most routine structure, the directive *Do/Must/Should*. This structure was also the most rhetorically forceful in the text, laying out instructions as requirements for compliance. In presenting instruction as absolute, directive structures may be more conducive to expressing statements related to *Consistency*. With *Do/Must/Should* as the most prevalent structure, *Consistency* as the most prevalent value, and the high relative co-occurrence of the two, RDA offers evidence that standards are written in a way that innately values uniformity.

Conditional structures, on the other hand, were seen to bring out different values in the text of RDA. Structures such as *If Important* ask the cataloger to make decisions that are either value-based or have value implications. In RDA, these decisions typically revolve around user needs and tasks. Their frequent association with conditional structures reveals important assumptions, however, including that catalogers understand user behavior concerning these tasks and that they can emphasize *Access* without be given a clear definition of it. Conditional structures in standards may support more idiosyncratic values than uniformity, but they are also indicators of the knowledge and judgment that the standard interpreter is expected to bring to the process.

Other structures that may be more specific to RDA were seen to hold varying roles in value expression. *Options*, *Exceptions*, and *Alternatives* are all methods through which the text of RDA qualifies or modifies a preceding instruction. For *Options* and *Exceptions*, a range of varying values were seen to co-occur. The values enforced by these structures may not present a meaningful, systematic pattern; these values may in fact be more closely associated with the preceding instruction/structures in these cases. It's possible that structures like *Options* or *Exceptions* serve to reverse or negate the preceding values. Further analysis examining the content preceding these specific structures may be more illuminating.

A pattern of interest was apparent concerning the *Alternative* structure, however. *Alternatives* were seen to co-occur most with *Institutional Preferences* and the legacy value of *Conciseness*. A possibility here is that *Alternatives* are a structural means of making allowances for certain legacy practices; they are designed to value legacy considerations. Though these practices and considerations will vary by institution, *Conciseness* is a common legacy approach to resource description, perhaps explaining its particular prevalence here. Further examination of the content of the RDA *Alternative* passages, as well as any corresponding passages in previous standards such as AACR2, might offer further insight into how this structure may be designed to value historical considerations.

Priority Lists may also serve an idiosyncratic valuating function in RDA. Through their co-occurrence with values related to sources of information, this structure appears to enforce relative valuations of various information sources relevant to catalogers. Similar structures in other standards may be focused on valuing other concepts. The core function of the *Priority List* structure, however, would appear to be innately valuating. In contrast, other structures appear to offer little affordance for expressing value. Routine structural conventions such as *External*

References and *Footnotes* perform non-procedural functions in standards, place little rhetorical force on the reader, and had little bearing on value expression in RDA.

It may be tempting to consider *Consistency* as the most explicitly enforced value given the rhetorical force behind directive statements in RDA. User Needs values, however, appear in less rote, more interactive situations in which catalogers must assess conditions and make decisions. Given the increased requirement for attention, it may be possible that values expressed by such conditional statements are more apparent to catalogers. Further determining which values are most effectively expressed to those who use the standard will require the perspectives of catalogers from Phase 2 data.

4.4 Summary

This chapter presented the results of research conducted as part of Phase 1 of the present study, including value analysis and structural analysis of the text of RDA. Value analysis yielded an initial frame of 39 distinct values expressed within the text; these values were arranged into seven major categories reflecting their common origins and functional relations to information resources and descriptions. The Principles-Based category, reflecting well-established principles of description along with RDA's asserted objectives and principles, was the most represented through valuations in the text. This finding demonstrates that the text of RDA does indeed emphasize the concepts that it claims to. Beyond this, the presence of a number of other values raised larger questions concerning the intentionality and rationale behind the values in RDA. Certain legacy values in particular appear to be at odds with the document's own asserted principles.

Content analysis focused on communicative and rhetorical structures in the text yielded a frame of 18 distinct, recurring structures. Structures were identified through a combination of linguistic and typographical conventions, and were seen to vary in terms of rhetorical force. Directive structures carried the most force, while conditional structures required catalogers to assess the situation and make a decision based on varying criteria. Structures such as these are common in procedural documentation, though other, more idiosyncratic structures such as lists and alternative passages were also identified. Together, findings showed that RDA communicates through a fairly well-defined set of structural conventions, with some appearing more innately valuating than others.

A combined analysis of values and structures looked for meaningful patterns in the way certain values are expressed in the text. Within the findings, different values were indeed observed to have different communication patterns in RDA, as realized through the previously identified structures. The most routine, directive structures were found to frequently co-occur with valuations of *Consistency*, suggesting this coupling as status quo in terms of how standards communicate. In contrast, the more idiosyncratic User Needs values were found to be more associated with conditional statements. These structures frequently asked the cataloger to consider the importance of particular user tasks while making a decision. This pattern suggests conditional directions in standards to be a key place in which more specific values rise to the surface. Overall findings showed that certain structures are more conducive to conveying values, and may be more conducive to certain types of values in particular.

Findings in this chapter work toward establishing a frame of values associated with RDA and deepening the understanding of how such values are communicated. As such, these findings support both RQ1 (What values are expressed, and to what extent) and RQ3 (How are values

communicated by knowledge organization standards). The major research questions of this study are further addressed through the exploration of cataloger perspectives; these findings are presented in the following chapter, which presents data and analysis from Phase 2 of the study. This is followed by a separate Discussion chapter intended to address all findings and research questions at a broader level.

CHAPTER 5

RESULTS: PHASE 2

5.0 Introduction

In this chapter, I present the results of interviews carried out during Phase 2 of the research as described in the Methodology chapter. To offer a more comprehensive view of the findings, this chapter is divided into three major sections followed by a summary (Figure 33). First, basic demographic information is offered alongside a narrative exploration of major themes developed through inductive analysis. Next, the results of a more focused value analysis are used to address practitioner perspectives on values in RDA. A final section connects findings from Phase 2 back to Phase 1 in a comparative value analysis that examines the results of my content analysis alongside practitioner perspectives for three specific RDA excerpts. Together, these three sections address RQ1 (What values are expressed, and to what extent, in the text of RDA) and RQ2 (How are values in RDA recognized and responded to by practitioners).

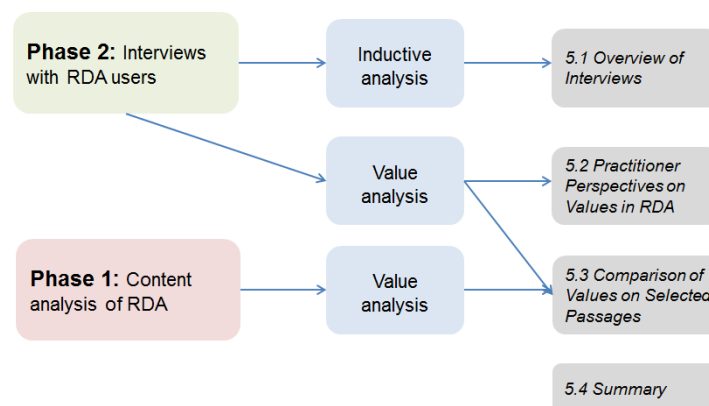


Figure 33. Overview of Chapter 5.

Interviews generated a wealth of data, so in choosing which data to present and explore I have attempted to maintain a tight focus on the research questions. To do so, each of the three major sections in this chapter utilizes a different means of presentation, selected in order to facilitate better understanding of the results. Inductive analysis results are offered through a thematically arranged narrative, punctuated throughout with brief, illustrative participant vignettes. For value analysis results, I have again turned to absolute frequencies for values coding while keeping an emphasis on description and the coding frame itself through continuous text (Schreier, 2012). In contrasting content analysis and interview results in the final section, presence/absence coding and visualizations are relied upon to make meaningful comparisons without being misleading.

5.1 Overview of Interviews

In this section, I present an overview of the results of the interviews conducted during Phase 2 of this study. The transcripts and researcher notes from the 20 interviews were analyzed through two different approaches. In the first approach, general inductive analysis was used to develop codes and arrange these into major themes concerning characteristics of the participants, their environments, their general attitudes, and their perceptions of RDA. The results of this analysis are presented in this section in the form of demographic information and a narrative arranged by eight major themes. The results of the second approach, a value analysis of the interviews, are examined in the subsequent section, 5.2.

The purpose of the general, inductive analysis was to reveal important information about the participants and their work. This information provides useful context in understanding the results of the subsequent value analysis. Thus, results in this section support RQ2 (How are

values in RDA recognized and responded to by practitioners). Beyond this, information in this section is also provided to further support generalization of the results. The provision of clear descriptions of participant settings, contexts, and characteristics has been cited as an effective means of improving the generalizability of qualitative analyses (Elo and Kyngäs, 2008).

5.1.1 Participant Demographics

A total of 20 participants took part in interviews. As described in the Methodology chapter, each of the participants was recruited through one of three professional listservs aimed at catalogers: RDA-L, OCLC-CAT, and OLAC-L. Snowball sampling yielded no additional participants. In keeping with the purposive sampling criteria, all participants performed cataloging duties as part of their work, had consulted the English version of RDA, and spoke English. Saturation of the value analysis results, described further in section 5.2, occurred after 15 interviews, with 5 additional interviews conducted to further ensure this. Eighteen interviews were conducted over the phone, while two interviews took place via Skype audio calling. Eighteen participants agreed to audio recording; transcripts of these recorded interviews were used in analysis. For the two participants who declined recording, my researcher notes were used in place of transcripts during the analysis process.

Table 21 shows a brief overview of the participant demographics; full demographic information collected is available in Appendix J. All participants were employed in a professional capacity in which they were required to catalog as part of their duties. The professional/paraprofessional nature of their individual positions was not explored in this study. The settings of the participants were largely slanted toward academic environments: 14 were

employed in academic libraries, with 3 in public libraries, 2 in national libraries, and 1 in a museum. It should be noted that two of the participants, P2 and P3, were in non-U.S. locations.

	Setting	Gender	Total Experience
P1	academic	F	17 years
P2	national	F	6 years
P3	museum	F	25 years
P4	academic	M	35 years
P5	academic	F	13 years
P6	academic	M	11 years
P7	academic	F	4 years
P8	public	F	8 years
P9	academic	M	20 years
P10	public	F	10 years
P11	public	M	7 years
P12	academic	F	13 years
P13	academic	F	20 years
P14	academic	F	25 years
P15	academic	F	22 years
P16	academic	M	8 years
P17	academic	M	20 years
P18	national	M	4 years
P19	academic	F	18 years
P20	academic	M	5 years

Table 21. Overview of participant demographics.

Within their respective settings, the participants were focused on cataloging a range of materials, including monographs, serials, music, media, special collections, and children's collections (Table 22). Six of the participants indicated that they cataloged for general collections and were responsible for all material types at their institution. One participant, P4, focused only on authorities work and did not conduct bibliographic cataloging as part of his duties. Including P4, 15 of the participants had conducted NACO (Name Authority Cooperative Program) authority work at some point, meaning their authority work followed Library of Congress

guidelines and is contributed to the LC authority file. One participant performed non-NACO authority work, while four others had not performed authority work.

	Material Focus	Authority Work
P1	serials	NACO
P2	general	non-NACO
P3	monographs, serials	NACO
P4	authorities only	NACO
P5	music	NACO
P6	general	none
P7	general, special collections	NACO
P8	general	NACO
P9	monographs, special collections	NACO
P10	special collections	none
P11	general	none
P12	special collections	NACO
P13	media	none
P14	special collections	NACO
P15	monographs	NACO
P16	monographs	NACO
P17	general	NACO
P18	media	NACO
P19	children's materials	NACO
P20	monographs, music	NACO

Table 22. Focus of participant cataloging activities.

Participants were asked about two measures of their experience: their overall experience in knowledge organization work, and their experience with RDA (Table 23). General knowledge organization work was considered as opposed to strictly cataloging experience for several reasons. First, while most participants had only performed library cataloging as part of their careers, some had previous experience working with other metadata standards such as Dublin Core or DACS that, while not technically called cataloging, was still relevant. Second, some participants had worked in other types of positions altogether, such as professional indexing, which again seemed relevant to the current study. Third, some participants had moved back and

forth between cataloging and other types of library positions during their career, making actual cataloging experience difficult to measure. As such, total overall experience was considered the length of time since the participant had first used knowledge organization standards in a professional setting. Total experience ranged from 4 years to 35 years, with an average of 14.5 years of knowledge organization experience among the participants.

	Total Experience	RDA Experience
P1	17 years	5 years
P2	6 years	4 years
P3	25 years	3 years
P4	35 years	5 years
P5	13 years	8 years
P6	11 years	2 years
P7	4 years	4 years*
P8	8 years	8 years
P9	20 years	7 years
P10	10 years	7 years
P11	7 years	2 years
P12	13 years	5 years
P13	20 years	7 years
P14	25 years	7 years
P15	22 years	5 years
P16	8 years	5 years
P17	20 years	8 years
P18	4 years	4 years*
P19	18 years	6 years
P20	5 years	5 years*

Table 23. Overview of participant experience.

The second measure of experience, RDA experience, was a measure of how many years the participant had been using RDA; this included classroom experience, practice/test cataloging, and fully implemented workplace cataloging. RDA experience ranged from a minimum of 2 years, to a maximum of 8 years for those who began as early adopters prior to Library of Congress's official adoption. Overall, participants had an average of 5.4 years of experience

working with RDA. For three of the participants (P7, P18, P20), RDA was the only cataloging standard they had ever worked with. The remaining 17 participants had all worked with AACR2 at some point prior to working with RDA.

5.1.2 Major Themes

During the inductive analysis, I coded interview transcripts, and where needed, researcher notes, looking for common, repeating factors of interest. Unlike in the more strict value analysis described in succeeding sections of this chapter, the inductive coding process was driven by emerging areas of interest and my own sensitivity to the potential importance of information shared by the participants. As inductive codes were developed, applied, and constantly compared, I began to combine these codes through axial coding (Saldaña, 2015) in order to determine the larger themes of interest.

Through this process, I determined eight major themes, which together offered a comprehensive and relevant context concerning the participants and their settings (Table 24). These themes correspond to the major prompts given in the first two sections of the interviews: general questions and cataloging questions (see Appendix F). The third set of prompts was a selection of three excerpts from RDA; data concerning these excerpts is presented separately in section 5.3. Any participant responses concerning values associated with RDA and RDA cataloging were coded separately using value analysis, the results of which are presented in section 5.2.

Major Themes	
Background	RDA Training
Current Responsibilities	Institutional Goals
Consulting RDA	Secondary Documentation
"Good" RDA Records	Personal Assessments of RDA

Table 24. Major themes in interview results.

The first section of the protocol, the general questions, was closely tied to themes as follows:

Background

- Derived primarily from General Question 1: “Could you briefly describe your cataloging background to me? What general cataloging work have you performed during your career and for how long?”
- Brought together comments concerning education and employment history

Current Responsibilities

- Derived primarily from General Question 2: “Briefly describe your current position and responsibilities.”
- Contains information about participant departments, organizational roles, and areas of responsibility

Institutional Goals

- Derived primarily from General Question 3: “How do you feel your position supports the goals of your institution?”

- Represents information about the purpose and motivation of participant institutions and positions

Collecting information under these three themes was important in order to understand the relevant experiences of participants, the day to day conditions they work under, and their perceptions of the larger organizational goals they are working toward, each of which may have some bearing on how they use knowledge organization standards.

The second section of the interview protocol, the cataloging questions, was also tied to specific themes:

RDA Training

- Derived primarily from Cataloging Question 1: “When were you trained on RDA, and how?”
- Brought together information on methods, materials, and timeline for being trained on RDA

Consulting RDA

- Derived primarily from Cataloging Question 2: “How often do you consult the text of RDA, and under what circumstances? Do you consult other documentation about RDA?”
- Brought together information on when and why participants directly interacted with RDA, as well as which portions they used most frequently

Secondary Documentation

- Derived from Cataloging Question 2: “How often do you consult the text of RDA, and under what circumstances? Do you consult other documentation about RDA?”
- Used to track all additional documents and sources of support from RDA cataloging beyond the official text

“Good” RDA Records

- Derived from Cataloging Question 4: “What do you think makes an RDA record good?”
- Used to examine individual participants’ ideals concerning RDA and RDA data

Collecting and arranging information under these themes was useful for a number of reasons, including bringing into focus all sources that may affect how participants conceptualize and interpret RDA, and affording deeper understanding and comparisons concerning participant attitudes toward RDA.

One final theme was not associated with any particular protocol item, but was devised as follows:

Personal Assessments of RDA

- Used to collate the various personal opinions of RDA that participants voiced throughout their interviews
- Included whether it was a good or bad standard, whether it was effective or not, and what they liked and disliked concerning it
- Much data here was elicited from the Final Question: “If you had to summarize RDA and its instructions in one sentence, what would you say?”

At many points during their interview, participants voiced evaluative comments about the standard, often without any prompting. They were often eager to share their personal opinions and frustrations. Specifically recording and organizing such comments with a theme was important in understanding congruencies and conflicts between participants and the standard.

5.1.3 Narrative

Results of the inductive analysis are presented below as a narrative arranged by the eight major themes described above. Themes are described at a broader level rather than articulating all specific codes appearing during the analysis, though some tables provide more granular data as needed. For each theme, a brief vignette of one participant is provided in order to illustrate the relevant findings associated with that theme. From there, narrative text is used to widen the perspective on the theme and illuminate important similarities and differences among the participants.

5.1.3.1 Background

P14: 25 Years of Special Collections Cataloging

P14 has been in the library field for 25 years now, and started out as a special collections cataloger, a responsibility she's held in various institutions for her entire career. She was originally trained on the AACR2 cataloging standard. She remembers doing NACO authority records via OCLC terminals in her first position. Following that, she worked as an electronic resources cataloger at another library, but continued doing special collections cataloging there as well. The training responsibilities she had in that position helped prepare her for her current position as head of collections at an academic library, where she supervises and continues to catalog special collections materials.

One aspect of P14's story is true for a number of participants in this study: level of experience. Among the 20 participants, there was an average of 14.5 years of knowledge organization work experience, with 7 of the participants having over 20 years of experience each (Table 23 above). For many participants, cataloging has been their first and only occupation within the library setting. For some, this work started during graduate programs. P18, for example, took cataloging electives during his graduate coursework and upon graduation was hired into a cataloging position. P20 held a student assistant position in a cataloging department before graduating and taking a professional position, while P2 began cataloging work as part of an internship during her graduate studies. Overall, the group encompassed many individuals who gravitated toward cataloging early in their career and have remained focused on it since.

Participants' knowledge organizing backgrounds were not limited to traditional library cataloging though. Two participants, P8 and P10, had prior experience in arranging and creating metadata for archival collections. P9's first professional position was in a large museum, while P3 has worked in a museum environment for over 25 years. One participant, P6, spent seven years professionally indexing journal articles. All of these participants felt their prior work to be related to the cataloging work that they currently perform.

Another area of interest within participant backgrounds was supervisory and training experience. While P14's story demonstrates her experience as both supervisor and trainer, participants were generally divided on whether or not they had experience in these areas (Table 25).

	Supervisory Experience	Training Experience
P1	X	X
P2	X	
P3		X
P4		X
P5	X	X
P6		
P7	X	
P8		X
P9		
P10	X	X
P11		
P12		X
P13		
P14		X
P15		X
P16		X
P17		X
P18		
P19	X	X
P20	X	X

Table 25. Supervisory and training experience.

Those with supervisory experience had often been responsible for reviewing and overseeing the work of other cataloging staff. This ranged from supervising student workers (P20) to serving as department head (P10). This is important to note, as catalogers with such experience may have needed to interact with cataloging standards and products in a different way. This may be true of training experience as well, which was more common among participants than supervisory experience. For participants, this training was often provided to student workers or copy catalogers, though a few had more significant training experiences: P5 had done NACO training and review, P8 offers professional training through a local library services agency, and P17 has taught graduate courses and professional workshops.

5.1.3.2 RDA Training

P10: To the Library of Congress and Back

In 2009, P10 was head of a cataloging department at an academic institution. At this time, RDA was beginning to come to the forefront. By 2011, she had been preparing for RDA by reading about FRBR and FRAD and discussing it with colleagues. In 2012, after she took a position at a state library, she began studying RDA directly. Her institution sent her to the Library of Congress for formal training in RDA, after which she was responsible for training other catalogers at her institution. She continued to keep up to date on RDA after this through webinars and e-courses.

P10's experiences are in many ways indicative of the RDA training of the overall group (Table 26). Like P10, participants' RDA preparation took place over a number of years and through a variety of mediums. Many of the earliest training experiences participants described involved FRBR study or introductory sessions held at conferences. FRBR serves as the conceptual basis for the RDA document, leading P10 to explain, "... basically if you want to understand RDA you have to understand FRBR. Or at least kind of understand FRBR." Participants studied FRBR early on to understand the concepts and terminologies that were to be important in the forthcoming RDA standard. Other participants described their earliest experiences as conference sessions given by groups such as ALA or ALCTS, designed to introduce RDA before it had been officially implemented in the U.S. Catalogers such as P4, who considers himself quite active with ALA, would attend these sessions as part of their regular conference activities.

Training Source	Participant Count
LC video training & materials	10
self-teaching	9
local training	8
books & articles	6
conference sessions & workshops	6
listservs	5
formal coursework	4
trained by supervisor	4
FRBR study	3
US RDA Test	3
webinars	3
e-courses	2
group meeting & study	2
colleagues	1
newsletters	1

Table 26. Sources of RDA training.

Another commonality that P10's story represents is the use of training materials from the Library of Congress. Unlike P10, however, other participants did not attend the Library of Congress directly; in fact, she was the only participant to have done so. Counting P10, half of the participants used LC training materials in some form during their RDA training. Most commonly reported were the freely available LC produced webinars on RDA cataloging—referred to by participants as the “Paul Frank videos” due to this LC staffer's presence in them. Some participants who worked alongside other catalogers reported watching these webinars as a group activity. P12, for example, described her department's approach as, “Yeah, we watched the Library of Congress series of videos and we just worked our way through those,” while P19 noted similarly, “What we did was we watched the Library of Congress training videos together.” Other more specific LC provided training materials mentioned by participants included NACO bridge training and BIBCO approval training. Alongside these webinars, LC provided slides, written documentation, and example records used by the participants.

Participants mentioned a number of other means through which they were trained on RDA as well. Self-teaching was an especially important aspect of their training. Self-teaching experiences saw the participants reviewing primary documentation on their own, sometimes on the fly while creating records. As P15 explained, “But a lot of it has been learning by doing, you know, getting a particular type of material and saying, my gosh, how do I deal with this, trying to find the relevant sections in RDA.” Local training was also common, sometimes done in conjunction with the LC training materials. Participants also mentioned specific books and articles that they consulted as part of their training; the most frequently mentioned source was *Maxwell’s Handbook for RDA* (3 participants). Other sources of RDA training reported included formal e-courses, newsletters, and listserv discussion.

5.1.3.3 Current Responsibilities

P16: The Tough Stuff

P16 supervises the work of cataloging assistants as part of his responsibilities at an academic library. Because of this, he generally doesn’t see books or other straightforward materials. Instead, the assistants only bring him the difficult items, for example, an audiobook in Korean or a unique special collections item. Aside from cataloging the more unusual and challenging resources, he also serves as his institution’s NACO liaison. He coordinates and oversees authority work and provides support on problematic cases.

P16 works at a large academic institution where catalog records for some bibliographic materials are provided by vendors. As such, on-site cataloging activities are focused on rarer or more unique materials; in P16’s case, only the most exceptional cases make their way to him. Participants described varying balances of copy cataloging to original cataloging, though tended to stress original cataloging while describing their responsibilities (Table 27).

Responsibility	Participant Count
authorities cataloging	14
original cataloging	14
training	8
supervision & management	7
copy cataloging	6
special collections work	6
metadata & digital collections	5
quality control	5
review	4
vendor records	4
committee work	3
music cataloging	3
gov docs cataloging	2
teaching	2
archival work	1
circulation	1
ILL	1

Table 27. Current responsibilities.

Original cataloging tasks were frequently focused on local or exceptional materials, for example, dissertations (P13), campus lectures (P6), local history (P10), and multimedia kits (P11). While the participants did describe more routine cataloging tasks, it's possible that they perceive the more challenging original cataloging more prominently than these other tasks. The following statement for P12 sheds some light on this:

Mostly what I do is original... no that's not true! I spend most of my time doing original cataloging, but you know the original takes a lot longer than the copy cataloging so... It just seems like I'm always doing original!

Even so, several participants, such as P6 and P11, described spending a more significant amount of time on copy cataloging than original.

Alongside bibliographic cataloging, many participants were responsible for authorities cataloging for personal names, corporate bodies, and geographic places. Of the 15 NACO trained participants, 14 continued to perform NACO cataloging activities in their current position. NACO authorities cataloging is performed in accordance with Library of Congress policies, with the resulting work included in the national authority file. Thus, NACO work is seen as a particularly rigorous process, and each of these participants described authority cataloging as an important and carefully conducted part of their jobs. For some catalogers, authorities work is their main or sole focus. P9's position requires significant amounts of authority cataloging; he estimates that he completes over 1,000 authority records every year. P4 was the only participant in the study whose position is completely devoted to authorities work; he performs no bibliographic cataloging.

In addition to cataloging tasks, participants reported a number of other responsibilities in their current positions. Most common were supervisory duties and training of staff. A handful of participants created non-RDA metadata descriptions for digital collections at their institutions, working with repositories such as CONTENTdm and DSpace. P19 catalogs in an academic library devoted to East Asian materials where she also performs reference services. In supporting his public library and the larger consortium network, P11 is responsible for circulation and interlibrary loan tasks on top of his primary cataloging duties.

5.1.3.4 Institutional Goals

P19: Making the Most of It
Being in an academic setting, P19 sees supporting teaching and research as the goal of her library. To do this, a great deal of money is spent acquiring resources. To P19 though, without careful metadata and organization, this money and effort may as well go to waste. The library gets the most out of its investment and furthers education by connecting users to the collection through cataloging. “Sometimes we don't necessarily have better collections,” she explained, “we just have better descriptions, so people know what we have, and they would come visit the library and use them.”

While P19's concern with return on investment was unique among participants, her tendency to see cataloging work as tightly intertwined with the underlying goals of her institution was not. In fact, all of the participants described their work as integral to the accomplishment of their respective institutions' goals. Though the nature of these goals varied among settings, participants saw direct connections to their work and were able to describe these goals through the lens of cataloging. A summary of institutional goals is provided in Table 28.

Institutional Goal	Participant Count
access/discovery	18
support research	10
support education	5
serve community	4
attract users	3
inventory control	3
efficient use of resources	2
good database	2
share metadata	2
support consortium	2
reputation	1

Table 28. Institutional goals.

Access and discovery was the most frequently mentioned goal; in general, participants saw the role of the library as providing things, and cataloging as the activity that helps connect users to those things. Access could be instrumental toward a larger institutional goal depending on the setting, for example, education, research, or community needs. None of the participants, however, mentioned any other services through which these goals might be met, such as instructional support, information literacy, or reader's advisory. While the prompt directed participants to explain their role in the goals of their institutions and this may be largely responsible for the nature of their responses, this trend still demonstrates that catalogers are influenced by the materiality of their work when interpreting overriding institutional goals.

Another trend in responses that was less common was a tendency to view cataloging and its products as an institutional goal in and of itself. Participants for whom this trend was apparent may be responding to their own personal connection to their work. This can be seen in a quote from P11: "But we pride ourselves, I personally pride myself and I think my institution does too, in helping doing our part and making sure that that's a very clean database." To others, the cleanliness of the database was perhaps instrumental in attaining a yet broader goal. P4, while explicitly aware of the goal of serving researchers, also saw another goal for his institution: reputation. He explained, "I see our work as it contributes to national databases, and larger pools of metadata as contributing to our reputation in the area of holdings, scholarly reputation."

5.1.3.5 Consulting RDA

P8: RDA, Everyday

P8 works full-time as a cataloger in a public library while also performing training and consulting work for a local library services organization. She estimates that she checks the RDA Toolkit at least once a day, especially when performing original cataloging or authority work. The relationship designator appendices and rules for preferred forms of names are the sections she consults most frequently. She also finds herself spending time in the Toolkit when preparing documentation and training materials.

Like P8, all participants in this study accessed the text of RDA through its online presentation, the RDA Toolkit. The Toolkit is the only online presentation of the text of RDA, though print and PDF versions are also available for purchase. Another aspect of P8's interaction with RDA was common among the participants: daily consultation. Including P8, half of all participants reported interacting directly with RDA on a daily basis (Table 29). Other participants reported consulting it on a regular but less frequent basis. It should be noted that some level of interaction with the text of RDA was a recruitment requirement for this study, meaning that catalogers who never consult the text of RDA were not represented here.

Frequency of Consultation	Participant Count
daily	10
2-3 times per week	5
2-4 times per month	3
once a month or less	2

Table 29. Frequency of RDA consultations.

The most common reason for consulting RDA was to check the list of relationship designators (Appendices I, J, K, and M), or other controlled terminology lists (Table 30). These lists present controlled vocabulary used for recording the relationships between two bibliographic entities (e.g., a work to its creator). P9 explained that these lists are lengthy,

difficult to remember, and change frequently without notice. Other participants expressed similar sentiments concerning these lists.

Reason for Consulting	Participant Count
terminology look up	11
doing authority work	9
cataloging certain formats	6
training and reviewing	5
cataloging imperfect resources	4
original cataloging	3
clarifying understanding	1
preparing documentation	1

Table 30. Reasons for consulting RDA.

Other reasons given for consulting RDA revolved around specific situations that the participants find themselves in. Having to perform authorities work was the most mentioned of these situations, with some participants who do authorities cataloging consulting RDA whenever these tasks occur. Reasons here given include the specificity and complexity of the rules, frequent changes to these sections of RDA, and the desire to be particularly cautious with authority records. Another situation which prompted consultation with RDA was the appearance of imperfect or irregular resources. Such resources defied cataloger expectations for a particular material type; for example, a map without scale information (P10), or a book without publication information (P17). These resources were seen as exceptional and prompted the participants to check for specific instruction. Finally, those participants who are responsible for training or reviewing work reported checking RDA in order to cite specific instructions to staff or students. P5 always goes directly to the text of RDA rather than local documentation when reviewing her staff's work, noting, "... if I'm checking catalog records someone has handed in to me to be

reviewed, I want to make sure I'm telling them accurate information, and cheat sheets go out of date quickly.”

5.1.3.6 Secondary Documentation

P5: A Collection of Go-To Sources

Though P5 checks the text of RDA directly on a daily basis, she further supports her responsibilities as a music cataloger with a collection of secondary resources. She’s especially fond of Yale’s music cataloging website, which has been publicly available for years. Other go-to support documents for her include the MLA best practices guide, the slides from her LC NACO training, PCC guidelines on relationships designators, and the PCC guide to e-resources.

P5 is not alone in her curation of a personal repertoire of secondary supporting documentation. Nineteen of the 20 participants described similar, personal collections of documentation they regularly consult when performing RDA cataloging tasks. Only one participant, P3, who works in a museum, reported consulting only the text of RDA in the course of her cataloging work. The major types of secondary documents consulted are summarized in Table 31.

Secondary Documentation	Participant Count
Best practices guides	14
Local documentation	11
Other websites	8
LC-PCC PS	6
Other LC documentation	6
Training materials	4
Books	2
Listservs	1

Table 31. Summary of secondary documentation sources.

Most common among these personal collections were best practices guides, documents published by specific groups offering more narrow interpretations of RDA instructions. Given that OLAC-L was a primary recruitment listserv for this study, the popularity of OLAC best practices guides among participants is not surprising; participants mentioned the various OLAC guides as useful sources of secondary support. Though participants included only two dedicated music catalogers (P5, P20), a total of six participants mentioned relying on the Music Library Association's best practices guides as well. Though the Library of Congress/Program for Cooperative Cataloging Policy Statements (LC-PCC PS) may be seen to function as a best practices guide, instantiating important LC interpretations of RDA rules, participants did not refer to them as such. Perhaps due to their longstanding incorporation directly into the RDA Toolkit or their origins as LC documentation, the LC-PCC PS were referred to as a separate kind of supporting resource by participants. Participants often turned to best practices guides and the LC-PCC PS for additional guidance in dealing with very specific material types, for example, Blu-ray discs or streaming audio files.

Beyond best practices guides, the next most common secondary documentation was other Library of Congress materials. Participants continued to return to the documents they were trained from, including slides, FAQs, and other RDA instruction materials produced by the Library of Congress. Participants also regularly consulted other forms of LC documentation, including the CONSER Manual, the Descriptive Cataloging Manual, and the NACO Participants manual. Participants' reasons for relying on these materials included their familiarity with them, their trust in LC, or their institutional obligation to follow LC policies and practices. The strong presence of LC within their collections of secondary resources is an indicator of the influence of Library of Congress on this study's participants.

5.1.3.7 “Good” RDA Record

P7: The Three Criteria
When asked how she judges an RDA record to be good or not, P7 responded with three major criteria. The first is that it has accurate metadata, meaning everything it says about the resource is correct. The second is that there is enough metadata in the record, and all necessary fields are present. The final criteria is that the record is consistently formatted, allowing for easy comparisons and, if needed, automated processing.

Few participants had such a clear and simple answer as P7 regarding the qualities of a “good” RDA record. In fact, some participants were initially puzzled by the very concept of a “good” RDA record. After I explained that catalogers can often look at a record and quickly decide whether it was good or bad, all participants were able to respond with how they make such assessments of RDA records. Though P7 was not among them, many participants mentioned relationships as key criteria (Table 32).

Criteria	Participant Count
relationships	11
all core elements	9
3XX	8
accurate representation	7
fully spelled out	4
subject & genre	4
follows rules	3
punctuation & formatting	3
intuition	2
originating institution	2
table of contents	2

Table 32. Criteria for “good” RDA records.

As P3 put it, “I think that it's good that, I think with RDA there's an increased effort to identify, to trace relationships, to identify the different roles that different agents have in the creation of a resource, when possible.” To many participants, relationships are a defining feature of RDA records. The very presence of relationship designators is a visual sign that a record is RDA compliant to catalogers such as P18. He explained, “If I see a lot of subfield 4 with codes in the 700s, I'll know that these are using MARC relator terms, and I want to see subfield e with full spelled out terms.” He is referring to previous AACR2 practice of using MARC relator codes rather than relationship designators associated with RDA. For many catalogers, this difference is a fast way to assess whether a record may be RDA, and whether it may be good.

Another prominent hallmark of RDA data was also cited as a fast indicator of quality: the content, media, and carrier elements, or as described by participants, the “33X.” The three elements are encoded in the MARC fields 336, 337, and 338, and have come to be known by this coding. P10's first response to the “good” record prompt was as follows:

Umm... well I guess having the correct 330 fields, that makes a good one, especially if it's something that is actually like, a book with a CD or something in it. If it actually has each one of the type, that makes a good RDA record, material types and things like that.

In addition to the 33X, some participants pointed to fully spelled out terms, as opposed to abbreviations, as a sign of a quality record. Others were more wary of what they felt to be relatively superficial aspects. P17 was particularly critical of assessments based on 33X and fully spelled out terms, instead looking for the realization of deeper principles:

But people think that when they see those types of things, that's what makes it RDA, and it's not! So there's more education we have to do as a community of catalogers for sure. But I think a good RDA record is I can look at it, and look at the record, and see that they faithfully recorded following the principle of representation. That's what I would look for.

Other, broader criteria mentioned by participants included generally accuracy, the presence of all core elements, a reliable originating institution, and general formatting. Somewhat circularly, three participants felt that a “good” RDA record was one that followed RDA rules. Finally, both P12 and P16 had a difficult time articulating their assessment processes, seeing them as more intuitive. As P16 explained, “... it’s like pornography; I know it when I see it.”

5.1.3.8 Personal Assessments of RDA

P6: From the Soapbox

“Because there are so many, I could talk forever on this, this is my soapbox now [laughter]. There are so many rule systems out there that are conveyed succinctly and effectively, or at least it seems to me, that there's got to be a better way to convey what RDA is doing. I think what it's trying to do, or what it's supposed to do in directing us to catalog is fine. It has all the elements, it has the things we need to describe something. It's in there. How it's conveyed could be much more digestible.”

As this quote from P6 demonstrates, a commonly expressed personal assessment of RDA was that it is difficult to understand. Like P6, participants generally agreed to RDA in principle, but not in execution. Reasons given for its difficulty included very specific terminology (P10),

confusing navigation (P13), unintuitive arrangement (P3), and “tortured” language (P9). Overall, half of the participants explicitly commented on the difficult nature of the text of RDA. This sentiment was not connected to a lack of professional experience; in fact, three of the most experienced participants (P3, P4, P14) fell in this group.

Beyond this, participants expressed a range of sentiments that were difficult to generalize. The overall attitude of the group may best be described as frustrated but optimistic. The following collection of adjectives used by participants to describe RDA shows a generally critical perspective:

- abstract
- arbitrary
- contradictory
- frustrating
- impractical
- incohesive
- prescriptivist
- unclear
- vague

Despite these criticisms, participants expressed a number of overall positive sentiments. P7 saw flexibility within RDA as a productive development for the practice of cataloging. P4 appreciated the logical and ontological underpinnings of the standard. P10 found the emphasis on accurate transcription to be a useful, realistic approach to cataloging. Perhaps most importantly, 11 of the participants felt that RDA actively improved access for users.

One trend worth further exploration is the disconnect that participants perceived between RDA and certain aspects of practice. In the most notable example of this, several participants were critical of the lack of MARC examples in RDA. P16 understood that RDA was meant to be agnostic of encoding standards, but still felt frustrated that the text so actively avoided referencing the formatting most of its current users would need to follow. Aside from this avoidance of MARC, another disconnect was felt in RDA's tendency to ignore copy cataloging and editing of records. Concerning passages about authority data, P11 understood the intentions in avoiding references to authority files or even records, but felt that this approach ignored the practical reality that most catalogers would be working in. P4 saw a similar issue in the way RDA treated all acts of cataloging like original cataloging; to him, this ignored the reality that many records are revisited and improved over time by a number of catalogers.

As a final note, I observed that many participants tended to assess RDA against its predecessor, AACR2. This may not be unusual, considering 17 of them had originally been trained on AACR2 and worked with this standard. In understanding or assessing aspects of RDA, many of these participants made active comparisons to AACR2. As P1 admitted, "... honestly, with this my brain gloms on to what is different now from AACR2... because I was originally trained with AACR2." What was surprising, however, was that even the three "born RDA" catalogers who had never learned AACR2 made such comparisons as well. For example, P18 first began cataloging in 2014 using RDA, but still commented in his interview that RDA generally gives catalogers more options than AACR2 did.

5.1.4 Discussion

Highly-experienced catalogers in academic settings constituted a large proportion of participants in this study, though both newer catalogers and those in public or government libraries were represented as well. While the participants were focused on describing a variety of materials, the majority of them had experience in authorities, with 15 of the 20 having been trained through the Library of Congress NACO program. All of the participants had years of experience working with RDA, and had trained on and practiced with the standard in a variety of ways. For most of them, RDA preparation was a years-long process that relied on a variety of sources; self-teaching and independent study were common follow-ups to formal Library of Congress training materials. Given these characteristics, the group of participants in this study can generally be seen as experienced knowledge organization workers, highly influenced by Library of Congress policies and practices, and actively engaged with RDA.

When asked about how their job related to the goals of their institutions, all participants found their work integral to specific goals and were able to explain why. The most commonly cited overarching goal was that of access, frequently phrased in terms of bringing users and resources together. Participants explained that the cataloging work that they performed was necessary for bridging the two. This trend provides evidence of access being a critical concept of value in cataloging, though some participants suggested it to be not a terminal goal, but rather, instrumental in achieving yet larger goals related to their specific settings. For those in academic settings, education or research represented an institutional goal beyond access that they were both aware of and actively working to support. Variations in cataloger setting thus hold implications for the functional set of values that catalogers may be working under when interacting with standards such as RDA.

Within their institutions, participants felt that they spent most of their work time focused on more challenging and exceptional situations. For many of them, this included authority work, a time-consuming task that participants treated with extra caution. Beyond this, their bibliographic cataloging was typically focused on more difficult, less routine items, such as special collections materials or other local, unique items. This pattern of work may explain why participants consulted the text of RDA frequently while other catalogers not represented in this study might not. Outsourcing trends in libraries may play a part in the number of unique, challenging cases these participants confront, with more routine materials now receiving their descriptions from vendors instead. For some participants, exceptions have thus become the norm, establishing a working pattern in which on-the-fly guidance from RDA is a regularly required. Exceptionality was also related to expectations that catalogers may carry about certain material types; the further these materials stray from expectations (for example, a map without scale information, or a book without publication information), the more the cataloger may feel compelled to consult the rules. For the participants, these kinds of resources put them in direct contact with the text of RDA, while more routine materials may be cataloged without the direct use of the standard, instead relying on memory or the large personal collections of supporting materials that many of them have amassed.

Overall, participant attitudes toward RDA were generally positive, but characterized by a number of criticisms. In principle, participants agreed with the goals and approach of RDA, and were especially positive concerning new opportunities for users and increased access. In practice, however, they found that the presentation of the text inhibited understanding, and were at times doubtful of a perceived dependence on personal judgment. More broadly, participants were troubled by an apparent disconnect between the standard and their realities. One major example

of this is the exclusion of MARC encoded examples in the text, even though the majority of current RDA users are likely interacting with MARC encoded data. While participants understood this design choice to be intentional and done to support a more agnostic and flexible view of bibliographic data, all 20 of them currently cataloged using MARC format, and 3 were openly critical of the lack of MARC examples in the text. Another broader disconnect noted by participants was the tendency for RDA to conceptualize cataloging as a one-by-one procedure: every record is assumed to be original, interaction with existing authority records or files is not discussed, and editing records is not considered. Participants felt that RDA did not recognize the context in which most catalogers are working, characterized by shared systems and initiatives, copious sources of existing bibliographic data, well-established authority files, and records that are under constant cooperative enhancement. These sentiments suggest that standards such as RDA can be so ideal that practitioners come to view them as divorced from their practical realities.

While participants may have found certain elements of RDA to be disconnected from their realities, they were much more enthusiastic about RDA's focus on bibliographic relationships. Explicitly recording and labeling these relations in bibliographic data, for example the relationship between a film and its sequel, is a practice not previously supported by Anglo-American cataloging standards. Participants were optimistic about the potentials for this relationship data to help users. The relationship aspect of RDA was influential to catalogers in other ways as well. Consultation of the relationship designator vocabulary lists in RDA was the most commonly reported reason for checking the standard. RDA provides hundreds of controlled terms to describe these relationships, a vocabulary too extensive for catalogers to memorize, and one that is not well-supported by current cataloging interfaces. Thus, RDA functions as not just a

procedural standard, but a terminological standard as well. Finally, participants saw relationship data as a defining feature of RDA records and an immediate indicator of data quality.

Participant focus on relationships in RDA was indicative of another trend in how they conceptualized the standard: RDA was often explained in terms of how it differed from its predecessor, AACR2. Relationships were one defining feature of RDA data in part because they are absent from bibliographic data derived from any other standard. While the lack of abbreviations and Latin terminology and the inclusion of more complete metadata were seen as superficial indicators of good RDA data by some, they were again easily recognizable and meaningful for participants due to their departure from the expectations set by AACR2. When participants described RDA as clearer or more confusing, easier to work with or more time consuming, it was done in implicit, and occasionally explicit, relation to AACR2. While at first glance it may appear that this trend derives from the fact that 17 participants were originally taught on AACR2, closer examination of the interviews reveals that the three “born RDA” catalogers made these comparisons as well. This shows that even for those who may not have directly used it, AACR2 remains influential in shaping cataloger conceptions, expectations, and, potentially, value recognition and enactment. This influence may diminish as AACR2 recedes further into the past and teaching materials make fewer references to it.

Results of the inductive analysis provide further context for understanding the value perceptions and enactments of the participants to be taken up in subsequent sections. As in other qualitative research, the presentation of participant settings, contexts, and characteristics here also work to support the generalizability of the findings (Elo and Kyngäs, 2008). This increased understanding of the participants, however, also exposes limitations of the current study. Participant settings were heavily weighted toward academic environments (14 out of 20), with

little representation of public libraries and no representation of K-12 school libraries. Due to the purposive sampling strategy, participants may have systematically self-selected based on their overall experience and confidence with RDA, leaving less experienced voices out. The perceptions of less experienced or less confident RDA catalogers are valuable, as well as those who catalog according to RDA but never check the standard, a subset of the population intentionally excluded for the purposes of the present study. In the future, further exploration of catalogers in other settings and with other work habits is warranted.

5.2 Practitioner Perspectives on Values in RDA

In this section, I present the results of the value analysis performed during analysis of Phase 2 interview transcripts and notes. Value analysis was conducted in a similar manner to the Phase 1 analysis. Sentences or sentence groups within the transcripts or notes seen as expressing values associated with RDA or the RDA cataloging process were coded using the frame of 39 distinct values developed during Phase 1. At the same time, additional value codes were inductively developed and applied as needed. The number of interviews conducted in this study was based on saturation, specifically saturation of the values code book. Saturation was reached after 15 interviews, and no new value codes were developed from the subsequent 5 interviews.

The purpose of this value analysis was to reveal what values catalogers see in RDA and RDA cataloging. Results are thus intended to speak strongly to RQ2 (How are values in RDA recognized and responded to by practitioners). Results concerning new value codes are considered separately from those concerning previously established values codes. To accommodate for the newly elicited values with no direct counterparts in the Phase 1 value analysis, a new value category was developed. Results concerning this category and its value

codes are presented here first. Following this, interview results concerning the expression of other values originally elicited in Phase 1 are then provided.

5.2.1 Situational Values Expressed by Catalogers

During interviews, catalogers expressed values associated with RDA and RDA cataloging that had not been elicited during the Phase 1 value analysis of the text. To further understand and explore the role of these values, an additional category of codes was added to the value code book. This category, Situational values, represents the values elicited exclusively from interview participants. Six such values were identified (see Table 33), each of which reflect certain situational aspects of the enactment of RDA as a standard. Each of these values is further explained below.

Situational Values	Definition	Count	Number of Participants
Ease of Use	Ease of use or practicality from the perspective of the standard user/interpreter	7	6
Efficiency	Maintaining the efficiency of data capture, from automated means or other sources	8	4
Cooperation	Emphasizing the sharing, cooperation, and collaboration among institutions	7	4
Collation	Bringing together like resources or metadata concerning them	6	4
Education	User learning, education from information resources	2	1
Research	Prioritizing research activities of the users	4	3
Total		34	

Table 33. Absolute frequencies for situational values.

Of the Situational values, *Ease of Use* was mentioned by the most participants, having been expressed at least once in 6 out of 20 interviews. *Ease of Use* referred to prioritizing the

general ease or practicality with which RDA can be used by the cataloger. Participants recognized specific practices in RDA as making work easier for them. For example, in referring to whether or not to count separate pieces, P13 mentioned, "...if it's easy to tell, you know how many pieces, to put it, the number. If it's not, just put various." P19 framed the concept in terms of practicality: "So it gives you an instruction to balance usefulness of the information you are providing and the realistic work load you have." With this, P19 recognized that the text appears to place priority on general ease of use by the cataloger. Closely related and also mentioned relatively frequently by interview participants was the *Efficiency* value. In this study, *Efficiency* was used to refer to placing emphasis on maintaining the efficiency of data capture, from automated or other sources. While *Ease of Use* specifically focused on the cataloger and their perspective, *Efficiency* was seen to relate more to the cataloging process. P12, a special collections cataloger, recognized this *Efficiency* in RDA, noting, "I feel like a lot of RDA is trying to just get you to be efficient rather than, you know... slogging through." P15, in referring to aggregating materials with multiple carrier types together under one label, stated:

This can be faster, this can be more efficient, you don't have to try to come up with all the words to call these different things, you can just say, "various pieces," and be done with it and that's ok.

Thus, some catalogers recognized an emphasis on an efficient cataloging process within the text of RDA.

Participants expressing the *Cooperation* value recognized that RDA and the cataloging process it prescribes values sharing, cooperation, and collaboration among institutions. This

value was mentioned in interviews with four of the participants (P4, P5, P9, P20), all of who work in academic libraries dealing with a range of materials and authorities. P4, an authorities cataloger with 35 years of experience, felt that cataloging rules such as RDA were designed to enable collective cultural heritage work on a global scale. He remarked, “When I do a name authority record I’m contributing to a worldwide body of knowledge on identity.” Other participants recognized the role played by RDA cataloging in the context of a fuller set of library activities. At P9’s institution there is a strong emphasis on interlibrary loan activities, activities which RDA cataloging can support. Referring to making records available in the catalog, he stated, “And it needs to be timely, because we have a pretty unusual collection, and they need to be available not just here at the university, but they need to be immediately available for ILL.” While he can be seen to expressing the general *Access* value, the additional consideration of sharing materials between institutions can be seen as a manifestation of the *Cooperation* value. While interlibrary loan is an important consideration for this cataloger, it should be noted that this concept is not mentioned within the text of RDA itself.

An emphasis on bringing together similar resources or the metadata concerning them was coded with the *Collation* value code. While the bringing together of similar resources has been described as a key principle of bibliographic knowledge organization (Lubetzky & Hayes, 1969; Svenonius, 2000), it was not observed during the textual value analysis of RDA. This may stem from the fact that, as a procedural document, RDA considers resources on a case-by-case basis. Catalogers, however, confront these resources in the context of a collection, and as such, saw RDA cataloging as enabling collation within their collections. For example, P4 stated the following:

To, given my perspective on the catalog as being about access, I see cataloging as a way not so much to sort of custom tailoring a description for a unique entity, but fitting that description into a context where it's relating to a lot of other things.

In enacting RDA cataloging rules, P4 saw creating a record that relates and collates with the rest of the collection as more important than creating a perfect description. Together, the four participants who expressed this value used terms such as “bringing together,” “pulling together,” or “belonging together,” and referred to collation of both surrogate records and physical resources. As P18 put it, RDA cataloging is meant to “bring together like-minded materials.”

The remaining Situational values, *Education* and *Research*, were expressed by a smaller number of participants, and strongly reflect the individual contexts within which these participants work. The *Education* value, which emphasized user learning and education from information resources, was only mentioned by P17. While P17 works in an academic library, he also teaches as an adjunct. In describing his cataloging work, P17 said:

So what we do, the descriptions that we create, the vocabulary that we choose and such, the value-added types of description that we add, tables of contents, all of these things are what help users find the information that they need, and so that's how it supports that idea of promoting learning.

While *Access* may be argued to be the terminal value of cataloging, as will be discussed later, P17's statement renders *Access* an instrumental value in service of *Education*. The *Research* value, which similarly prioritized research performed with information resources, was expressed

by P1 and P15, both academic librarians, as well as P3 who is employed in a museum. Similarly to P17, P3 saw *Access* as instrumental in accomplishing another terminal value:

Well, I think that it helps people to discover the collection, to discover the research materials that are available to them, and to evaluate whether or not the materials we have are of interest to them and will help them further their own research goals.

5.2.2 Other Values Expressed by Catalogers

During interviews, participants also expressed values associated with RDA and RDA cataloging that corresponded to values previously elicited during Phase 1 content analysis of the text. This section presents results associated with these value expressions. While value analysis of the interview transcripts and notes took place at the sentence level, providing an actual count of how many sentences a value manifested in might be misleading as some catalogers spoke more than others, or explained certain concepts or perspectives more repetitiously. To accommodate for this and prevent direct comparisons to absolute frequencies given in section 4.1, data and discussion in this section is focused more simply on whether a value was mentioned by a participant or not (i.e., presence/absence level). It should also be noted that results in this section exclude the portion of the interview devoted to discussing three sample passages from RDA. Including those results here would have weighted overall results toward the values associated with these three specific passages. As such, results here focus instead on expressions participants made concerning RDA as a whole, while values in the three excerpts are taken up independently in section 5.3.

Table 34 presents the main value categories developed during Phase 1, along with a count of how many participants out of 20 mentioned one or more of the values associated with each group during their interview. Each of the seven categories was represented, though Principles-Based values and User Needs values were mentioned by more participants.

Value Category	Number of Participants
Principles-Based	12
User Needs	20
Usage	5
Logistics	4
Time, Space, and Culture	2
Choice	5
Sources of Information	1

Table 34. Value categories expressed by participants.

Within these major categories, value expression by participants was not even, but typically focused on a few critical values. Table 35 illustrates this with an expanded view, depicting each value mentioned and which participants mentioned it during their interviews. Of the 39 values elicited during content analysis, only 19 were expressed by participants.

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	T
Access	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	19
User Needs	X	X	X	X		X			X				X	X	X	X			X		11
Cataloger Judgment								X				X		X	X		X				5
Users		X		X											X			X	X		5
Completeness		X					X	X											X		4
Consistency				X												X		X	X		4
Flexibility						X	X	X												X	4
Representation							X			X							X		X		4
Clarity		X	X	X																	3
Continuity		X	X																		2
English Language		X							X												2
Explore				X				X													2
Find																X	X				2
Selection						X											X				2
Item in Hand										X											1
Agents															X						1
Identification																X					1
Understand																X					1
Western Culture									X												1

Table 35. Expanded view of values by participant.

Five values from the Principles-Based category were recognized by participants during the interviews. Participants' conceptions of *Consistency* aligned closely with what was observed in the text of RDA during Phase 1. In interviews, participants associated *Consistency* with the many controlled terminology lists in RDA. For example, in speaking of the relationship metadata prescribed by RDA, P4 said, "In order for that relationship to work, often terminology is really important, and using consistent terminology is important." To P4, the importance of *Consistency* in RDA was clear, as was its enactment throughout adherence to controlled terminology. Other participants took broader views of *Consistency* and RDA. P16 found the generally consistent rules throughout RDA to be one of its strengths, while P19 thought of *Consistency* as more of a terminal goal of RDA cataloging, observing, "So if we all follow RDA, likely different catalogers may provide a very similar description... so that's helpful to achieve bibliographic

consistency.” *Representation*, the valuation of accurately describing resources as they present themselves, was also apparent in the interviews. P19 described this concept as “whether the description seems to be matching the material it is describing” and stressed its importance in RDA. P10 offered a longer explanation of the relationship between RDA and *Representation*:

I noticed too throughout the years that RDA is really about cataloging what's on the actual item, what's verbatim and not what you might know the actual name is, so what's important is what you have in your hand, what's in your possession, what's on that piece.

Other Principles-Based values recognized by catalogers during interviews were *Flexibility*, *Clarity*, and *Continuity*, particularly with AACR2.

Even more commonly observed during interviews were values from the User Needs category. In fact, each of the 20 participants expressed at least one User Needs value during their interviews. The general *User Needs* value was mentioned by 11 participants; its presentation in interviews was similar to in RDA in that it often took the form of being helpful to a user in some unspecified way. P1 provided a very typical quote: “I feel like RDA emphasizes providing useful information for the user.” Specific user task values presented somewhat differently during interviews, particularly the most commonly observed value in interviews, *Access*, which appeared in 19 out of 20 interviews. *Access* was explicitly mentioned by participants frequently, for example, in P11’s explanation of RDA: “It's about describing resources, and using that description to enhance access.” However, *Access* was framed in less explicit ways during interviews as well, occasionally using terminology associated with more specific user tasks. This can be seen later in P11’s interview, when he explained, “We want people to be able to find

stuff.” Though *Find* is a specific user task value noted in RDA, the quote from P11 was not specific enough to be taken as the formal *Find* code; use of the word “find” was not enough to signify the formal user task. For this quote and others like it, I coded the *Access* value, recognizing that it expresses a connection between users and resources but in a non-descript manner. Only when tasks were formally identified by participants was it taken to mean a more specific user task value. The *Find* and *Identify* values were coded to the following explanation from P16, for example: “[RDA] gives us a framework for describing anything in a way that any person should be able to find, identify or other important tasks.”

Participants’ expressions of Usage values were limited to two kinds: *Users* and *Agents*. It is notable that these are the two Usage values associated with persons; participants did not observe the valuation of usage from written sources (*Preferred Source*, *Relevant Works*, *Scholarly Works*) when speaking generally of RDA. Five participants expressed RDA’s valuation of *Users* usage, that is, preferring forms of name used by end user of catalog data. This was well-put by P4, a cataloger focused solely on authorities work:

And again the goal is to have a name that is most likely to be familiar to people looking for this person. That's what the access is all about, it's not about following an arcane set of rules to get something catalogers will recognize as right, it's about following the rules that are deeply cognizant of cultural and scholarly convention and practice, to get a name that most people will be able to find.

Agents usage, on the other hand, values the form of name used by the person or group that is

being described. In referring to cataloging corporate bodies, P15 described it thus, “It’s part of like their philosophy in RDA for, and NACO too, for determining the preferred form of name, is that you are really trying to go for how the body presents itself.”

Only one value from the Logistics group was observed during interviews, but it was expressed by four participants. *Completeness* was seen as an important aspect of RDA by these catalogers, and in some instances, was equated with overall quality. For example, P19 thought of *Completeness* as one of the key indicators of quality RDA cataloging, and operationalized it as “how many fields there are,” referring to the fact that RDA records require the use of more MARC fields in encoding than previous bibliographic standards. In fact, *Completeness* in RDA was typically viewed in relation to the preceding bibliographic standards and practices in this way. This can even be seen in a quote from P7, a cataloger who was never trained on AACR2:

I would say that RDA is about describing resources in a way that's based on the presentation of information given in the resource, and that also is not, and that also includes more information than say could be contained on a catalog card.

Though the Logistics value of *Conciseness* was observed more frequently than *Completeness* throughout the text of RDA, it was not mentioned by interview participants.

Time, Space, & Culture values were less commonly observed during interviews. Participants did not express any values related to time (*Earliest, Recency*), and of the other four, only *English Language* and *Western Culture* were noted, and not the opposing values of *Originating Language* or *Internationality*. Two participants felt that the English language was valued by RDA; these two participants are both heavily focused on non-English materials

cataloging. P2 performs authority work for names in a number of languages, and felt that the entire conception of naming and language in RDA focused on English. P9 was critical of the valuation of English he noticed in RDA instructions concerning manifestation data, particularly in the examples, explaining, “We catalog a lot of languages and publication types and every country had different conventions. This illustrates, as do all the chapters, in their examples, how Anglo-centric RDA is.” P9 was also the participant who noted a valuation of *Western Culture* in RDA. He was similarly critical of this, viewing it as an unfair bias in perspective that limited the useful application of the standard. He concluded his thoughts on the matter with the following: “RDA was essentially written for a narrow... and by a narrow set of people in the United States who work with a narrow collection.”

Though *Institutional Preference* was the exceedingly more common Choice value observed within the text of RDA, interviewees did not mention this value at all. Instead, five of them felt *Cataloger Judgment* to be of importance in RDA. In discussing *Cataloger Judgment*, the participants framed it as the need to interpret and perhaps even bend the rules. P14, a special collections cataloger with 25 years of experience, equated the concept with subjectivity in cataloging, explaining:

Well I think that's one of those parts of cataloging that's very subjective. So we say we are a library science but we are really a very subjective field. And so that to me says you have the right and the responsibility to make sure you are describing whatever is important in your instance, in your place.

Perhaps due to its subjective nature, *Cataloger Judgment* was not universally appreciated by the participants who recognized its importance. While P12 recognized *Cataloger Judgment* to be prominent throughout RDA, she felt that catalogers would prefer more prescription and less judgment points. P17, a cataloger and adjunct professor, supported the role of *Cataloger Judgment* in RDA, but expressed an understanding of why other catalogers might not feel this way:

...so catalogers, a lot of catalogers, this is what I have found in my days of doing instruction to practicing catalogers, that there is a good solid, third maybe, of our profession who really really want very black and white, cut and dry, this is the answer, type of pattern. And I think this type of instruction that would frustrate them to no end, because it leaves it very open for you as to make decisions as to what works best.

5.2.3 Comparing Participants and RDA on Previously Elicited Values

Together, interview participants expressed a total of 19 previously elicited values concerning RDA and RDA cataloging, with each of the 7 previously developed value categories receiving representation. Of these values, *Access* and *User Needs* were mentioned the most. Including the next two most commonly expressed values, *Cataloger Judgment* and *User usage*, it's worthwhile noting that participants focused the most on values associated with people (end users and catalogers). In their interviews, catalogers did not always refer directly to RDA as a standard, but often to the RDA cataloging process itself, or even more simply, cataloging. Furthermore, they did not always clearly distinguish among these concepts, often referring to

them together as one. Another ambiguous distinction in interviews was whether catalogers saw RDA as valuing something, or they valued this thing about RDA. These fuzzier distinctions hold implications for the ways in which values are involved in the enactment of standards; consideration of this will be taken up further in the following chapter.

In comparing the results of participant interviews to the Phase 1 content analysis of RDA, participants spoke more frequently of values associated with the Principles-Based and User Needs categories. This reflects the predominance of values from these categories elicited from the text of RDA during Phase 1. Important differences in value expression, however, are already apparent, many of which seem to stem from catalogers conceptualizing values at a higher level and not distinctly operationalizing them to the extent present in the text of RDA. For example, the text of RDA shows valuation of *Access*, but values distinct user tasks such as *Identification* and *Selection* more frequently. Almost every participant (19 out of 20) mentioned *Access* as a priority associated with RDA, but very few mentioned individual tasks by name; *Find* and *Selection* were the most common, having been mentioned by two catalogers each.

Another emerging trend in comparing Phase 1 and Phase 2 results shows that specific cataloging work may play a role in the recognition of values in RDA. Of the 20 participants, only 2 were focused exclusively on non-English materials in their jobs. Both of these catalogers found and were critical of the *English Language* value in the text of RDA. One of these participants also spoke similarly concerning a *Western Culture* value. These values may have become more prominent and noticeable to them based on the nature of their cataloging work. Beyond this, some results suggest that personal values may also play a role in how values in RDA are recognized and enacted. Though the value of *Cataloger Judgment* is mentioned explicitly in the text of RDA rather infrequently, this was the third most common value mentioned by

participants. Some participants expressed strong personal opinions concerning the role of judgment in cataloging, which may play a part in them recognizing *Cataloger Judgment* as an important value throughout RDA.

5.2.4 Discussion

During interviews, participants together recognized 19 out of the 39 values that had previously been elicited during content analysis. Of the values they mentioned, those of the User Needs category were particularly prominent. Seven out of the eight values in this category were recognized by one or more participants, with the values of *User Needs* and *Access* being the two most recognized during the interviews (11 and 19 participants, respectively). These findings suggest that catalogers may be particularly sensitive to values in RDA concerning the needs of users, and offer further evidence of *Access* functioning as a final value. As in the content analysis phase, however, the meaning of *Access* as used by participants was unclear. Participants spoke of specific, FRBR-inspired tasks much less frequently than the general, rarely qualified concept of *Access*. The functional definition determined during content analysis (i.e., any connection between users, resources, and resource metadata) was again applicable here, and used to help parse the meanings of participants' otherwise vague comments on the matter. Another example of catalogers being particularly sensitive to user-based values can be seen in their comments on Usage category values: participants only spoke of *User* and *Agents* usage, the only two kinds of usage associated with persons rather than resources.

In further comparing value expressions of the participants with the results of formal value analysis of RDA, there is evidence that the preceding bibliographic standard, AACR2, may play a role in how catalogers recognize and respond to values. The most apparent example of this

concerns the Logistics values of *Completeness* and *Conciseness*, which prioritize the most comprehensive metadata or the briefest, respectively. While four participants recognized *Completeness* as a value associated with RDA, none of the participants spoke of *Conciseness*. The results of the formal value analysis of RDA, however, found *Conciseness* to be explicitly valued in the text far more than *Completeness*, 126 occurrences to 38. Participant tendency to perceive *Completeness* as more important may be a manifestation of catalogers conceptualizing RDA in comparison to the prior standard AACR2; inductive analysis of the interviews showed that catalogers found RDA to be characterized by fuller, less abbreviated data than AACR2. This suggests the importance of AACR2's role in value formation, and the potential interaction among multiple standards in cataloger recognition and enactment of values. It's possible that expected values were ingrained in some catalogers through previous experience with prior standards such as AACR2, and that the values of these prior standards may affect how they interpret subsequent standards.

Of significant interest within the results was the development of a new value category. The Situational values offer further insight into the role of context in value perception. The *Ease of Use* value in particular shows the importance of individual cataloger perspective in value recognition. Whether the document as a whole or a specific passage supported *Ease of Use* was a subjective decision that varied among the catalogers and may be affected by their past and present work experience. There is some evidence that individual perspectives influenced the perception of non-Situational values as well. For example, *Cataloger Judgment* was rarely explicit in the text, but was understood by five of the participants as a key value in RDA; this discrepancy may be an example of catalogers seeing their own perspective within the standard.

Findings concerning the *English Language* and *Western Culture* offer further support of the effects of individual context and perspective on perceived values.

Other Situational values reflect the context of the larger, practical realities of working with bibliographic data for real resources in real collections. Seeing the value of *Efficiency* in RDA may be subjective in much the same way that seeing *Ease of Use* is. Whether or not this value is perceived may depend on the type of work, work load, and overall expectations of the individual cataloger's position. In seeing *Collation*, catalogers move beyond RDA's typical one-by-one approach and begin to find support for the effective arrangement of their institutional collections within the standard. While the text of RDA is similarly silent on the matter of *Cooperation*, participants recognized this as an important practical aspect of cataloging supported by RDA's instructions. Together, Situational values such as these show that catalogers see and interpret values through the lens of the larger environment in which their work is taking place. Additional Situational values, such as the "beyond final" values of *Education* and *Research*, offer further support for this.

Overall, findings from the value analysis of the interviews show that while catalogers recognized many of the values elicited during formal content analysis, they were particularly focused on those associated with users and their perspectives. At the same time, the emergence of a new category of Situational values revealed the importance of context in cataloger value perceptions associated with RDA, a finding further supported by other discrepancies in value elicitation between content analysis and interviews. While the general findings here begin to suggest differing value systems among catalogers and cataloging standards, a more in-depth examination of several passages of RDA presented in the following section further explore this emerging implication.

5.3 Comparison of Values on Selected RDA Passages

In this section, I present the results of a comparative value analysis utilizing content analysis data collected in Phase 1 and value analysis of the three excerpts provided during Phase 2 interviews; this interview data was not included in the previous section. While the previous section of results enabled high-level comparisons between formal values elicitation and the perspectives of catalogers, results presented here are intended to make more direct comparisons. Data highlighted here serves to put Phase 1 value analysis in context while offering specific examples of how catalogers perceive, respond to, and enact values in RDA. This further supports RQ1 (What values are expressed in RDA, and to what extent) and RQ2 (How are values in RDA recognized and responded to by practitioners).

Comparison was focused on three specific passages of RDA. These passages were presented to participants during interviews as part of the written protocol given to them prior to their session. Each passage consisted of one continuously numbered sequence of instruction. The protocol contained these three passages, verbatim, and formatted as closely as possible to the original formatting within the RDA Toolkit website, preserving all fonts, colors, and examples. Hyperlinks were indicated through underlined text but were not active links. These specific passages were chosen for several reasons. In attempting to capture a range of topic matter without being overwhelming to participants, I chose passages that focused on differing entities (manifestation, corporate body, person), represented both the main text and appendices, and demonstrated a variety of structural devices. Most importantly, each of these passages was found to express three or more values during Phase 1 content analysis.

Comparisons of elicited values for each of the three passages are given below, followed by a discussion of the major trends observed. While Phase 1 value analysis was conducted on sentence or sentences groups, participants mostly spoke at the passage level. For this reason, presence/absence data is presented below, simply showing whether a value was present or not in a phase of the analysis. The number of times a value occurred during Phase 1 content analysis is not considered here. For interviews, a count is given of the total number of participants who expressed a value at least once during their session; the number of expressions per participant is not considered.

5.3.1 Passage 1: RDA 3.1.4.3

The first passage, **RDA 3.1.4.3**, comes from the third chapter of RDA, a chapter focused on describing carrier aspects of bibliographic manifestations, including physical characteristics and formatting. This passage occurs within the larger section **3.1.4, Manifestations Consisting of More Than One Carrier Type**. The instruction **3.1.4.3** is titled **Recording Predominant Carrier Type and Extent in General Terms**, and is to be applied to manifestations consisting of “many different types of carriers.” It offers specialized instruction concerning three elements of metadata: carrier, extent, and dimensions. The full-text of **RDA 3.1.4.3** is available in the protocol at Appendix F.

During Phase 1 content analysis, three values were elicited from this passage (Figure 34). *Prominence*, a value from the Logistics category prioritizing prominent or predominant information, was coded to the first sentence in the passage due to an explicit prioritization of “the predominant carrier type.” Codes for the specific User Needs values *Identification* and *Selection* were used for the subsequent instruction, “Record details of the pieces in a note if considered

important for identification or selection (see 3.21.2.3).” No values were elicited from the optional passages or examples. Overall value analysis of this passage showed that predominant carrier types were prioritized, while further details were contingent upon the importance of specific user tasks.

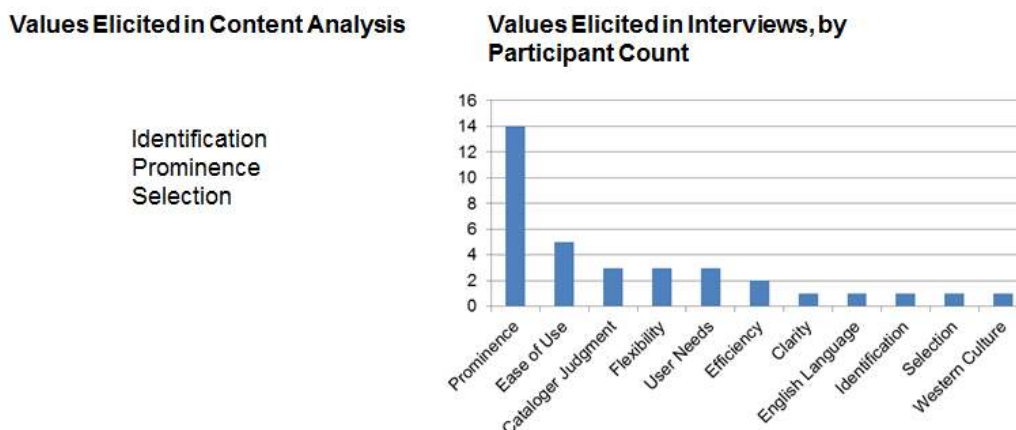


Figure 34. Comparison of values elicited for RDA 3.1.4.3.

In the interview data concerning this passage, *Prominence* was coded in the responses of 14 out of 20 participants. Many participants focused on the word “predominant” within the instructions and used this or a similar term in their explanation. For example, P12 explained, “Well I think its emphasizing picking out the dominant material type rather than being too specific.” Some participants found the focus on *Prominence* to be problematic. P17 was particularly critical of this: “And so choosing to omit other carrier types in favor of the one that is deemed to be predominant is something where, I don't know that this would fully [support] Ranganathan's Laws of Library Science.” *Identification* was indicated as a priority by one participant (P13), as was *Selection* (P6). Three other participants, however, expressed the higher-level, more general value of *User Needs*.

Participants mentioned a number of other values in discussing this passage that were not elicited during content analysis of the text. Most apparent are the values *Ease of Use* and *Efficiency*, which, as values from the Situational category, were only elicited from the interviews. Comments concerning *Ease of Use* were focused on the option to omit numbering. P20 saw this option as a way to make things easier for the cataloger: “You can leave out the numbering if it’s too difficult to determine.” Five participants found *Cataloger Judgment* to be prioritized within this passage, though as with previous findings concerning this value, participants did not necessarily view its presence positively. P15 explained, “There are a lot of people who really like to list all the things, and so this really can create a lot of tension for people in trying to, because it's cataloger's judgment...” A participant who works with non-English materials (P9) also found and was critical of *English Language* and *Western Culture* values in this passage.

5.3.2 Passage 2: RDA 11.2.2.5

The second passage presented to participants, **RDA 11.2.2.5**, comes from the eleventh chapter of the document. This chapter falls within a section of RDA devoted to describing FRBR “Type 2” entities; Chapter 11 specifically focuses on naming and describing corporate bodies. The particular passage considered here comes from the section of Chapter 11 covering the determination of a preferred form of name for a corporate body. Instruction **11.2.2.5, Different Forms of the Same Name**, provides guidance concerning the selection of a preferred name when multiple variations exist. It is focused solely on the preferred name element. The full-text of **RDA 11.2.2.5** is available in the protocol at Appendix F.

A total of six values were elicited from this passage during Phase 1 content analysis (Figure 35). These included the Logistics values of *Conciseness* and *Formality*, the Usage values

of *Usage*, *Preferred Source*, and *Scholarly Sources*, and the Principles-Based value *Differentiation*. One reason for the number of values elicited from this passage is the reliance on *If Then* structures: a sequence of four *If Then* clauses guides the cataloger through various options in order of preference. The *Preferred Source* of information is initially prescribed as the most important consideration, though if this does not resolve the instruction, *Formality* is next considered: “If variant forms of the name appear in the preferred source of information, choose the form of the name that is presented formally.” This continues on, with *Conciseness* and then *Reference Sources* receiving consideration in that order. At the same time, *Differentiation* is also valued within the passage, with the warning that the chosen form of name “must be sufficiently specific to differentiate the body from others.”

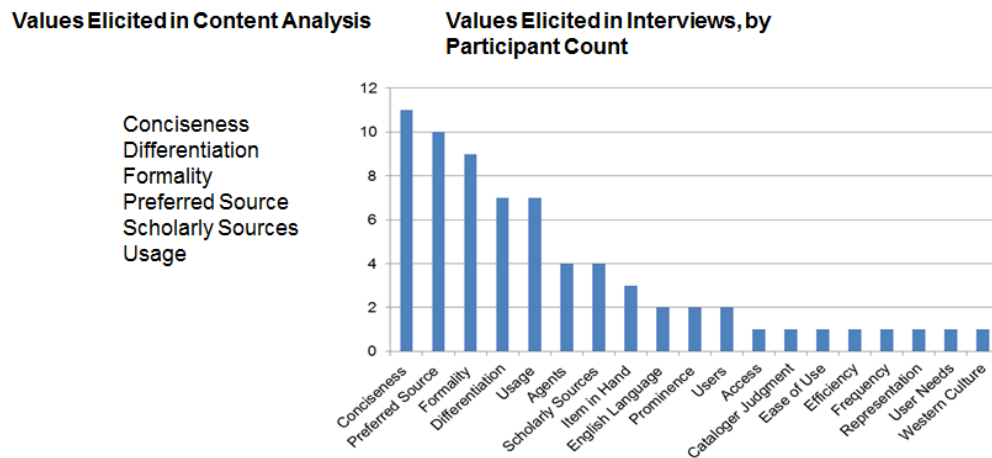


Figure 35. Comparison of values elicited for RDA 11.2.2.5.

In their explanations of meaning and prioritization in this passage, participants recognized these six values as well. Despite the concept appearing later in the overall passage, *Conciseness* was the value most commonly recognized by participants, with 11 of them mentioning it. In doing so, several of them framed *Conciseness* as the overarching, most

important priority. P13 put it simply, “The priority seems to be the brief forms.” Several participants found the prioritization of *Conciseness* to be unjustified or arbitrary. P1, an experienced serials cataloger, offered the following thoughts:

I've always found it interesting that if we have nothing in the preferred source, nothing presented formally, and all the forms are presented the same we choose the brief form. I find that very very interesting. What that says about the assumptions we're making about our users. As I've said before, we have to arbitrarily say, if it's six of one half dozen of another, pick one this way. It's interesting to me that RDA fell on that side. That's taken some adjusting.

Beyond *Conciseness*, participants recognized that various other priorities were in play in this passage. Some, like P12, laid out the relationship among these priorities. She explained:

This passage is about how to select the preferred term for a corporate body, and start with what the preferred place to look, and to choose a formal name, but also a brief name, and to look in a reference source if you need to differentiate, and especially about recording variant names if making an authority.

Thus, other values, including *Preferred Source*, *Formality*, *Reference Sources*, and *Differentiation* were seen by P12 and others.

As with the first passage, catalogers expressed a number of values here that were not elicited during the Phase 1 content analysis. Four participants felt the *Agents* usage, how an

entity uses its own name, was an underlying priority within **RDA 11.2.2.5**. This can be seen in P14's response:

I think what's emphasized here is what is the name that the company formally has out there as what they want to call themselves, as opposed to what is on the piece, which in the past has been the most important thing.

Here, P14 saw the greater body of evidence consulted in **RDA 11.2.2.5** to be reflective of the corporate body's overall intentions. Another kind of usage, that of *Users*, was noted by two of the participants. P15 also found *Agents* usage to be most important in this passage, but following that was consideration of *Users*: "That's sort of first, and then second, and sometimes competing importance, is how can people find this. Is that form of name useful for patrons and how they're going to look for it and conceive of it?" The two catalogers who focused on non-English materials, P2 and P9, again recognized a bias towards *English Language* and *Western Culture* in this passage.

5.3.3 Passage 3: RDA F.1.1.2

The final passage participants were asked about was **RDA F.1.1.2**. Unlike the previous two passages, this came from the appendices rather than the main instructions. Appendix F, Additional Instructions on Names of Persons, is meant to be used in conjunction with Chapter 9, Identifying Persons, and contains additional guidance concerning names in various languages and scripts. **F.1.1.2** occurs within a section devoted to names in the Arabic alphabet; titled **First Element**, it addresses Arabic script names made of multiple parts, and offers guidance on how to choose the first part for filing purposes. It is a brief passage with implications for two metadata

elements: preferred name and variant name. The full-text of **RDA F.1.1.2** is available in the protocol at Appendix F.

Despite its brevity, this passage was found to contain five different values during Phase 1 content analysis (Figure 36). *Scholarly Sources* stood out as a clear value within this passage; the first instruction here advises the cataloger to consult a reference source to determine the correct order for a name. If this does not resolve the instruction, the cataloger is advised to always record the first part they see as the first portion of the name, a prescription that prioritizes *Consistency*. Further instruction concerning variant names tells the cataloger to record other orderings of the name if someone might reasonably search that way (*Users* usage), and other transliterations “if considered important for identification or access” (*Identification*, *Access*).

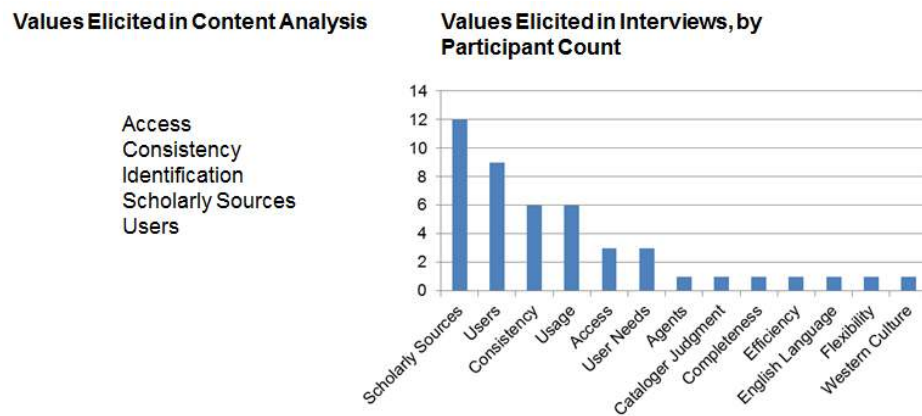


Figure 36. Comparison of values elicited for RDA F.1.1.2.

Four of the five values elicited from this passage in Phase 1 were also recognized by participants. The *Scholarly Sources* value was particularly common in their responses, having been mentioned by 12 of the 20 participants. P4, who works exclusively with authority data, agreed with the emphasis placed on external references, explaining:

Arabic names are really really hard to determine the form just by examination and a knowledge of rules, that in the end there's so much convention and practice in the naming of prominent Arabic name forms that you've got to look them up, which is why I was reassured to see that you determine this from reference sources, basically they are saying you can't tell just looking at an Arabic name the right way to handle it is.

Several of the participants commented on the relationship between *Scholarly Sources* and *Consistency* here, summarizing in a manner similar to P12, "...if you find it in a reference source, good, if you don't, just put it down as it's found."

As with the second passage, participants found *Users* and *Agents* usage prioritized, as well as *Cataloger Judgment*, among a number of other values. While *Access* was noted by three participants, none mentioned *Identification* explicitly. Rather, three other participants noted the higher-level value of *User Needs*. P9 was doubtful, however, that this passage carried out on the ostensible focus on the needs of users, summarizing:

I think it's sort of attempting to use language that says do what is most user friendly and serves researchers who are going to use the materials. I think that's the spirit of what they're writing but otherwise it's just convoluted as to what they want you to do.

P2, who routinely works with Arabic materials and names, again saw *English Language* and

Western Culture receiving undue emphasis within this passage.

5.3.4 Discussion

Results of this comparative analysis provide evidence that values seen in the content analysis of RDA are also recognized by practicing catalogers. In each of the three sample passages, systems of values elicited from participants' descriptions strongly overlapped with the set of values I found during content analysis. This suggests the presence of some highly recognizable prioritizations within this standard. Beyond this trend, however, participants recognized a larger array of values within these passages. Details concerning this finding illustrate important differences between the two sets of data, with implications for how standards are interpreted and enacted in real-life situations.

In all three passages, participants recognized and expressed more values connected with people and their perspectives than was recognized during formal content analysis. *Cataloger Judgment* and *User Needs* were seen in all three passages by multiple participants, but were not elicited by content analysis. Similarly, *Agents* usage was seen by participants in **11.2.2.5** and **F.1.1.2**, with *Users* usage being found in **F.1.1.2** as well. Each of these values is closely tied to a person, whether that is the creator of content, the cataloger, or the end user. As catalogers generally found an emphasis on judgement to be a defining feature of RDA in comparison to AACR2, their recognition of its implicit presence in many rules may be expected to a certain extent. While a reliance on their judgment was personally divisive among the participants, they understood it to be something of value in the text. Values such as *User Needs*, *Users* usage, and *Agents* usage all share a concern with the perspectives and intentions of other people or groups; in identifying such values in these passages, catalogers showed a sensitivity to the needs and

views of others. Overall, these findings suggest that catalogers may be particularly responsive to the human aspects of their work, and see these as valued in ways that the text of RDA does not communicate as directly.

Overlapping to some extent with that finding was the presence of contextually-oriented values within participant interpretations of the three passages. Prominent among these were the Situational values, values elicited only from interview participants and thus thought to represent specific aspects of their working environments. *Efficiency* was found to be important by at least one cataloger for all three of the passages, while *Ease of Use* was the second most commonly reported value for the first passage, **3.1.4.3**. Catalogers may be more likely to recognize these values based on the specifics of their past or present working conditions. Stronger evidence of this trend can be found with the *English Language* and *Western Culture* values. Neither of these values was found during formal content analysis of the three passages considered here, nor did most participants note these. Only the two participants who work routinely with non-English materials were aware of one or both of these values in all three passages. This suggests that some values may be recognized or considered only in very specific situations, and thus, that value perception in standards bears a strong contextual element.

There was some evidence that catalogers recognize and conceptualize values at a higher, less granular level than was done during the formal value analysis of the text. This was particularly apparent in participant responses concerning the first passage, **RDA 3.1.4.3**. While the specific user task values of *Identification* and *Selection* are explicitly mentioned in the text, participants were more likely to express the generic value of *User Needs*. Catalogers may see and address the various user tasks as one generic concept of value, as opposed to breaking them

down into their respective FRBR conceptualizations. This raises further questions about how catalogers understand and accommodate for how users interact with bibliographic metadata.

Rather unexpectedly, findings here also shed light on the communicative, rhetorical structures employed by RDA and their effects. Most notably, participants commented on the sequence of *If Then* statements utilized in RDA **11.2.2.5**. While the earlier structural content analysis performed in this study analyzed each of these statements independently, catalogers saw these statements as one unit intended to present a variety of alternatives in order of the acceptableness. Certain structures may thus work together at a broader level to impress values in a particular way on the cataloger. In reviewing these three passages, several catalogers were also keenly aware of the typographical conventions in use. P6, for example, when asked to explain prioritization in **3.1.4.3**, explained that bolded font, italics, and color shading all played a role in helping him identify what was important. While different individuals may respond differently to such conventions, this does provide some evidence that recurring typographical patterns effect how users understand the text of standards.

While content analysis and interviews showed similar value profiles for each of the three passages, the greater variety of values in interview data shows a range of interpretations exist among practitioners in the field. Notable within this range of interpretation were several important trends: the tendency for catalogers to humanize and add their own contexts to the standard, the higher level conceptualization of certain values, and the role of structural and typographical conventions in apprehension. All of these factors had bearing on which values catalogers perceived in the three passages presented here.

5.4 Summary

This chapter presented results of research conducted as part of Phase 2 of the present study, including inductive analysis and value analysis of interviews with 20 RDA catalogers. Results of the inductive analysis revealed eight major themes which helped provide further context for the catalogers, their backgrounds, settings, and responsibilities. Overall, participants were an experienced group of catalogers, many of whom had undergone NACO authority training, worked in academic settings, and consulted the text of RDA on a routine basis. While most of the participants viewed access as a primary institutional goal which their work supported, the purpose of this access varied depending on setting, sometimes facilitating larger goals such as education or research. While catalogers tended to view the relationship between RDA and access positively, they were more critical of other aspects of the standard, particularly its language. Overall, results of the inductive analysis help contextualize subsequent findings concerning the value perceptions of the 20 participants in relation to RDA. While exploration of the inductive analysis results supports generalizability, it also highlights some of the limitations of the present study.

A value analysis of the interview data focused specifically on the values participants expressed in connection with RDA and RDA cataloging. A significant finding of this analysis was the development of a new value category, Situational values. The six values contained in this category had no direct counterparts in the formal content analysis, and are seen to reflect the personal and practical settings and perspectives of the catalogers. As the name of the category suggests, apprehension of these values in RDA may vary depending on the context of the individual cataloger. Participants also mentioned 19 out of the 39 values previously elicited from content analysis, with a heavy focus on User Needs values, especially *Access*. Apprehension of

these values appears to be impacted by cataloger context as well. Overall, findings offered a first glimpse into cataloger perceptions of values in RDA, and began to suggest the presence of differing value systems between the catalogers and this standard.

A comparative value analysis further honed in on these differences, comparing results of my value analysis of the text of RDA with the perspectives of the catalogers for three specific passages. While these passages reflected varying aspects of RDA, each of the three was found to express numerous values in Phase 1 content analysis. Overall, the combined results of the catalogers strongly reflected the main values I had elicited for each of these passages, showing the presence of some commonality of value apprehension. Beyond this, however, individual catalogers differed in important ways. Catalogers working with non-English materials, for example, recognized *English Language* as a value in these passages where others did not. The differences suggest a tendency for catalogers to humanize and add their own working situations to standards, and demonstrate the contextual nature of value apprehension while working with these documents.

Findings in this chapter further develop the frame of values associated with RDA while providing evidence of practitioner perspectives on the values of this standard. As such, these findings support both RQ1 (What values are expressed, and to what extent) and RQ2 (How are values in RDA recognized and responded to by practitioners). In addition, cataloger perspectives also shed unexpected light on RQ3 (How are values communicated by knowledge organization standards). Taken together with the preceding chapter, the data and analysis presented here allow for a thorough consideration of the study's major research questions. A comprehensive exploration is presented in the following Discussion chapter.

CHAPTER 6

DISCUSSION

6.0 Introduction

The present chapter moves beyond the six discrete data presentations of the preceding chapters and offers a broader, synthesizing discussion organized around the three main research questions: What values are expressed, and to what extent, in the text of RDA? How are values in RDA recognized and responded to by practitioners? How are values communicated by standards for knowledge organization? Along the way, findings are placed in the context of previous work and literature, as well as past, current, and future trends. A final discussion then looks past these research questions to explore the wider implications of this study's findings as they relate to values, standards, and the fields of knowledge organization and library and information science.

Discussions in this chapter build off those offered in the two preceding chapters. In Chapter 4, data from the value analysis and structural content analysis of the text of RDA prompted exploration of the standard's asserted and functional values, as well as the systematic, and sometimes idiosyncratic, ways in which it communicates. In Chapter 5, data from the inductive and value analyses of RDA cataloger interviews afforded initial discussions about similarities and differences among the participants and the role of context in interpreting a procedural standard. Together, these discussions provided a first look at the deeper meanings behind the data in regards to this study's goals, and set a foundation for the broader discussions developed in the present chapter.

6.1 RQ1: What values are expressed, and to what extent, in the text of RDA?

The first major research question for this study concerned what values are present in the text of RDA and their relative extents. Values are general beliefs in the preferability of certain end states of existence or ways of behaving (Rokeach, 1968); in short, values are preferences for ways of being and ways of doing. What does it mean for a document such as RDA to have values? As a procedural knowledge organization standard, RDA sets out certain ideals concerning resource descriptions and the resource description process. Through the lens of value theory, these ideals can be seen as expressed through a series of valuations. In placing value on certain concepts, the text of RDA communicates a set of preferences to its users concerning resource description practice. These embedded values thus shape how knowledge organization is carried out here and are worthy of examination.

The first part of this question, what values are present, is addressed most directly with the study's finalized coding frame itself (Figure 37). Developed through value analysis of the text as well as interviews with practicing RDA catalogers, the frame organizes 45 distinct values under 8 larger categories meant to represent commonalities in origin and function among the values. Further consideration of the overall frame is provided here, followed by more detailed discussions concerning the extents, functions, and relationships of the individual values.

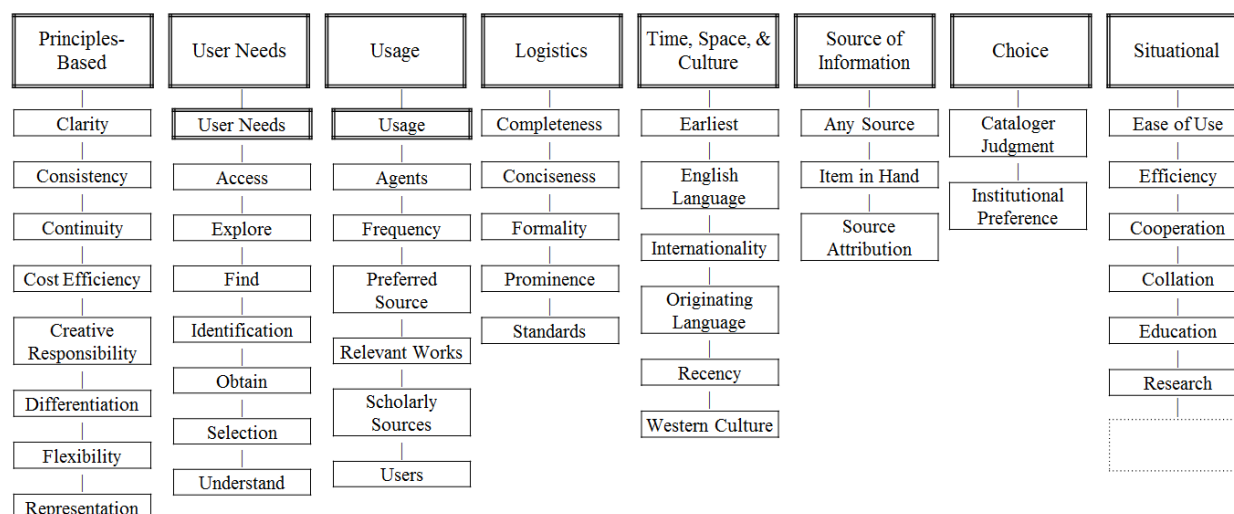


Figure 37. Frame of categories and values associated with RDA.

The first three categories (Principles-Based, User Needs, and Usage) are reflective of the traditional principles of resource description and the asserted objectives and principles within RDA. Both the User Needs and Usage categories feature top level, generic values (*User Needs*, *Usage*) followed by more specific subvalues. The next four categories (Logistics, Time, Space & Culture, Source of Information, and Choice) organize values with common functions relating to aspects of information resources and the description process. Finally, the Situational category contains values perceived by the RDA catalogers strongly tied to contextual aspects of their use of the standard. Six Situational category values are depicted above, but additional, tentative space has also been allotted within the diagram, predicting the existence of further values here. Though participant settings in this study covered a range, they were not exhaustive, and I speculate that further Situational values could be uncovered through exploration of additional settings.

This value frame was created primarily through the use of value analysis. Value analysis is a kind of content analysis focused on eliciting the values expressed in written documents or

other forms of communication (White, 1951). Through this method, the priorities embedded within some content can be brought into focus and distilled into a set of values. In addition to value analysis, however, the perspectives of practicing RDA catalogers were used to develop and refine this frame as well. Most importantly, catalogers were cognizant of specific values within RDA that were not uncovered through traditional value analysis. These Situational values represent priorities within the text that may only be apparent in certain contexts, or to certain persons. More broadly, these values may reflect the contextual nature of standard enactment, and the hermeneutical nature of interacting with written documentation. Beyond Situational values, cataloger interviews also provided further evidence for the categorizations employed in the value frame. Participants spoke of valuation at a less fine-grained level than was employed in the content analysis, particularly concerning User Needs and Usage. For example, rather than articulating specific tasks such as *Find* or *Obtain*, participants referred more generically to “user needs” or “user tasks.” This trend offered additional evidence that, conceptually, it was useful to place such values in the same category.

A common endeavor within values research has been the development of classifications enumerating specific values. While such classifications facilitate research into values, more inductive, contextual approaches to values have purposely eschewed well-established classifications. Given the inductive, exploratory nature of the present study, the frame presented above is not intended to serve as a concrete classification of values for descriptive standards. Rather, it is a frame meant to facilitate the understanding of RDA as developed through this study. While specific and contextual, this frame does offer some generalizable findings concerning knowledge organization, considered further below. Moreover, this frame is not a final answer, but an initial exploration leaving room for further investigation of how RDA’s

values are recognized and played out in specific scenarios. Further considerations undertaken in the succeeding sections add to this exploration, and at the same time allow us to move beyond the question of what values are present, and toward questions of why they exist and what roles they serve.

6.1.1 Value Frequency and Implications

In addressing the second part of this research question, the extent to which values are present in RDA, the conceptualization of “extent” poses certain challenges. At a surface level, extent can be approached through basic frequency counts. In the first phase of research, content analysis yielded counts of valuing statements for all identified values. In the second phase, values associated with RDA expressed by interviewees were best understood through presence/absence coding. Both of these statistics are presented below in Table 36, arranged by content analysis count. These two counts are not directly comparable. When placed side by side, however, they offer an initial, count-based understanding of the extent of values within this standard. While the content analysis counts may serve as the most direct answer to questions of extent, the participant counts highlight the importance of perceived presence in understanding how extensive a particular value may be in practice.

Value	Category	Content Analysis Count	Participant Count
Consistency	Principles-Based	588	4
Clarity	Principles-Based	390	3
Identification	User Needs	381	1
Any Source	Information Sources	243	
Access	User Needs	181	19
Item in Hand	Information Sources	165	1
Representation	Principles-Based	149	4
Differentiation	Principles-Based	143	
Selection	User Needs	142	2
Institutional Preference	Choice	130	
Conciseness	Logistics	126	
English Language	Time, Space, & Culture	111	2
Source Attribution	Information Sources	102	
Originating Language	Time, Space, & Culture	99	
Scholarly sources	Usage	90	
Standards	Logistics	84	
Western Culture	Time, Space, & Culture	67	1
Relevant works	Usage	64	
Prominence	Logistics	62	
Creative Responsibility	Principles-Based	58	
Recency	Time, Space, & Culture	48	
Usage	Usage	39	
Completeness	Logistics	38	4
Agents	Usage	37	1
Earliest	Time, Space, & Culture	30	
User Needs	User Needs	24	11
Find	User Needs	18	2
Preferred source	Usage	15	
Formality	Logistics	12	
Continuity	Principles-Based	11	2
Flexibility	Principles-Based	9	4
Frequency	Usage	9	
Users	Usage	8	5
Understand	User Needs	6	1
Obtain	User Needs	5	
Internationality	Time, Space, & Culture	5	
Cataloger Judgment	Choice	5	5
Cost Efficiency	Principles-Based	2	
Explore	User Needs	1	1
Ease of Use	Situational	0	7
Efficiency	Situational	0	8
Cooperation	Situational	0	7
Collation	Situational	0	6
Education	Situational	0	2
Research	Situational	0	4

Table 36. Extents of values for both research phases.

Content analysis revealed *Consistency* to be the most frequently occurring value within the text of RDA, which is not surprising considering the underlying goal of standards in establishing uniformity (Svenonius, 2000). Beyond this, other commonly appearing values such as *Clarity*, *Identification*, and *Access* are concerned with various aspects of the end user experience, while *Any Source* and *Item in Hand* guide catalogers in selecting from among available sources of bibliographic information. Among the values with the lowest absolute frequencies in RDA were specific user task values including *Understand*, *Obtain*, and *Explore*, along with *Cataloger Judgment* and the asserted values of *Internationality* and *Cost Efficiency*. From the perspective of the catalogers interviewed, frequently occurring values such as *Consistency* and *Clarity* were indeed recognized to be important, though specific user tasks and needs were more commonly understood as generic values such as *Access* and *User Needs*. Catalogers were also more likely to see values associated with users, including catalogers themselves, as more prominent, along with a set of Situational values that had not been elicited during content analysis.

While these numbers are telling concerning the relative presence and extent of various values in RDA, they do not tell the full story. As noted above, frequency counts offer a surface level assessment of the relative extents of these values. Just because a concept is mentioned more frequently, however, does not necessarily mean that it is more important. While sheer frequency does hold implications for importance that cannot be overlooked, several other aspects of value manifestation must be examined, particularly ambiguity and implicitness. These aspects hold additional implications for the extents and importance of individual values, and will be explored here. Similarly, frequency of occurrence does not necessarily mean that a value will be perceived

as extensive or important; the perceived importance of these values will be taken up later in section 6.2 of this document, alongside other considerations of practitioner perspectives.

Ambiguity and implicitness serve as broader themes to consider when examining the presence of values in RDA, and bring further nuance to the basic, count-based approaches to conceptualizing extent. The first of these, ambiguity, refers to the fact that some values within RDA, including some of the most frequently occurring, are undefined or otherwise unclear throughout the text. This means that despite repetition, these values may not be conceptually cohesive enough to have an influential impact. A key example of this is the value *Formality*, which was taken to mean an emphasis on the most formal version of a piece of information. Though mentioned at various times in RDA, “formality” as a concept is never further explained in the main text. A definition for this concept does exist in the Glossary, however, where it is referred to as the prominent, isolated presentation of a piece of information. Confusion concerning this concept was apparent during interviews though, particularly when participants were asked about **RDA 11.2.2.5, Different Forms of the Same Name**. Nine participants recognized *Formality* as an important value within this passage, though only P4 was able to offer some explanation as to what “formal” meant. Another participant, P14, was openly critical about this word and the lack of meaning it carried within the text. *Formality* is a clear example of how ambiguity may weaken the presence of a particular value, and the implications of glossary definitions versus in-text approaches.

Other values remain impactful despite their ambiguity. The primary example of this in RDA is the value of *Access*. In value analysis and interviews, *Access* was taken to refer to a meta-task encompassing any connection between a user, a resource, and its metadata. Like *Formality*, *Access* is mentioned in the text without any actual definition, and is not present in the

Glossary. Unlike *Formality*, however, “access” is in the title of the standard itself, and is one of the most frequently occurring values, particularly in conditional instructions. As demonstrated in the cataloger interviews, *Access* is indeed among the most prominently perceived priorities within the text. It is perhaps assumed within RDA that practitioners come to this document with a prior understanding of what *Access* means. Nevertheless, this approach leaves the interpretation of a critical concept to the variations of individual cataloger understandings. As many conditional instructions hinge on this value, *Access* is thus extensive but susceptible to a range of interpretations and enactments.

Another kind of ambiguity can be seen in the values belonging to the Usage category. These values are manifestations of RDA’s principle of common usage or practice; as was discovered during value analysis, however, “common usage” was found to mean a number of different things in the text, thus necessitating the creation of a cluster of distinct meanings of usage here. While common usage is stated as a clear design principle, it is ambiguous due to this multitude of meanings. It is extensive throughout the text, but fractured across many different operationalizations. The Usage value of *Scholarly Sources*, for example, emphasizes quite a different kind of common usage than that of *Users*. As such, it was found that the text of RDA valued different kinds of usage under different circumstances, and that it was sometimes difficult to ascertain which type of usage the text was referring to. During interviews, catalogers showed similar frustrations in understanding this concept as well, but ultimately felt that *Users* and *Agents* were the most important kinds of usage considered in RDA. These two values, however, were among the least frequently occurring of the Usage values during traditional value analysis of the text. As previously discussed, it’s possible that catalogers are more sensitive to usage as it relates to people rather than resources. Given the ambiguity of the overall concept of “common

usage” in the text, catalogers have the opportunity to construe it in a way that is most meaningful to them. Usage is a much more complex concept than initially presented in the text, though catalogers may draw on previous ideations and values to see it more cohesively and extensively within the standard.

Just as some important values in RDA may be ambiguous, others may also be quite implicit. In fact, it’s possible that some influential values are too implicit in the text of RDA to be fully recognized by the value analysis procedure used in this study. Are there, perhaps, other ways besides repetition in the text that values may be embedded, extensively but at a more subliminal level? While data from the present study may not be able to answer this question fully, results concerning two specific values shed some light on the ways in which values with low frequency counts in the text may yet be influential in other ways.

The first of these values, *Internationality*, is quickly asserted in the opening chapter of the document, and with the exception of a comment in Chapter 2 concerning internationally recognized identifiers, is never explicitly mentioned again. For value analysis, this yields a relatively low overall occurrence. This stood in contrast to valuations of *Western Culture*, which frequently took the form of special consideration of Christian liturgy, offices, and calendars not afforded to other religious traditions. While RDA does make many allowances throughout for non-English languages and some non-Western terminology, it is often accomplished through “othering.” For example, Appendix F contains a collection of considerations of non-English and non-Western names and naming conventions, while rules for English names are given in the main text in Chapter 9. Still, Chapter 9 contains considerations and examples of non-English names and non-Western naming conventions as well. It’s possible that *Internationality* in the text of RDA is less apparent in the individual instructions, serving instead as a broad principle

influencing other aspects of design. A comparative analysis with an openly Anglo-American precursor might further reveal the ways in which RDA offers a more extensive valuation of *Internationality*. This valuation may still be lost on actual practitioners, though. Only two participants brought up issues concerning *Internationality* within the interviews. These catalogers, who focus on non-English materials, felt the bias toward *English Language* and *Western Culture* in the text of RDA remained overwhelming.

The second of these values, *Cataloger Judgment*, is neither asserted as a principle by the text of RDA nor mentioned frequently. Explicit references to this concept were rare: at just five occurrences, it was found through value analysis to be one of the least frequent values. Curiously though, *Cataloger Judgment* was one of the values that interview participants expressed most prominently when discussing RDA. These catalogers recognized conditional instructions and other decision points in the text to be instances where their judgment was being prioritized, occasionally to their dismay. They found the standard to be very reliant upon *Cataloger Judgment* in a way that may be frustrating at times for some. Why, then, did these catalogers not mention *Institutional Preference*, a contrasting value that was far more frequent in the text at 130 occurrences? It's possible that this value is just not as meaningful to them, or that they interpret themselves as an extension of the "institution." *Cataloger Judgment* is a common, well-entrenched concept in bibliographic description (Santamauro & Adams, 2006), and RDA may well have a reputation for being more judgment-based (Hasenyager, 2015). These factors may affect cataloger perceptions of the extent of this value in the text; they may see it in places where traditional value analysis does not. Findings concerning *Cataloger Judgment* show that while a value may not be explicit within the text often, it can still be impactful in more implicit ways.

Frequencies are an important aspect of conceptualizing the relative extents of values in the text of RDA. A count-based approach, however, must be considered with caution. Frequency does not equal importance, and certain values may be emphasized in other meaningful ways. To offer a fuller understanding of the relative importance of values in the texts of standards such as RDA, other considerations including ambiguity and implicitness must be taken into account. Together, these factors provide a more detailed, nuanced account of valuations and their extents within these documents. Even so, frequency, ambiguity, and implicitness do not tell the full story concerning how important a value may be perceived to be. Further considerations from practitioner perspectives will address this in section 6.2.

6.1.2 Functional Relationships among Values

As shown so far, not all values in RDA are of equal importance. Another aspect to their relative importance is their functional relationships. Though value theory has yielded numerous, varying classifications of values, one classificatory view that has become well-established and widely utilized concerns functional roles and relationships. Rather than grouping values by content characteristics, this approach categorizes values across a set of general dimensions, and has thus proven useful in values research across domains. These dimensions include terminality, intrinsicity, conditionality, and essentiality (Orsi, 2015). Though any of these four dimensions could be applied to the values uncovered in the present study, the instrumental/terminal dimension holds particular relevance. Terminal values are those things considered valuable in their own right, and contrast with instrumental values, which are valuable only in that they lead to some other more valuable end. This dimension represents a particularly useful lens for further examining value presence, extent, and purpose, and will be considered in this section.

The instrumental/terminal distinction has been recognized in value theory since the work of Aristotle, and served as the primary division in Rokeach's (1968) influential value framework. Under this distinction, values may be categorized as worthwhile end states (terminal) or modes of behavior that lead to such end states (instrumental). An ultimate or final value is a terminal value that is worth more than all others (Orsi, 2015). In the context of the present study, instrumental values can be seen as valued approaches to knowledge organization, while terminal values represent the valued goals of knowledge organization. Examining the eight major categories of values associated with RDA, some generalizations concerning instrumental/terminal roles can be made. Evidence from the content analysis, the interviews, and the document's own asserted principles statement would suggest the User Needs category to be the final value, or most important terminal value. Other categories, particularly Principles-Based, are useful in that they lead to the fulfilment of User Needs, and may thus be considered instrumental.

For example, *Identification* is a frequently mentioned User Needs value in RDA, and may be seen as one of the terminal goals of RDA's description process: a user identifies the information they were seeking. In order to enable *Identification*, the cataloger adhered to the Principles-Based value of *Representation*: depicting a resource accurately as it presents itself can enable users to make this *Identification*. Thus *Representation* is instrumental, while *Identification* is terminal. Further values may be instrumental in enabling *Representation*, for example, the Source of Information value *Item in Hand*: a cataloger must consult the item itself to accurately represent it. This complete instrumental/terminal chain is depicted in Figure 38, and holds implications for the general roles of the Source of Information, Principles-Based, and User Needs value categories.

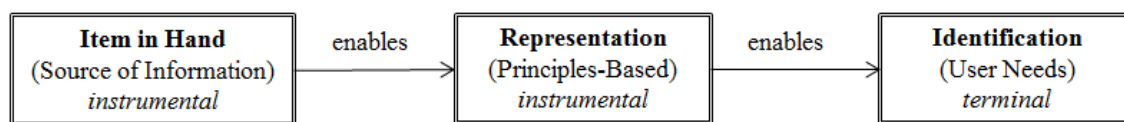


Figure 38. Example instrumental/terminal relationships among values.

Other value categories may also be instrumental in achieving User Needs. Values in the Choice group offer a chance to override basic instructions in order to tailor to User Needs in a specific situation. *Cataloger Judgment*, for example, may be invoked in order to tailor metadata to local users' *Access*. Situational values, on the other hand, may be instrumental in achieving User Needs, or may be terminal values in their own right in some settings, for example, *Education* being a terminal value in academic settings. While such general conclusions can be drawn about the instrumental and terminal natures of the major value categories, stronger evidence exists of more well-defined instrumental/terminal relationships among individual values.

While *Clarity* would appear to be an admirable goal in its own right, in RDA it carries the inherent perspective of the end user: information should be clear to the catalog user. In instances where *Clarity* is valued, bibliographic information is modified or qualified in order to improve user understanding. This value can thus be seen as instrumental in achieving various values in the User Needs category; the value co-occurrence analysis found *Clarity* to be frequently associated with the *Identification* value in particular. Less clear, however, is the functional role of *Representation*, a value that sometimes stands in opposition to *Clarity*. While *Clarity* guides the cataloger to amend or modify information, *Representation* values information as directly

found on the resource, regardless of such information being misleading. It is more complicated, then, to envision *Representation* as instrumental in achieving User Needs, though this may indeed be the case. Though *Representation* lacked a clear co-occurrence pattern with other values, it's possible that it still supports user task processes such as *Identification*, particularly from the perspective of catalogers as opposed to end users. Interview participants indeed stressed the importance of *Representation* when assessing RDA record quality. Still, *Representation* may have moved beyond instrumental purposes and become a terminal value of its own, a purely academic principle adhering to material logistics. For example, other comments from participants concerning the cleanliness and "correctness" of the catalog would suggest *Representation* to be something valued for its own sake. The instrumental/terminal quality of *Representation* may thus be contextual.

Further values in RDA may be instrumental in achieving *Representation* and *Clarity*. As the valuation of information directly from the resource, *Representation* would be impossible without the *Item in Hand* as a source of information, leading to a logical, instrumental relationship from the latter to the former. Though *Clarity* may be supported by a number of other values, co-occurrence data showed a frequent association with *English Language*. In order to attain *Clarity* within a particular element of metadata, supplemental *English Language* terms are often prescribed in RDA. Thus, rather than being a terminal value prioritized for its own sake, *English Language* may act as an instrumental value meant to support *Clarity*, and ultimately, the understanding of the assumed users. While this may show the *English Language* valuation to be justified to some extent within the English translation of RDA, it also reveals significant assumptions within the standard concerning the users and environments of this bibliographic data.

As with *Representation*, other values in RDA may also function as instrumental or terminal depending on the context. The most prominent example of this is *Consistency*, the valuation of uniform data and approaches to description. As a terminal value, *Consistency* represents an idealized end state achieved through standardization. Procedural standards address recurring problems through codified and instantiated responses, thereby bringing practice into uniformity (Moen, 1998). *Consistency* is thus a foundational goal of these documents. Whether or not *Consistency* has an instrumental function, and what other values it may lead to, would depend on the specific standard. In the case of RDA, evidence from value analysis and interviews would suggest that *Consistency* is instrumental in achieving User Needs. Still, its instrumental role is less overt than values such as *Clarity*, and as values in the Choice category demonstrate, uniformity may not be the only or best means of achieving User Needs. Instrumental or terminal, *Consistency* is certainly a valued state of affairs within the context of standards. In RDA, however, data from this study shows that other terminal values may ultimately be more important, particularly *Access*.

As ill-defined as the concept remains in RDA, *Access* may indeed function as the most important, final value of this standard. *Access* represents the valuation of any connection between a user, a resource, and its metadata, and serves as a more generic user need as opposed to the FRBR tasks. At a surface level, its placement in the title of the standard highlights this concept as especially important. Traditional value analysis in this study showed *Access* to be the fifth most frequently valued concept in the text, co-occurring most commonly with conditional statements asking the cataloger to actively consider impacts on end users. In interviews, *Access* was the most recognized value, mentioned by 19 out of 20 participants; the next most recognized, the general *User Needs* value, was mentioned by 11. Beyond the present study, work

concerning values and library and information science has consistently recognized *Access* as a key value (Bates, 1999; American Library Association, 2004; Gorman, 2015; Koehler, 2015). In discussing knowledge organization, Feinberg (2009) even positioned access to information to be the ultimate, underlying value of the field. While there is much evidence to support *Access* as the final value in RDA, its lack of a clear definition within the standard remains problematic. This omission reveals important assumptions about practitioners, and highlights the importance of cataloger education.

Intriguingly, results from this study hinted at the possibility of “beyond final” values associated with RDA, that is, terminal values that *Access* is instrumental in achieving. Interviews with participants in academic or research settings revealed that some catalogers conceptualized other Situational values as being the final value of their work with RDA, particularly *Education* and *Research*. In such settings, the ultimate goal of description is to enable what happens after users are connected with resources. These subsequent activities, which are still user-focused, are possible through the instrumentality of *Access*, in a manner reminiscent of Wilson’s (1968) “exploit” power. The same could not be said of other settings, however, such as public libraries, which serve different purposes. Thus, as the presence of values such as *Education* or *Research* are situational, their roles as “beyond final” values are contextual as well. The importance of such values cannot be fully predicted by a standard serving so many diverse environments, setting up potential value conflicts between a standard and its actual enactment. The more universal, widely applicable a standard is designed to be, the greater the potential for a values gap to exist between what is in the standard and what is in the environments in which it is used. RDA, it should be noted, is perhaps the most widely applicable descriptive standard to date.

Between Situational “beyond final” values, and instrumental values such as *Consistency* and *Representation* that have come to be valued in their own right, is it possible that some values distract from RDA’s hypothetical final value of *Access*? This may indeed be the case for documents with as complicated a value system and diverse a deployment as RDA. Any attempt to create a static classification of value roles in knowledge organization standards would not be fruitful then. As shown here, the functional relationships of values are contextual to a certain extent, and must be assessed in light of the actual enactment setting. Still, overall evidence does suggest that *Access*, however ill-defined, remains the most clear final value offered by the text of RDA.

6.1.3 Summary

Data from this study revealed eight major categories of values associated with RDA, with Principle-Based values and those associated with User Needs being the most frequently occurring throughout the text. Frequency within the text does not necessarily equate to importance however, and additional factors such as ambiguity and implicitness play a role in the presence and extent of values. Functionally, instrumental values in RDA can be seen as valued approaches to knowledge organization, while terminal values represent underlying goals. In general, most values in RDA are subordinate to User Needs values, working instrumentally to achieve more terminal user-related values. *Access* in particular stands out as a final, most prized terminal value. Findings also demonstrated that the instrumentality/terminality of a particular value may be contextual though, and the presence of Situational values suggests that, in specific settings, other values may lay beyond *Access*.

6.2 RQ2: How are values in RDA recognized and responded to by practitioners?

The second major research question for this study asked how values in RDA are recognized by practitioners, and how the practitioners respond to these values. While the first research question focused on the text of the standard and the values embedded in it, the second research question recognizes that standards are more than just documents; they are performances. Thus, this research question was designed to explore how practitioners enact standards and their values, that is, how they instantiate RDA and its values in their attitudes and everyday practice. The answer to this question sheds light on the ways in which the enactment of RDA and its values might diverge from the text in meaningful patterns. Before offering evidence and discussions aimed at addressing these issues, it will be useful to first recapitulate what values were recognized by practitioners in this study.

Through the course of their interviews, participants together recognized 19 out of the 39 values that had been elicited from the text of RDA during traditional value analysis (Table 37). Values from the User Needs category, concerned with generic and specific tasks that users are seeking to accomplish, were particularly prominent in the interview data. Seven out of the eight values in this category were recognized by one or more participants, with the value of *Access* being mentioned by all but one of the participants. Beyond this, catalogers recognized a range of values from other categories such as Principles-Based, Choice, and Usage. Of significant interest, however, was the emergence of a new category of values with no direct counterparts from the content analysis phase of the study.

Value	Category	Participant Count
Access	User Needs	19
User Needs	User Needs	11
Ease of Use	Situational	6
Cataloger Judgment	Choice	5
Users	Usage	5
Completeness	Logistics	4
Consistency	Principles-Based	4
Flexibility	Principles-Based	4
Representation	Principles-Based	4
Collation	Situational	4
Cooperation	Situational	4
Efficiency	Situational	4
Clarity	Principles-Based	3
Research	Situational	3
Continuity	Principles-Based	2
English Language	Time, Space, & Culture	2
Explore	User Needs	2
Find	User Needs	2
Selection	User Needs	2
Item in Hand	Source of Information	1
Agents	Usage	1
Identification	User Needs	1
Understand	User Needs	1
Western Culture	Time, Space, & Culture	1
Education	Situational	1

Table 37. Values recognized by participants.

The Situational category was developed solely through interview data, and organizes values expressed by interview participants thought to reflect contextual aspects of their use of RDA (Table 38). Among these six values, *Ease of Use* and *Efficiency* represent practical, everyday considerations of working with bibliographic standards and data, while *Cooperation* and *Collation* recognize the actual collections and consortia in which bibliographic description takes place. The values of *Education* and *Research* are overarching, institutional goals that are important in some settings. It is speculated that further Situational values associated with RDA could be uncovered through exploration of more diverse implementation settings. Overall, this

category of values reflects the importance of cataloger setting and the role of context in value perception.

Situational Values	Definition
Ease of Use	Ease of use or practicality from the perspective of the standard user/interpreter
Efficiency	Maintaining the efficiency of data capture, from automated means or other sources
Cooperation	Emphasizing the sharing, cooperation, and collaboration among institutions
Collation	Bringing together like resources or metadata concerning them
Education	User learning, education from information resources
Research	Prioritizing research activities of the users

Table 38. Situational values.

As documents, standards are commonly considered dry, serious, and technical, which is a simplistic misconception (Busch, 2000). In the present study, interview results showed that practitioners working with RDA do indeed see this document as packed with meaning, priorities, and perspectives. In short, catalogers do perceive values in the text of this standard. While participants recognized many of the values elicited during formal content analysis, they were particularly focused on those associated with users and their perspectives, as well as more contextual values related to their individual settings. Thus, catalogers' constructions of values associated with RDA are built from both interactions with the text and other, contextual factors.

In fully addressing the second research question, however, it is necessary to move beyond what values catalogers perceived, toward questions of how they perceived them, what they think about them, and what they do about them. Discussion below is thus presented in two sections: value recognitions, and value responses. Though data from this study offers an initial exploration

of the enactment of RDA and its values, it is not able to address this matter comprehensively. Findings here are most revelatory concerning the rationale for enactment from the perspective of value theory. Though actual manifestations of enactment are addressed, this area could be further detailed through future work involving observations and other methods.

6.2.1 Value Recognition

Overall, cataloger recognition of values in RDA was based heavily on the content of the instructions themselves. This is most apparent in the findings from participant analyses of the three RDA excerpts. During their interpretations of these passages, the presence of keywords such as “prominence” and “formality” signaled the valuation of these concepts to catalogers. In each of the three sample passages, systems of values elicited from participants’ descriptions strongly overlapped with the set of values I found during content analysis. This suggests the presence of some highly recognizable prioritizations within this standard, strongly signaled by the presence of certain keywords. The content and wording of instructions inherently makes some values easier to see and reinforce; this is even true when the actual meaning of such keywords are ambiguous, as was the case with “formality.” Catalogers’ understandings of wording and key concepts may also pose a challenge to the perception of values in the text, though. During interviews, participants found the text of RDA to be confusing and unclear, a finding backed up by previous work (Knowlton, 2009; Danskin, 2014). The recognition of values in RDA is tied to cataloger reading comprehension of the text itself, meaning there is the potential that intended values may not be communicated clearly in passages that are more difficult to understand.

In general, catalogers tended to perceive values at a higher conceptual level than was assigned during value analysis of the text, particularly those concerning user activities. While the User Needs value category was found to have eight values, many of which reflected specific FRBR tasks stressed in the text, participants were most aware of *User Needs* and *Access*, the two most general values in this category. In discussing the three excerpts from RDA, participants again tended to recognize *User Needs* and *Access*, even when more specific terminology, such as *Identification*, was used in the passage. Both *User Needs* and *Access* serve as ways of generalizing the tasks that users need to perform with bibliographic metadata. Their repeated recognition of these values shows that participants tend to identify user activities at a higher, more generic conceptual level, rather than breaking them down by individual tasks. Regardless of the terminology used in a specific passage, participants tended to express the values they recognized as *Access* or something similarly general. This tendency to generalize all user tasks recalls P11's explanation of the value of cataloging: "We want people to be able to find stuff."

An important means through which catalogers perceived values in RDA was their sensitivity to user perspectives and needs. General findings from participant interviews showed that the catalogers in this study were most cognizant of User Needs values, particularly *Access*. While these values are indeed stressed in the text, participants perceived them as more important than the more frequently occurring Principles-Based values. This also provides yet further evidence that sheer frequency does not necessarily impress importance. Findings from the participant analyses of the three RDA excerpts further highlighted cataloger sensitivity to user perspectives, with participants noticing User Needs values in the text that were not found in traditional value analysis. In perceiving these values, practitioners may be drawing on an increased sensitivity to user needs that develops through their work as catalogers. This sensitivity

and its effects can also be seen in how the participants perceived Usage values. While types of Usage associated with textual resources were much more common in the text of RDA, participants stressed the importance of *Users* usage, that is, conforming to the usage predicted of actual end users. This again shows that catalogers may see values in RDA somewhat selectively, guided here by their concerns for their anticipated users.

Cataloger sensitivity to their own needs and those of their institutions was another means by which they perceived values in RDA in this study. Given the well-established nature of the concept of “cataloger’s judgment” in education and practice (Santamauro & Adams, 2006) and its frequent association with RDA (Hasenyager, 2015), it is not surprising that participants in this study were acutely aware of the value of *Cataloger Judgment* in the text of this standard. Findings from the interviews showed that they saw this value in places that traditional value analysis did not. They also failed to mention *Institutional Preference* at all, another Choice value that is far more explicit and common in the text. It’s possible that such instances, as well as any choice or judgment points, may be seen as valuations of *Cataloger Judgment* due to catalogers’ perceptions of themselves within the text. Sensitivity to institutional needs may be more related to the perception of other values, though. *Collation*, the valuation of bringing like things together, was perceived in RDA by some catalogers despite its explicit absence from the text. In their apprehension of this value, catalogers may be influenced by the responsibility they feel to their institutions’ collections. Similarly, other Situational values such as *Efficiency* or *Ease of Use* may be related to general workloads and expectations that individual catalogers face in their place of work. When working with standards such as RDA, needs associated with their positions and institutions have bearing on the perception of values.

A number of factors served to mediate how the participants recognized values associated with RDA. The first and perhaps most surprising of these factors was typographical layout in the text of the standard. Font, coloring, and physical layout were found to have unanticipated effects on the recognition of values, particularly during participants' analysis of the three excerpts from RDA. This was most apparent in responses concerning the first passage, **3.1.4.3, Recording Predominant Carrier Type and Extent in General Terms**. Figure 39 presents an excerpt of this passage as it appears in text of RDA.

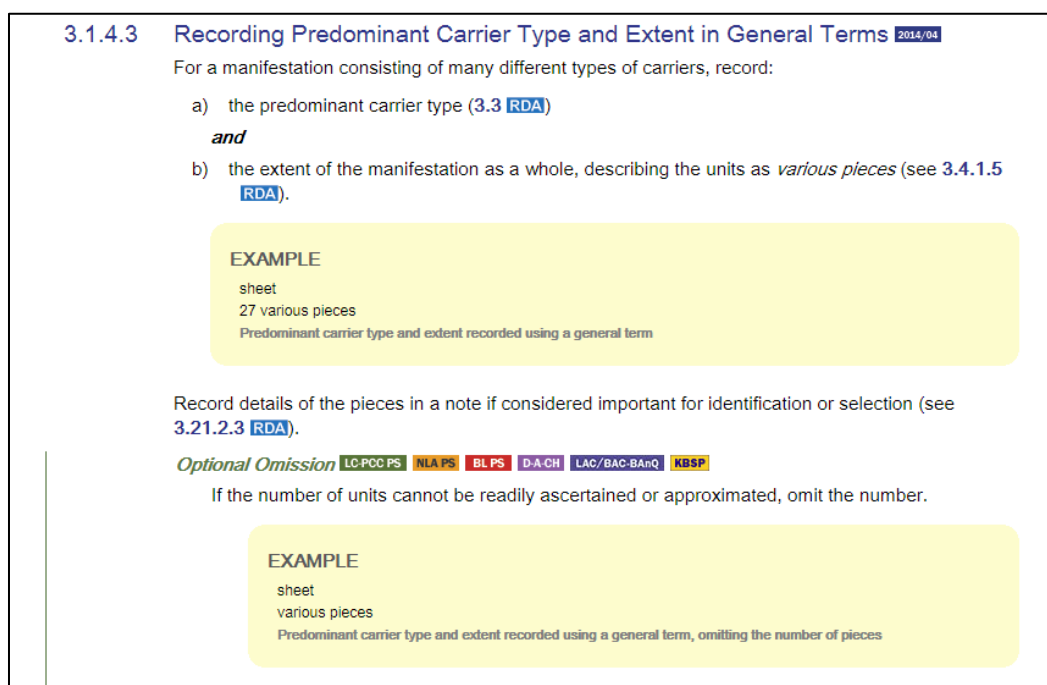


Figure 39. Typographical conventions in RDA 3.1.4.3.

As this figure demonstrates, the text of RDA is characterized by a number of distinct typographical conventions, including bolded and italic font, varying font sizes and colors, indentations, and shadings. Several catalogers noted how these conventions worked to draw their attention to certain terms and phrases. P6 in particular explained that bolded font, italics, and

color shading all played a role in helping him identify what was important in this passage; for example, he felt that textual emphasis on the words “and” and “or” signaled the varying importance of key concepts, as well as his own judgment. While different individuals may respond differently to such conventions, findings from this study provide evidence that recurring typographical patterns effect how practitioners perceive values in the text of standards.

Another, much more expected mediating factor on the recognition of values in this study was participant context. This was clearly demonstrated in findings concerning the *Education* and *Research* values. These particular goals were not mentioned explicitly in the text of RDA, nor were they recognized by the majority of interview participants. However, some participants in academic and research settings did recognize these as terminal values that RDA directly enabled. A cataloger’s working environment may thus effect what values they see within the standards they work with. *Cooperation*, another Situational value, offers further evidence of this. This value was recognized by four participants whose libraries serve important roles in their consortia. As a more universal standard, RDA cannot predict the sharing practices of individual libraries, and thus does not comment on them explicitly. Catalogers may still find values such as *Cooperation* in the text and spirit of the standard though, particularly as cooperative record sharing has been an increasingly important aspect of library cataloging in many countries (Swanekamp, 1998). Findings concerning the *Western Culture* and *English Language* values have perhaps the most significant implications here though. Only participants working with non-English and non-Western materials expressed an awareness of these values in RDA. For many Anglo-American catalogers, these values may be innocuous or difficult to perceive, but as RDA’s implementation base continues to expand on an international scale (Poulter, 2012), these

values and their effects could make this standard problematic for an increasing number of catalogers and collections.

A final mediating factor that will be addressed here concerns the role of previous standards the practitioner has worked with. The primary example in this study was AACR2, the descriptive code that immediately preceded RDA in most Anglo-American cataloging environments. While experience with AACR2 may have affected a number of aspects of participants' current work, one trend of interest here was an increased awareness of values in RDA that contrasted with those associated with AACR2. This can be seen in the contrast between *Completeness*, which participants associated with RDA, and *Conciseness*, which they associated with AACR2. Though traditional value analysis found *Conciseness* to be much more valued in the text of RDA, participants were much more aware of *Completeness* and even described it as a key indicator of RDA record quality. Relationship metadata was similarly described as a key aspect of RDA and its data, serving as both a hallmark and key indicator of quality, likely due to its relative absence from RDA. Differences between the two standards thus had an effect on how important participants perceived some things to be; this was true even for those who had never used AACR2. Though RDA has been found to be more intuitive for new catalogers (Harden, 2012), it is likely that, for now, most catalogers approach this standard with important conceptions about its predecessor. All participants in this study tended to conceptualize RDA in comparison to AACR2; this conceptualization served to highlight the values that participants found to be different between the two.

6.2.2 Value Response and Enactment

Beyond what values catalogers saw in RDA and how they saw them, findings from this study provide evidence on what catalogers think of these values and what they do about them. Despite frustrations with the document's overall style and wording, participants in this study generally agreed to RDA in principle. This seems to stem largely from their appreciation of the standard's valuation of user needs. Participants saw developments in RDA as offering new opportunities for users and increased access, concepts that they valued and worked toward as catalogers. As previously noted, the apprehension of shared values plays a role in how "convincing" a system is to its audience (Feinberg, 2012); in finding values such as *Access* and *User Needs* in RDA, participants saw their own values supported, and were therefore generally "convinced" by this standard. The apprehension of other values the participants thought positively of, including *Representation*, *Completeness*, and *Flexibility*, also played a role in their general agreement with and support of RDA.

Not all perceived values elicited a positive response from participants, however. A key example of this was *Cataloger Judgment*, a value found infrequently by means of traditional value analysis but one that participants were particularly sensitive to. Participants in this study had a mixed reaction to the presence of this value, and while some were appreciative of the principled approach that judgment enables, others worried that the amount of judgment in the text was frustrating for catalogers looking for clear instruction. Responses to *Cataloger Judgment* show that just because catalogers perceive a value in the text as important does not mean that they support it. A less obvious example involved the value of *Flexibility*: the text of RDA intentionally omits examples of the popularly used MARC encoding format from the main instructions. This has been done to highlight RDA's applicability across implementation settings,

and avoid the close coupling that its predecessor, AACR2, developed with the MARC format (Tennant, 2002). Participants in this study had negative reactions to this design choice though, finding it to be one example of where the standard's idealistic values clashed with their practical realities. Instances such as these reveal value conflicts between catalogers and the standard, and may threaten how rhetorically "convincing" the standard is perceived to be (Feinberg, 2012).

For catalogers to agree or disagree with values they find within a standard implies that they have already developed a sense of values associated with their work. Catalogers approach their work with standards such as RDA with an internalized set of values relevant to cataloging that they have developed; their work with standards thus entails a process of values negotiation. Previous work has explored the general values of cataloging and catalogers, and sheds some light on catalogers' internalized value systems. Beghtol (2008) explored ethics in relation to knowledge organization and cataloging, finding access as a core value guiding ethical decisions. In exploring the ethics of library cataloging specifically, Bair (2005) identified influential values including intellectual freedom and service, as well as honesty, integrity, and cultural respect. Ferris (2008) offered a look at the more self-referential values of catalogers, including judgment, the integrity of the catalog, and the practical needs of users. Findings from these works are generally congruent with findings concerning participant value responses in this study. What is currently less clear is where these internalized values are developed. Induction into community values takes place through more than just cataloger interaction with one standard. Education, training, interaction with colleagues, and previous experience may all have an effect on the development of professional values, and thus, on catalogers' value-driven responses to standards as well.

In their practice, catalogers work to enact not only the RDA standard but its values as well. While a full view of their values enactment is not possible with the findings from this study, there are several significant instances that can be explored. The first of these involves the value of *Consistency*, a Principles-Based value prominent in the text and recognized as important by participants in this study. Participant comments in the interviews revealed adherence to RDA's controlled vocabularies as a notable enactment of *Consistency*. This was especially true of relationship metadata. As P4 said, "In order for that relationship to work, often terminology is really important, and using consistent terminology is important." Catalogers saw the value of consistent terminology, and implemented RDA's prescribed vocabularies in order to achieve it. Previous work has examined the use of RDA's controlled vocabularies for relationship designators, finding them to be increasingly utilized in bibliographic records, particularly those indicating work-work relationships (Park & Morrison, 2017). The meanings and operationalizations of these specific terms, however have been called into question (Wallheim, 2016). The valuation of *Consistency* drives catalogers to adhere to such vocabularies where possible, indicating there are significant implications to RDA's controlled vocabularies that should be further investigated.

Another clear example of values enactment noted during interviews concerned the *Representation* value. This is another value from the Principles-Based group, reflecting the valuation of describing resources as they appear, and was recognized by the catalogers in this study as important as well. Participants closely associated this value with RDA, and enacted it by adopting a "take it as you see it" approach; this approach was implicitly in contrast to AACR2's rules, which by comparison prescribed more abbreviations and alterations of source data. In enacting *Representation*, participants recorded information from bibliographic sources with close

adherence to its presentation. This included wording, ordering, punctuation, capitalization, and abbreviation. More broadly, participants like P19 conceptualized *Representation* as how accurate or authentic metadata was in relation to the actual resource. Realizing this *Representation*, then, was a mark of quality in bibliographic metadata for some participants, and beyond being generally perceived as “correct,” was thought to enable a specific kind of identification. In enacting *Representation*, participants felt their cataloging to be more authentic to the resource and to the RDA standard as well.

As with their recognition of values, catalogers were affected by a number of mediating factors in how they reacted to perceived values as well. As was the case with the *Representation* value, AACR2 again played an important role here. Seventeen participants in this study had initially been trained in AACR2 environments and worked regularly with this standard. The three remaining participants still showed awareness of AACR2 and its approach despite never having actually used it. As previously observed, AACR2 remains an influential force on cataloging, even in modern RDA environments. Not only does the contrast between the two standards affect which values catalogers recognize, it also plays a role in which values catalogers realize. As an element of metadata, relationships were not conceptualized as a value in the present study, though it is clear that the participants valued and devoted specific attention to recording them, in part due to their close association with the new RDA approach. The contrast between RDA and AACR2 also led catalogers to recognize *Completeness* as more prominent and important than *Conciseness*. Finding *Completeness* to be a sign of RDA compliance and a departure from AACR2, catalogers may be compelled to provide more complete metadata and records than before, thereby actively enacting this value.

Other mediating factors had less immediate implications for values enactment, but are speculated to be influential nonetheless. One such factor in this study was the role of the Library of Congress and its approach and policies. The Library of Congress serves as a voice of authority in the cataloging community, not just in the United States but worldwide (Swanekamp, 1998). Participants in this study were indeed heavily affected by LC policies and practices. Half of them received RDA training from LC materials, and many still relied on these as supporting documentation in their ongoing work with RDA. Taking part in the various LC cooperative programs places additional stipulations on catalogers and their work. As 15 of the participants were active in the NACO, CONSER, and/or BIBCO programs overseen by LC, the RDA work of these catalogers is being actively guided by a number of LC documents and policies. Participation in such programs places additional restrictions on cataloger activities while also providing another set of potential values to negotiate in accomplishing their work. Adherence to LC documents and programs enables further uniformity and quality in RDA cataloging work, and has influenced the manner in which participants in this study enact RDA. The implications for values are less immediately clear without further value analysis of LC policies and documents.

Finally, institutional setting and work type may also serve as important mediating factors in the enactment of RDA's values. This may be most apparent in Situational values such as *Education*, which, while not explicitly present in the text, are perceived by some catalogers as values associated with the standard. For a cataloger in an academic setting, the accommodation of some user needs related to *Education* may affect the bibliographic data they create, particularly when working with conditional passages in RDA. Different work responsibilities also put catalogers in contact with different portions of the RDA document. Participants who

performed authority work described frequent consultation of the rules; this close interaction with the text may have bearing on the enactment of values specifically associated with those chapters of RDA. Due to some of the more homogenous aspects of the participant group for this study, value enactment differences related to setting and work type are not easily discerned; further environments must be explored to increase understanding here. Regardless, variations in cataloger setting hold implications for the functional set of values that catalogers may be attempting to enact when working with RDA. This echoes previous findings concerning variations in the implementation and enactment of standards related to actual work settings (Kelty, 2008; Millerand & Bowker, 2009; Palme & Pargman, 2009).

6.2.3 Summary

In working with RDA, participants in this study demonstrated that they indeed perceive values associated with this standard. In particular, they were keenly aware of values related to user needs and activities, as well as values related to their respective contexts. Beyond this, important trends were observed relating to how they recognize values and how they respond to them through their attitudes and everyday practices. Perception of values was strongly tied to textual content in the standard, though participants tended to express these values at a more conceptual, generic level than was found in the text. In perceiving values, the catalogers drew on their sensitivity to user needs, as well as their own needs and those of their institutions. Value recognition was mediated by a number of factors, however, including setting, experience with previous standards, and typography. Participants agreed with the major values they perceived, thus finding the standard to be rhetorically convincing. They did not agree with all perceived values though, and worked to negotiate RDA's values with other functional values in their

practice. Their enactment of RDA's values saw participants complying with specific controlled vocabularies and recording bibliographic data with close adherence to its physical presentation. Values enactment was again mediated by previous and current professional experiences. Findings from this study shed light on how practitioners instantiate RDA and its values, though further work is needed to more fully understand the range of values enactment as well as other sources of participants' understandings of values.

6.3 RQ3: How are values communicated by standards for knowledge organization?

The final major research question for this study sought to examine the mechanisms by which knowledge organization standards communicate values, through an examination of RDA. While the first research question revealed the ways in which content in RDA expresses values and the second provided an understanding of how practitioners perceive these values, the third research question attempts to move beyond specific content and examine the ways in which generic conventions may be related to value expression. Inspired by rhetorical/genre studies, this line of inquiry positions RDA as an instance of the genre of knowledge organization standards, with findings providing further, more generalizable information on how values are embedded in such documents. While a number of approaches may be used here, within the present study this was accomplished through examination of common rhetorical and communicative structures in the text of RDA.

Through a content analysis specifically focused on these structures, the text of RDA was found to communicate through 18 different structural conventions (Table 39). Code development here was guided by the perceived rhetorical force and function of commonly recurring structures in the text; the coding process itself relied upon the presence of certain keywords, typographical

conventions, and physical layouts to distinguish among the structures. Together, these 18 structures show that RDA can be seen to communicate through a small, well-defined set of conventions. Though analysis treated these structures as distinct, important similarities were noted among some, particularly directives (*Do/Must/Should, Do Not, May*) and conditionals (*If Then, If Important, If Possible*). Overall, *Do/Must/Should* structures were found to be the most commonly employed within the text.

Structure	Count
Do/Must/Should	2407
Internal Reference	2108
Example	1712
If Then	1385
Commentary	1044
If Important	338
Do Not	249
Exception	133
Alternative	127
External Reference	113
Option	86
Choice List	79
Deleted	76
Priority List	69
If Possible	49
Footnotes	46
To Be Developed	18
May	17

Table 39. Absolute frequencies of structures in RDA.

With these structures defined and enumerated, further analysis was aimed at examining the relationships between structures and value expression. Structural content analysis data was combined with the value analysis data for the text of RDA. Structure and value co-occurrences were then reviewed for major trends. Table 40 provides a brief summary of the more common

co-occurrence patterns detailed earlier in this document; fuller analysis and exploration of structure and value relationships are provided in section 4.3 of this document.

Structure	Value(s)
Alternative	Conciseness, Institutional Preference
Choice List	Consistency
Commentary	Differentiation, Clarity, Standards
Deleted	n/a
Do Not	Consistency
Do/Must/Should	Consistency
Example	Clarity, Differentiation
Exception	Consistency, Clarity
External Reference	Scholarly Sources, Standards
Footnotes	Institutional Preference
If Important	Identification, Access, Selection
If Possible	Clarity, Identification, Selection
If Then	Clarity, Identification, Conciseness
Internal Reference	Identification
May	Institutional Preference
Option	Source Attribution, Identification
Priority List	Item in Hand
To Be Developed	n/a

Table 40. Values most commonly co-occurring with each structure.

Results highlighted here demonstrate that different values were observed to have different communication patterns within the text of RDA as realized through structural devices. For example, *Consistency* was communicated through direct required instructions, controlled vocabularies, and other lists intended to limit the range of cataloger responses. In contrast, this value appeared infrequently in conditional structures requiring decisions such as *If Then* and *If Important*, which were more likely to feature User Needs values particular to RDA, including *Access* and *Identification*. These trends suggest that while basic directives in knowledge organization standards work to maintain consistency, more idiosyncratic values are exposed at

decision points. Overall, co-occurrence patterns suggest that certain communicative conventions may be more inherently affording of valuations than others.

The discussion presented below is intended to move beyond description of co-occurrence patterns and more deeply examine how certain key structures are tied to valuations, as well as their implications and the assumptions they carry concerning practitioners and implementation environments. Furthermore, in more fully addressing the third research question, other communicative conventions must be considered; evidence from this study supports the roles of definition, typography, and assertion in value communication, and is detailed below.

6.3.1 Key Valuating Structures in RDA

The most common structure utilized in RDA was *Do/Must/Should*, a type of instruction that indicated required action through the use of imperative verbs and/or modals. This structure belonged to a larger category of rhetorically forceful structures referred to as directives, which also included *Do Not* and *May*. Aside from their rhetorical force, these structures shared another common trait: recurrent valuations of *Consistency*. Directive structures in RDA indicate requirements for compliance through both prescribing action and preventing it. In presenting instructions as absolute, directive structures were more conducive to expressing *Consistency* than other types of structures such as conditionals. Given the place of directives as the most prevalent structures in the text, it may be seen that RDA was written in a way that inherently values and promotes *Consistency*.

Though *Consistency* was tightly intertwined with directive instructions in RDA, this value was communicated through other structures in the text as well. Most notable were *Choice Lists*, structures intended to limit the range of cataloger responses through predetermined lists of

alternatives. As with the directives, this structure is prescriptive: it is designed to exert a significant amount of control over cataloger actions. Thus, prescriptivist structures can be seen as a key way in which RDA communicates valuations of *Consistency*. This connection between control, prescription, and *Consistency* is likely not limited to RDA; procedural standards in general are characterized by directive statements (Farkas, 1999) and are designed to promote uniformity (Svenonius, 2000).

Other structures in RDA were more affording of different valuations. The text of RDA is marked by the presence of conditional instructions throughout, typically indicated through the use of the keyword “if.” Three kinds of structures were found to exhibit this pattern (*If Then, If Important, If Possible*) and together constitute a category of conditional structures. Unlike directives, conditional structures co-occurred with *Consistency* very rarely. Rather, they were far more likely to contain valuations of *Clarity*, *Access*, and *Identification*. Through conditional structures, the text of RDA affords active interaction, asking the cataloger to assess certain conditions and make decisions. Quite often, catalogers are asked to assess the implications for specific user needs and perspectives. Thus, while basic directives worked to enforce the general value of *Consistency*, conditional decision points highlighted key values idiosyncratic to RDA.

Values such as *Access* and *Identification* also represent more terminal values, as opposed to the more instrumental value of *Consistency*. In providing conditional instruction, the text of RDA requires that catalogers keep the end goals of their work in mind. In doing so, however, it makes important assumptions. The most basic assumption is that all practitioners using the standard are capable of making such decisions without further guidance. Beyond this, these structures assume cataloger familiarity with information concepts, user needs, system functions, and user information behaviors. Overall, conditional structures support more idiosyncratic,

terminal values in standards such as RDA, but they are also indicators of the knowledge and judgment that the practitioner is expected to bring to the process.

While both directive and conditional types of structures were affording of valuation in RDA, other structures were less so. Within the text, a number of more supportive structures functioned to inform or guide rather than prescribe action. Structures such as *Commentary*, *Examples*, *Footnotes*, and *External References* served to support the procedural instructions and provide further context for the cataloger. Such structures placed little rhetorical force on the reader, however, and had little bearing on value expression in RDA. One exception to this general trend involved the *Commentary* structure, which reflected passages intended to define or explain concepts and practices to the cataloger. Associated with this structure were some of the less frequently occurring values, including *Continuity*, *Differentiation*, and *Internationality*. This finding raises some noteworthy possibilities concerning the role of explanatory commentary in standards. First, *Commentary* passages may be more affording of the valuation of complex concepts; in RDA, *Differentiation* in particular is a complex, deeply-rooted concept specific to bibliographic practice that may require frequent explanation. Second, *Commentary* passages might serve as additional “assertion points,” in which more implicit key values are communicated. A prime example of this in RDA is *Internationality*, which, while explicitly absent from most instruction, is present within *Commentary* passages. Thus, non-instructional structures may serve to express more difficult or diffuse values that procedural instructions are not conducive to. In general, however, these supporting structures in RDA illustrate that some routine structures in standards offer little affordance for expressing value.

While structures in this study were examined individually, there was some evidence that structures in RDA may work together to communicate and enforce values in specific ways. This

was most apparent during interviews, when participants were asked to discuss the second RDA excerpt, **11.2.2.5**. Several participants were particularly drawn to a string of conditional, *If Then* statements within the excerpt. While the structural content analysis performed in this study analyzed each of these statements independently, participants saw these statements as one unit intended to present a variety of alternatives in order of their acceptableness. For these catalogers, this passage functioned more as a *Priority List*, placing differing amounts of value on the different items. This finding suggests that, when combined, certain structures may work together at a broader level to impress values in a particular way on the cataloger. Further work is needed to examine the value affordances that these larger structures may present.

6.3.2 Other Means of Value Communication

Beyond content and structures, several other value communication means were observed throughout the course of this study. The first of these means is typographical patterns: as noted during the content analysis phase of this study, the text of RDA relies on consistent font, coloring, and shading conventions throughout, particularly in presenting options and choices. While these conventions facilitated the recognition of *Option*, *Alternative*, and *Exception* structures, they also had an effect on participant recognition of values during the interview phase. Several catalogers noted how varying fonts and colors worked to draw their attention to certain places in the text, and may have had an impact on their perception of values in these passages. This effect was not anticipated in the present study, however, and further study would need to be designed and implemented in order to assess the effects of typography on practitioner comprehension and value recognition. While different individuals may respond differently to fonts and colors in the texts of standards, findings from this study provide evidence that such

typographical conventions may have systematic, unanticipated influence in how these documents communicate value.

Another means through which values may be communicated in RDA is definition. In defining certain terms, the text of RDA grants a concreteness and recognizability to certain concepts. In RDA, definition is accomplished in one of two ways. The first sees terms defined within the main text, appearing as part of commentary passages, or embedded within instructive passages. For example, user tasks such as *Identification* are defined explicitly in section **0.4.2**, and are named consistently throughout the remainder of the text. A section of instruction at **2.2.2** similarly defines and explains preferred sources of information, facilitating cataloger understanding and recognition of *Preferred Sources*. Passages such as these serve as reference points and prime the cataloger's awareness of these concepts in the text. The second way in which definition is accomplished is through the use of the Glossary. RDA's Glossary presents an alphabetical listing of key terms and their definitions, serving primarily as a reference point. Though this portion of the document fell outside the scope of the present study, it is worth noting that participants in the interviews struggled in understanding the concept of *Formality*, which is only defined in the Glossary. How often, if ever, catalogers consult the Glossary is unclear. Further examination of the effects on value perception of explicit definition, and where this definition occurs, is warranted. As was observed with the critical *Access* value, however, actual definition is not required for texts such as RDA to communicate value.

While typography and definition play important roles in value communication, perhaps the most significant other means of value communication observed in this study is assertion, that is, the explicit declaration of key values. Within RDA, this is accomplished in the introductory Chapter 0, which lays out guiding principles and objectives in section **0.4** that serve as the basis

for the design of the overall standard (Table 41). Though very little explanation is provided concerning the general nature and role of the objectives and principles, traditional bibliographic theory would cast objectives as intended functions for resulting data, and principles as underlying design heuristics (Svenonius, 2000). The objectives and principles in RDA are derived from IFLA's *Statement of Cataloguing Principles* (2009), which was itself heavily inspired by Svenonius's (2000) enumeration of the traditional principles of description. RDA's objectives and principles are the closest thing that the text has to an explicit statement of values; we would expect that these priorities are, in a sense, "baked" into the overall standard. While other priorities are discussed in the remainder of RDA's opening chapter, including internationality, interoperability, and wide-spread applicability and appeal, they are not distilled and explicated in the same way as these key concepts are.

RDA Objectives and Principles	
Objectives	
	Continuity
	Cost Efficiency
	Flexibility
	Responsiveness to User Needs
Principles	
	Accuracy
	Attribution
	Common Usage or Practice
	Differentiation
	Relationships
	Representation
	Sufficiency
	Uniformity

Table 41. Asserted objectives and principles in RDA.

In stating and defining them, the text of RDA gives concreteness to the objectives and principles in a way that other concepts, such as access, are lacking. Through this emphasis, are

these concepts then more easily stressed in the text, and more readily perceived by practitioners? A comparison between RDA's objective and principles and the values elicited during this study indeed show close alignment, particularly with some of the most frequently occurring values (Table 42). While these values were organized into a Principles-Based category after coding, it's important to note that they were elicited inductively during the value analysis process. Their presence in the coding frame reflects valuations found in the text, rather than an intentional search for RDA's design principles. The resulting congruence between elicited values and RDA's objectives and principles shows an overall harmony between asserted and functional values.

RDA Principle/Objective	Corresponding Value
0.4.2.1: Responsiveness to User Needs	User Needs
0.4.2.2: Cost Efficiency	Cost Efficiency
0.4.2.3: Flexibility	Flexibility
0.4.2.4: Continuity	Continuity
0.4.3.1: Differentiation	Differentiation
0.4.3.2: Sufficiency	User Needs
0.4.3.3: Relationships	n/a
0.4.3.4: Representation	Representation
0.4.3.5: Accuracy	Clarity
0.4.3.6: Attribution	Creative Responsibility
0.4.3.7: Common Usage or Practice	Usage
0.4.3.8: Uniformity	Consistency

Table 42. Value correspondence to RDA principles/objectives.

Further examination of the frequency data, however, shows that while these values are prominent throughout the text, they are not evenly so. RDA's principles of accuracy and uniformity are reflected in the two most commonly occurring values, *Clarity* and *Consistency*. Not only are these concepts initially asserted as important, they are found consistently

throughout the remainder of the document. Through initial emphasis and continued coverage, these values are certainly among the most strongly communicated by the text. Compare this, however, to *Cost Efficiency*, the value corresponding to the RDA principle of the same name. While this concept is asserted as an important design consideration, its presence throughout the text is difficult to discern; value analysis revealed only two occurrences, and participants did not mention it at all. Other Principles-Based values received varying amounts of attention both within the text and from participants. Through initial assertion and subsequent uniformity of language within the text, it's possible that these values are more noticeable. Differences among the Principles-Based values, however, demonstrate that while assertion may add to the recognizable presence of values in the standard, assertion alone is not enough to ensure that a concept will receive emphasis.

This trend may also be seen in the User Needs and Usage value categories, which correspond to the RDA objective of responsiveness to user needs, and the principles of sufficiency and common usage. Though certain User Needs values, including *Identification* and *Access*, are among the most frequently occurring values and were well recognized by interview participants, others, such as *Obtain*, were not. Interestingly, in the Usage category, participants were most cognizant of *Users* usage, the type of common usage that was the least frequent in the text. Findings here yield two implications: 1) RDA is not consistent in how larger concepts are operationalized and communicated as individual values, and 2) frequency is not always an indicator of how strongly communicated that catalogers will feel certain concepts to be.

RDA explicitly states its governing objectives and principles, asserting these as recognizable and valued concepts. It is worth considering, however, that there may be another set of unasserted, inherited principles at play, working to emphasize other values. Being heavily

based on its predecessors AACR and AACR2, RDA exhibits certain legacy influences that may be better understood by examining the principles of the documents from which it is descended. While AACR2 lacks a clear statement of principles and objectives, such a statement is present in AACR (American Library Association et al., 1970, p. 189-190). The following table summarizes these principles and their meanings (Table 43).

Principle/Objective	Meaning
Objectives of descriptive cataloging	The catalog enables location and collocation
Description of a perfect copy	Descriptions should depict the most complete copy
Extent of description	Descriptions should provide only enough information to meet objectives
Terms of description	Terminology should reflect that used by creator/resource
Organization of the description	Description order should be the most useful to users
Documentation	Provide source of information as needed
Style	Spelling and capitalization should be consistent

Table 43. Objectives and principles of AACR.

While clear parallels exist between RDA's and AACR's respective statements of objective and principles, one particular principle of AACR is worth pointing out: extent of description. At its core, this is a principle of economy, reflecting Ranganathan's (1969) principle of parsimony, and dictating that among equal alternatives, the most economical option is to be preferred. The closest parallel principle in RDA may be that of sufficiency, focused on providing data to meet user objectives though here with no mention of economy or parsimony. Despite this, we still find a strong valuation of economy in the text of RDA, most apparent with the value of *Conciseness*, an emphasis on recording the briefest possible form of information. When tempered by RDA's principle of sufficiency, the end result is quite similar to AACR's extent of description principle: only record as much information as is needed. The presence of *Conciseness* in RDA may therefore be understood as a modern manifestation of a legacy

principle of economy, one that was explicitly asserted in previous knowledge organization environments operating under different sets of limitations. To what extent this is a by-product of inherited wording from previous standards would require comparative analysis for further illumination. Regardless, this finding demonstrates that assertion is not necessary for a value to be communicated by a standard. Legacy values may be inherited from previous standards or documentation, and continue serving as hidden design principles.

Though not made explicit in any statement of principles, another deeply ingrained design choice present in RDA's predecessor standards was the emphasis on Anglo-American collections and settings. From their very names, to the introduction in AACR2 and its frequent mention of American and British considerations, it's clear that English-speaking cultures and their materials are an integral part of the scope of these standards. While the scope of RDA is different, as espoused by its own assertions of internationality in Chapter 0, persistent valuations of *English Language* and *Western Culture* are still present and may be attributed to these legacy influences. Though some valuations of the *English Language* are variable and change depending on the translation of RDA being consulted, other, more structural valuations were also uncovered during content analysis, further suggesting the influence of legacy design choices. Previous research on RDA has been critical of its approach to internationality and fit with international collections (Biella & Lerner, 2011; Kimura, 2015). The persistence of legacy influences and their contribution to the presence of certain values offer further insight into these findings. Deeper examination of previous standards, as well as other influential documents such as FRBR and FRAD, could shed further light on the influence of unasserted, legacy design principles on values in RDA.

Assertion plays an important role in how standards communicate value. At a surface level, explicitly asserted statements of principles and objectives provide an ostensible reference point for a document's key values. More deeply, these assertions may impact the way that important design choices are communicated and perceived as values. This does not mean that they are the only design choices in play, however, as unasserted, legacy values may also influence a standard's design. Still, such open statements of principles and objectives may help focus the efforts of the standard designer and ensure more prominent embedding of related values. How influential these statements are on active practitioners remains to be seen. While it may be surmised that these statements have an impact on the practitioner and their use of the standard, this relationship was not explored in the present study. How practitioners interact with prefatory, non-instructive portions of procedural standards, and whether or not such statements have an effect on their perception of values in the overall document is a lingering question. Together with definition and typography, assertion represents an important aspect of value communication in standards that warrants further study.

6.3.3 Comparative Considerations

Communicative structures in standards and procedural discourse have been previously addressed through rhetorical and genre studies, an area of inquiry focused on the properties, forms, and functions of documents and their implications for communication. The general, rhetorical nature of knowledge organization systems and documents has been explored through Feinberg's (2010, 2011, 2012) work and her application of key rhetorical concepts such as credibility, authorial voice, and argumentation. Though examinations of specific rhetorical structures are absent from the literature on knowledge organization standards, they have been

studied in other areas. For example, Young (2003) analyzed the communicative structures present in FASA accounting standards. Specific rhetorical structures such as justifications, tethering current practice to past practice, and passage numbering conventions were identified, and found to contribute to the ways in which these standards position themselves as serious, credible documents (Young, 2003). Though value implications remain largely unexamined, additional works in the area of standards and procedures have yielded more developed frameworks of communicative structures; several of these serve as useful comparisons for the structural framework developed in the present study.

Farkas (1999) drew on rhetorical studies to examine procedural discourse, that is, instructions guiding users in performing specific tasks. Though such procedures come in different forms, including steps, flowcharts, and scripts, all are designed to lead users from one set of circumstances to another. Farkas (1999) focused specifically on streamlined-step procedures within help systems, and from his work, drew conclusions about three recurring rhetorical devices in these documents (Table 44).

Rhetorical Device	Affordances	Drawbacks	RDA Analogs
Imperatives	simplicity, clarity	authoritative	Do/Must/Should, Do Not, May
Conditions	careful consideration	taxing, disruptive	If Then, If Important, If Possible
Options	power, flexibility	demands decision making	Option, Alternative, Exception

Table 44. Rhetorical devices and implications from Farkas (1999).

Each of these devices was characterized by its own set of affordances and limitations. For example, while imperatives are simple and clear in their direct prescription of action, they come across as authoritative and controlling. Similarly, options provide flexibility but place greater

cognitive demands on the user in making more active decisions. Farkas (1999) found conditionals in particular to hold a number of implications: while conditional instructions denoted a carefully thought out procedure, they also functioned as descriptions of problems that needed to be addressed through action. Farkas (1999) speculated that more trouble-prone systems and procedures would then be characterized by more conditional instructions.

Of the various types of procedural discourse, RDA most closely resembles the streamlined-step approach that was analyzed by Farkas. Common structures discovered in the text of RDA in the present study show strong overlaps with the Farkas framework as well, as depicted above in Table 44. Comparisons here suggest RDA, with its reliance on directive instructions, to be generally authoritative, but characterized by a number of bibliographic “problems” that must be resolved through cataloger navigation of conditions and options. While Farkas’s work did not address the implications for value expression, his framework would suggest more cataloger attention to be focused on conditionals and options, and thus, the values associated with them. Indeed, in the text of RDA, negotiation of such “problem” spots is typically guided by the important and commonly perceived User Needs values.

Similarly to Young’s (2003) study, Bradbury and Schröder (2012) examined accounting standards and the communicative structures they employ. From their results, the authors developed a framework of common rhetorical structures that included rules, justifications, examples, definitions, and references. This framework was then used as a means of understanding the differences between rules-based and principles-based standards, a major area of interest in accounting (Bradbury & Schröder, 2012). Rules-based standards are generally characterized by a larger number of rules, more frequent exceptions, higher verbal complexity, and fewer judgment points; in contrast, principles-based standards feature fewer rules, more decisions, and more

frequent justification via conceptual models. While accounting standards have become progressively more principles-based, standards in other domains may exhibit different trends over time (Bradbury and Schröder, 2012).

Many of the rhetorical structures noted in the Bradbury-Schröder framework are present in the text of RDA, though their relative extents would suggest that RDA demonstrates characteristics of both rules-based and principles-based approaches. For example, like rules-based standards, RDA contains a larger number of rules, expressed in, according to participants in this study, a verbally complex and confusing manner. The relatively few exceptions, high number of decision points, and frequent justifications through the FRBR conceptual model, however, are more in line with a principles-based approach. The Bradbury-Schröder framework might suggest that structures associated with principles-based approaches would be more affording of values based on key principles, though further analysis would be required to determine this. While, ostensibly, RDA is principles-based, structural findings show signs of both rule-based and principles-based approaches, and may reflect the historical tensions between these approaches in library knowledge organization (Osborn, 1941; Lubetzky, 1953).

Though not a formal conceptual framework, the *Principles and Rules for the Structure and Drafting of ISO and IEC Documents* includes a consideration of rhetorical structures that holds relevance here. Within these guidelines, classes of structures are prescribed as specific verbal forms and expressions designed to communicate what is necessary for compliance, and clearly delineate between requirements and choices (ISO/IEC Joint Directives Maintenance Team, 2016). These structures are to be used in all ISO standards and documentation. The five structures are shown alongside examples in Table 45.

Verbal Form Type	Examples
Requirement	"shall," "has to," "do not"
Recommendation	"should," "it is recommended"
Permission	"may," "is permissible"
Possibility/Capability	"can," "it is not possible to"
External Constraint	"must"

Table 45. ISO verbal forms and expressions.

While RDA is not an ISO standard, comparison between the two is, nevertheless, insightful. ISO shows a narrower range of structures, most of which are concerned with communicating compliance and non-compliance. The closest correlation exists between ISO's requirement structure and the directive structures in RDA, including *Do/Must/Should* and *Do Not*. Requirements in ISO standards utilize imperative verbs to indicate that a provision is necessary for compliance with the standard; this is generally true of RDA's directives. While the *May* structure was seen as a directive in my framework for RDA, ISO documentation would suggest this is less rhetorically forceful and belongs in a separate category. In ISO standards, possibility and capability are communicated through specific phrases, though in RDA these seem to manifest as conditionals, options, and alternatives. ISO's external constraints relate to constraints put in place by laws or other standards, and have no direct structural equivalent in the text of RDA. Overall, differences between ISO's structures and those found in this study show that RDA has a distinct manner of communication, is intended to communicate more than compliance and non-compliance, and distinguishes between requirements and choices in its own ways.

6.3.4 Summary

A content analysis focused on the rhetorical and communicative structures employed in the text of RDA revealed a set of 18 recurring structures, ranging from directive instructions, to conditional decision points, to non-instructive support. Value co-occurrence analysis revealed certain structures to be associated with different values in the text; most prominent were the relationships between directives and the *Consistency* value, and conditionals and the User Needs category of values. Other means of value communication beyond rhetorical structures must not be overlooked, however, with definition, typography, and assertion playing additional roles in how RDA communicates values. Comparisons of this study's results to other frameworks concerning structures in standards and procedural documentation showed a number of similarities and indicate RDA's use of common rhetorical devices. Important idiosyncrasies, however, highlight the standard's distinct communicative style and mixture of rules-based and principles-based approaches.

6.4 Broader Implications

What values are expressed, and to what extent, in the text of RDA? How are values in RDA recognized and responded to by practitioners? How are values communicated by standards for knowledge organization? Findings from the present study have enabled discussion focused on these major research questions, as presented in the preceding sections of this chapter. At the same time, these findings also enable us to move beyond the research questions toward a broader examination of the implications of this work. In this section, discussion proceeds out into the larger areas of study within which this research was situated. Here, further implications of the

findings are explored as they relate to values and value theory, the study of standards, and the knowledge organization and library and information science communities.

6.4.1 Value Theory

Value theory positions values as enduring beliefs in the preferability of states of being or modes of conduct. While we might tend to associate values with persons or even groups, values may also be “held” by artifacts. Insight into the value-laden nature of artifacts is not new, and has been well documented in value theory and the general study of values (White, 1951; Dhand, 1967; Rokeach, 1973; Spiggle, 1986). The consideration of standards as value-bearing artifacts, however, is unique to the present study and its findings. As important embodiments of community ideals, standards are valuating in their very nature, and the analysis of RDA presented here shows that the values in these documents can be elicited and understood through value analysis and other approaches. Within standards, values serve as recurring prioritizations of a ways of doing something, or desired end-states. While the presence of such values in ostensibly neutral, technical documents may be surprising to some, on the contrary, values belong here and serve an important purpose. In developing their values orientation theory, Kluckhohn and Strodtbeck (1961) proposed that all groups face specific questions or problems, and their responses to such problems were guided by their values. As a group, knowledge organizers, or any other community of practitioners, face their own common problems, with standardization representing one important means of encoding agreed upon solutions. Standards thus serve as problem-solving documents, and in doing so, are always guided by the values of their communities.

A common activity in values research has been the construction of value classifications. Many values scholars have contributed their own value schemes, the most influential of which have tended to be broad or even universal in nature. These include White (1951) and Rokeach (1968), some of the earliest proponents of value analysis, whose models contain key values such as beauty, friendship, and peace. Other subsequent, influential classifications of values have been similarly broad, for example, Schwartz's (1992), which organizes 56 values shared by all societies. These three frameworks are well-established and remain useful in the social sciences; they were influential in shaping the approach taken by the present study. Comparing the results of the RDA value analysis to such broad models, however, proves difficult. Can a knowledge organization standard value things such as beauty or friendship? More meaningful comparisons can be made to classifications of values specific to information domains, as will be taken up in the following section. Furthermore, the results of the present study are not intended to serve as a formal classification of values for knowledge organization standards. While this endeavor may be desirable and possible through subsequent studies, the work presented here is exploratory in nature and intended to increase understanding of values in RDA and similar standards rather than prescribe a formal model.

Results of this study do, however, hold implications for the functional classification of values. Though classification entails multiple dimensions, one dimension in particular was investigated within the present study: the instrumental/terminal dimension. Results of the value analysis and interviews with catalogers strongly suggest that while some values in RDA play an instrumental role, such as *English Language* or *Item in Hand*, others serve more terminal purposes, with *Access* serving as the most important of these (i.e., the final value). The findings associated with some values, however, present a much less clear distinction between

instrumentality and terminality. Values such as *Representation* and *Consistency* are ostensibly instrumental, serving to fulfil the needs of users, though cataloger perspectives occasionally cast these as terminal values. It's possible that through repeated use, these concepts become prized in their own right by practitioners, representing a contextual shift from instrumental to terminal and going against the intentions of the standard creator. Results from the value analysis show that the instrumental/terminal distinction of values is not always clear in documents such as standards, and that making this distinction is part of the interpretive work that practitioners do in interacting with these texts.

Beyond value classifications, another key component of the study of values has been the concept of a value system. Value systems are priority-arranged lists of values particular to a person or group, and emerged from the more structuralist works on value theory by Rokeach (1973) and others. Each person or group can be seen as having their own value system, with these varying orders of priority having implications for their behavior (Clawson & Vinson, 1978). In relation to artifacts, however, this concept is more difficult to apply. Value systems are often elicited through surveys and ranking questionnaires (Rokeach, 1973), methods that are not applicable to documents. The content analysis based approach to RDA in this study yielded a rich frame of values, though an exact priority-ranking of these values is not possible with the current data. Rather than value systems being inapplicable to artifacts, however, I believe they manifest differently. Artifacts such as RDA still possess a group of interrelated values, but unless the document is explicit about their relative importance, there will always be an interpretive aspect to the ranking of these values. For standards in particular, it may be helpful to consider the value system as a pool of values waiting to be realized. This system becomes realized through the enactment of the standard, with different enactments yielding differing orderings of these

values. Thus, there is a strong contextual element to the value systems of RDA and other similar artifacts.

Finally, the present study yields implications for ethics as well. In traditional value theory, ethics refers to a specific set of normative values, typically conceptualized as goodness or rightness (Rescher, 1969). These normative values have particular implications for truth, judgment, and action (Gorman, 2015). While rightness or goodness themselves are not values that were elicited from RDA, the values that were uncovered do have implications for these concepts. Previous work has highlighted the inherently ethical nature of standards (Lampland & Star, 2009); specifically, in setting a reference for what is acceptable and what is unacceptable, standards embody a set of ethics, and contribute to the moral economy of society (Busch, 2000). RDA uses its value system to establish a conception of rightness for knowledge organization, and given its nature as a community artifact, it can be taken as a reflection of the ethical stance of the library community. As such, the present study can be seen as belonging to a larger body of literature concerned with the exploration of library and knowledge organization ethics (Bair, 2005; Beghtol, 2008; Ferris, 2008; Fox & Reece, 2012). Unique to the present study is the analysis of standards in order to draw conclusions about community values (see section 6.4.3). Findings show that standards can be used as a means of understanding the values and ethics of the groups they belong to, and are a valuable site of investigation concerning information ethics.

6.4.2 Standards

As with all technologies, standards are not neutral. They are more than mere technical documents; they are living embodiments of community ideals that carry perspectives, priorities, and biases. This has been demonstrated by a body of critical standards literature, including

Bowker and Star (2000), Busch (2000), and Lampland and Star (2009). In such works, values were not directly pursued, but remained incidental to the larger issues of perspective, bias, and rhetoric. The present analysis of RDA is unique in its application of value theory to a standard. The findings from this approach have demonstrated that standards do have discernible values, and that value analysis is a useful method for evaluating and comparing standards. Though the body of work on standards is, perhaps, necessarily diffuse due to their ubiquitous nature, the study of RDA adds to this overall endeavor while answering the call to further study of the social aspects of specific standards (Timmermans and Epstein, 2010). As a method, value analysis holds continued promise here, and could be incorporated into the common methodological approaches to standards such as case studies and ethnographies, adding a further dimension to the critical analysis of standards in any domain. Beyond the utility of value analysis, the present study holds other implications for the study of standards focused on their communicative and rhetorical properties, their enduring but dynamic nature, their enactment, and their design.

Structural analysis of RDA showed that while it conformed to basic, generic conventions expected of procedural standards (Farkas, 1999), it also exhibited its own, idiosyncratic communicative style. This style was shared to some extent by other cultural heritage knowledge organization standards in the preliminary studies, though important variations were noted here as well. This suggests a more in-depth, rhetorical analysis of these and other standards to be another fruitful methodological approach. Furthermore, the present findings on RDA show that communicative conventions in standards are linked to value expression, and that some structures are more conducive to expressing certain types of values. The relationship between directive instructions and valuations of consistency and uniformity was particularly pronounced, as was the connection between conditional structures and terminal values. When examining value

communication in particular, however, analysis must move beyond content and structures. Findings from the present study suggest that other, more subtle mechanisms play a role in the expression of values, including assertion, definition, and typography. These and other less obvious means of communication should be included in further rhetorical and genre studies of standards. Findings concerning RDA's communicative conventions also hold implications for practitioners; despite their wealth of experience, participants in this study still found the text of RDA to be difficult to understand at times. Training on RDA and other standards should address general approaches and strategies for working with the text itself. Overall, the present study suggests that it is useful to approach procedural standards, particularly those for knowledge organization, as a genre of document; in doing so, it continues the rhetorical and genre studies perspectives on knowledge organization systems advanced by Feinberg (2010, 2011, 2012) and others.

Standards are not, however, just static documents. They are dynamic tools that change over time, a factor that must be taken into account in the study of standards. While updates for some influential knowledge organization standards such as AACR2 have ceased, rendering them fixed, current standards such as RDA continue to evolve. This was evidenced in the present study by the observation of *Deleted* and *To Be Developed* structures in the text, as well as participant conceptions of the document as dynamic, and, at times, even unpredictable. Any study of RDA or other "living" standards must acknowledge that findings may thus change over time. Significant changes are in fact on the horizon for RDA, in the form of the 3R Project revisions aimed at transforming the presentation of RDA into an interactive database (RDA Steering Committee, 2018), as well as the eventual incorporation of new and revised content to accommodate the Library Reference Model (LRM), the successor to the FR family of conceptual

models (Riva & Žumer, 2015). These impending changes provide further opportunities for the study of RDA, with comparisons over time revealing further information about community ideals and values and how they relate to standards. Even amidst this evolution, however, RDA carries clear legacy influences that should be further investigated. For instance, how much text in RDA is lifted from AACR2 or earlier predecessors with little modification and what are the implications? Text mining and other textual analysis techniques would be useful here, and represent one means of showing continued legacy influences over time, even as standards continue to change.

Whether static or dynamic, standards are more than just documents though. They are guided practices, meant to be performed and upheld in real settings by real practitioners, and with real implications for social realities (Busch, 2000). What is in the documental form of a standard often differs from its enacted form. Within the present study, differences in practitioner perception affected their hypothetical enactment of certain instructions; for example, during RDA passage analysis, participants were more inclined to interpret common usage as relating to persons, rather than to documents as was described in the text. Goals and experiences associated with actual contexts also have an effect on what catalogers are striving to achieve when enacting this standard. While these findings show that enacted standards may differ from their documental form in systematic ways, other findings suggest that standards offer ideals that may not even be attainable, or may be at odds with the views and motives of practitioners. This conflict between ideal and actual practice was evident in RDA, particularly in findings concerning the absence of record sharing considerations or MARC examples in the text, both of which were viewed negatively by study participants. Further examinations of any standards in practice would be useful in more fully understanding the ramifications of their document/enactment duality.

Through their enactment, practitioners must work to translate a standard into an actual environment; in knowledge organization environments this adds a further layer of translation, as practitioners are already attempting to translate from the “language” of the publisher and item into that of the knowledge organization system (Svenonius, 2000). Further exploration of the language/translation metaphor may be useful here.

Finally, this study offers implications for the design of standards. Findings concerning RDA and other cultural heritage knowledge organization standards suggest that values are an inextricable part of standards; they will always be present. As such, their presence should be examined and embraced in the design of standards. Standards are key community artifacts where important values may be asserted, justified, and translated into practice. If standards such as RDA were more open about what is valued and why, this could prompt examination of any conflicts between asserted and functional values, and lead to stronger reinforcement of agreed-upon community values. For standards in the information domain, this approach to design could easily build off previous VaD work. This area of study has been incorporating theories and frameworks of values into the study of system design (Cheng & Fleischmann, 2010; Friedman et al., 2013), but has thus far refrained from including standards as systems of interest, even as VaD researchers call for a wider array of approaches to studying values in relation to specific artifacts (Shilton, Koepfler, & Fleischmann, 2013). A value-analytic approach to the design of information standards would both support the general study of standards and further the current VaD research agenda.

6.4.3 Knowledge Organization & Library and Information Science

In her rhetorical analysis of knowledge organizing systems, Feinberg (2012) noted that the apprehension of shared values plays a key role in how convincing audiences find a system to be. As a prominent knowledge organizing system, we would expect RDA to exhibit key values of the library and information science knowledge organizing community in order “convince” practitioners of its appropriateness and effectiveness. Interview results garnered from the present study suggest that while catalogers may disagree with certain practical aspects of the standard, they are indeed approving of it in principle. In short, the recognition of certain normative values may have played a hand in “convincing” them. What are these normative community values, however, and where do they come from? Though answering this question would entail designing and implementing a research procedure of its own, further exploration is possible here through comparison of the RDA values framework to formal encapsulations of values associated with knowledge organization and library and information science. How do the values associated with RDA compare to these other value frameworks? Addressing this question also allows us to move beyond comparisons and toward a better understanding of what the findings about RDA tell us about the values of the knowledge organization community and its artifacts.

Given RDA’s role as a standard for knowledge organization, it may be helpful to start with a comparison of RDA’s values to those associated with the knowledge organization community. Though a number of works in this field have addressed the ethical implications of values, notably Mai’s (2013) review of contemporary classification, fewer have been dedicated to an enumeration of asserted or functional values for knowledge organization. In her exploration of ethics in relation to knowledge organization, Beghtol (2008) found access to be a core, guiding value. In exploring the ethics of library knowledge organization specifically, Bair (2005)

identified influential values including equitable access, intellectual freedom, service, honesty, integrity, and cultural respect. The most formal distillation of values for knowledge organization, however, comes from Ridi's (2013) exploration of values and knowledge organization practices. The author drew on relevant, professional values lists to arrive at a set of core values for knowledge organization (Table 46).

Ridi (2013)
Accessibility
Cognitive Saving
Coherence and Continuity
Competence
Completeness and Granularity
Contextualization
Freedom
Historicization
Hypertextuality
Interoperability and Standardization
Sustainability and Cooperation
Thirdness and Impartiality
Usefulness and Comprehensibility

Table 46. Values from Ridi (2013).

Ridi's framework offers a formal, high-level depiction of the values associated with knowledge organization activities. In comparing this to the RDA values frame, there are a number of immediate overlaps. Though Ridi's Accessibility is actually broader in scope than RDA's *Access* value, the two are still closely related. Cognitive Saving and Usefulness/Comprehensibility correspond with the User Needs category of values in RDA, as well as Principle-Based ones such as *Clarity*. Coherence and Continuity, Completeness, Interoperability and Standardization, and Sustainability and Cooperation roughly equate to their similarly named counterparts in the RDA frame. For other values, however, congruency is less

apparent. Ridi's Thirdness and Impartiality, for instance, values the removal of any personal influence or motives from the knowledge organization process, a concept not touched on by the text of RDA. Contextualization, the value of placing information in useful context for users without enforcing opinions and perspectives, may be at odds with the lingering influence of *English Language* and *Western Culture* values in RDA. Thus, some values in the Ridi framework are so conceptual that they may be entirely assumed within RDA, while others espouse a neutrality that may be difficult to attain in procedural standards.

Turning to the field of information science, we find a heavier emphasis on the development of formal value frameworks. Of these, one of the more prominent frameworks is the Meta Inventory of Human Values (MIHV). The creators of this framework reviewed a total of 12 previous value models from information science and the social sciences, aggregating and aligning individual values where possible. In the final inventory the authors included only values represented in at least five different sources (Cheng & Fleischmann, 2010). The resulting meta-inventory contains 16 broad values, defined as things that people or organizations find important (Table 47).

MIHV (2010)	
Freedom	Intelligence
Helpfulness	Responsibility
Accomplishment	Social Order
Honesty	Wealth
Self-Respect	Competence
Broad-Mindedness	Justice
Creativity	Security
Equality	Spirituality

Table 47. Key values in MIHV.

Overall, this framework recalls the broad models by researchers such as Rokeach (1968) and Schwartz (1992), and may be too general compared to the present study's scope to serve as a meaningful source of comparison. Still, some relevant connections can be drawn, particularly between Helpfulness in the MIHV and the User Needs category of values in RDA. Honesty and Equality also hold strong implications for information standards, and may manifest in RDA most notably as *Representation* and *Internationality*.

Value sensitive design (VSD) research offers another take on values in information science. Through ongoing, interactive research, Friedman (2013) and her collaborators arrived at a framework of 13 key values (Table 48). These values are aspirational in nature, and intended to serve as design heuristics.

VSD (2013)	
Human Welfare	Informed Consent
Ownership and Property	Accountability
Privacy	Courtesy
Freedom from Bias	Identity
Universal Usability	Calmness
Trust	Environmental Sustainability
Autonomy	

Table 48. Key values in VSD.

The authors predict the emergence of further values in this framework, and intend them to guide the balance of usability and ethical considerations. Given the deductive and aspirational quality of the VSD framework, there are few direct correlates between these values and those elicited from RDA. Freedom from Bias and Universal Usability may manifest in RDA as the *Internationality* value, and are clearly pertinent to information standards in general. Other

important values in the VSD framework, such as Autonomy and Privacy, are largely absent and potentially challenged within RDA; this conflict will be addressed further below.

Given RDA's status as a standard born from the library tradition of knowledge organization, value frameworks specifically associated with library settings offer another opportunity for comparisons. Perhaps the most well-known value statement associated with libraries, the American Library Association's *Core Values of Librarianship* (2004) presents an aggregation of values drawn from the ALA Policy Manual and other official documentation (Table 49). These values are aspirational and intended to guide the work of American libraries and library workers.

ALA (2004)
Access
Confidentiality/Privacy
Democracy
Diversity
Education and Lifelong Learning
Intellectual Freedom
The Public Good
Preservation
Professionalism
Service
Social Responsibility

Table 49. Values from ALA (2004).

Some immediate parallels are visible between the ALA values and those elicited in this study. *Access* and *Education* are distinct values in both frames, while *Service* and *Public Good* in the ALA list are realized in RDA through the User Needs values. Though *Internationality* was not among the more frequently expressed values in RDA, it reflects the *Diversity* value set out by ALA. *Intellectual Freedom* and *Preservation* hold further implications for library knowledge organizing standards such as RDA, though their manifestations in RDA's values are less

immediately clear. It should be noted that previous work, particularly Shoemaker's (2015), has called into question the relevance of the ALA values to knowledge organization work though, finding ALA's list to be both idealistic and slanted toward public services work. In attempting to cover all of librarianship, the ALA values may be too broad, and only indirectly related to the kind of work overseen by standards such as RDA.

An even broader presentation of values may be found in the *IFLA Code of Ethics for Librarians and other Information Workers* (Garcia-Febo et al., 2012). This brief framework is concerned with the ethical implications of information work in libraries, and enumerates aspirational values associated with ethical conduct in these settings (Table 50).

IFLA (2012)
Access to Information
Responsibility toward Individuals and Society
Privacy, Secrecy, and Transparency
Open Access and Intellectual Property
Neutrality, Personal Integrity and Professional Skills
Colleague and Employer/Employee Relationship

Table 50. Values from IFLA (2012).

Once again, the *Access* value in RDA is the most immediately reflected in the IFLA framework. Other entries in IFLA's framework function as clusters of related values, making comparisons less direct. For example, IFLA's Responsibility toward Individuals and Society encompasses equality, equitable access to services, cultural and linguistic respect, literacy, and the protection of minors. Certain values in RDA may be seen as instantiations of this larger concept, for example, *Internationality* and *Vernacular Language*, though there is not complete coverage of all the associated IFLA concepts. Other entries may be beyond the scope of standards such as RDA, specifically Colleague and Employer/Employee Relationship. Once again, the value of

privacy may be actively challenged in RDA, while complete neutrality may be an ideal that is simply not possible in library settings (Gregory & Higgins, 2013).

While organizations such as IFLA and ALA issue influential values statements, a number of individual authors have offered their own interpretations of the core values of library and information science; ongoing work by Koehler (2003, 2015) has examined these value lists in an attempt to distill pertinent commonalities. He found that most lists contain important references to intellectual freedom, privacy/confidentiality, intellectual property rights, neutrality, preservation of the cultural record, and equity of access (Koehler, 2015). A full list of values in this meta-inventory is provided in Table 51.

Koehler (2015)	
Confidentiality	Preservation of the Cultural Record/Stewardship
Cultural Diversity	Professional Neutrality
Democracy	Protecting Library Users' Right to Privacy/Confidentiality
Diversity of Opinion	Protection from Injury
Equality of Opportunity	Rationalism
Equity of Access	Recognition for One's Work
Faithfulness to Organizational, Professional, and Public Trust	Respect for the Autonomy of the Self and Others
Freedom and Self-Determination	Responsiveness to Social Responsibilities
Good Professional Service	Rights of Users, Fellow Professionals, the Profession, and Society
Information Literacy	Seek Justice or Fairness
Intellectual Freedom, Selection, and Censorship	Seek Social Harmony
Intellectual Property Rights and Fair Use	Service
Literacy	Skill Competence
Minimal Well-Being	Support for the Profession
Patron or Client Needs	

Table 51. Values and ethical principles from Koehler (2015).

In comparing to the RDA values frame, once again the *Access* value has a clear correlate in Equity of Access. RDA's User Needs values are well aligned with Good Professional Services,

Patron or Client Needs, and Service. Furthermore, it could be argued that the existence of library community standards such as RDA is a fulfillment of Support for the Profession. As with other frameworks, values given here may appear to be at odds with those elicited from RDA, including Protecting Library Users' Right to Privacy/Confidentiality, Diversity of Opinion, and Respect for Autonomy. Still others may lie beyond the scope of library knowledge organizing standards, for instance, Literacy or Minimal Well-Being.

Having reviewed relevant value frameworks from the knowledge organization and library and information science communities, it is apparent that the strongest overlaps with RDA's values occur around *Access* and other User Needs values. This adds further evidence to the underlying importance of this set of values. In fact, it is notable that these values tend to serve more terminal functions in RDA, rather than instrumental. Given this, it is possible that knowledge organization standards may embody the terminal values of their fields and communities, but how these values are achieved (instrumental values) are more varying, contextual, and idiosyncratic. Still other values in the above frameworks may be intentionally broad and vague, seeking to cover an entire field of practice. When instantiated into an actual, procedural standard, these values may take on more narrow, specific operationalizations. For example, RDA's *Internationality* value may serve as a manifestation of broader values such as diversity or universal usability. Finally, some important, recurring values in knowledge organization and library and information science frameworks carried no counterpart in RDA; major examples include concepts such as autonomy and privacy. The presence of some key values and the absence of others show that not all community values are embedded in standards, and that standards may be more conducive to certain values than others. Alternatively, this could suggest that some values are too difficult to actively implement in certain standards. The relative

absence of more “human” values in RDA raises these issues while offering further insight into the normative aspects of values in standards.

Human or moral values are those concerned with human well-being and empowerment; examinations of the library and information science field have often highlighted the importance of human values (Friedman, 1996; Branch, 1998; Bates, 1999; Gorman, 2015). Despite its prominence in the literature and presence in ALA’s statement of core values, privacy was found to be of little consideration in the text of RDA. In fact, only one explicit mention is made, occurring at **2.19.1.2, Recording Immediate Source of Acquisition of Item**: “Record the source from which the item was acquired, the date of acquisition, and the method of acquisition, if this information is not confidential.” Here, acquisition information such as the name of a previous owner may be withheld to protect personal privacy. In contrast, many other instructions in RDA have been criticized for their general neglect of personal privacy, including passages that disregard an individual’s choice for self-disclosure in divulging gender identity (Billey, Drabinski, & Roberto, 2014). Such conflicts raise questions about the role of knowledge organization standards in supporting human values in information. Should these values have a place in standards such as RDA? On the contrary, we must ask, could valuing privacy compromise other important values, for instance, the highly valued goal of *Access*? Conflicts such as these could explain the absence of otherwise important community values, and are worth deeper exploration.

Overall, results of the value analysis of RDA, particularly concerning *Access* and other User Needs values, show congruence with other knowledge organization and library and information science value frameworks. Agreement on these important, terminal values serves to make RDA more rhetorically convincing to these communities. Beyond this, however, RDA

shows value variations and even conflicts when compared to prominent community value statements. In the strictest sense, standards are intended to communicate and regulate an ideal or optimal reality for a community (Busch, 2000). In failing to communicate some important community values, is RDA less appropriate, less effective, or less convincing than it could be? Further addressing this issue requires a deeper understanding of relevant community values, where they come from, and when and how they are instilled. Focused examination of value construction and indoctrination in knowledge organization and library and information science communities of practice is one promising means of addressing this. Deeper understanding of the origins of community values can provide further context for understanding the role of standards such as RDA in enforcing and reinforcing values, and ultimately help ensure that desired values are upheld in standards.

6.4.4 Summary

Beyond addressing major research questions, findings from the present study enable a broader examination of the implications for the larger, related areas of study. For value theory, work presented here demonstrates the applicability of values as a useful analytical and comparative lens for standards. At the same time, findings suggest a necessary departure from traditional conceptions of value systems and the instrumental/terminal distinction when examining standards. Regarding the general study of standards, the present work affirms that standards are more than just documents; they are dynamic, community-based enactments. Furthermore, values are a useful and integral part of standards, and should be more actively considered in their design. Finally, in relation to the library and information science and knowledge organization communities, results here show that RDA embodies key community

values, even while others are absent or challenged. Within community standards and value statements, most agreement occurs around terminal values, with more instrumental values varying by setting. Despite their asserted importance, questions remain concerning the role of human values within standards for these communities.

6.5 Summary

Discussion presented in this chapter was organized around this study's three major research questions. What values are expressed, and to what extent, in the text of RDA? Data from this study revealed eight major categories of values, with Principle-Based values and those associated with User Needs being the most frequently occurring throughout the text. While *Access* in particular stands out as the final value, other considerations beyond frequency offer a more nuanced perspective on the relative importance of the values. How are values in RDA recognized and responded to by practitioners? Catalogers were keenly aware of values related to user needs, as well as values related to their respective contexts. Many contextual and other factors affected their perceptions and enactments of values, though compliance with controlled vocabularies and accurate recording of bibliographic data were common, value-based enactments of RDA. How are values communicated by standards for knowledge organization? This study yielded a set of 18 recurring communicative structures, which varied in their association with values. Most prominent were the relationships between directives and the *Consistency* value, and conditionals and the User Needs category of values. Other means of value communication beyond rhetorical structures are also important, including definition, assertion, and typography.

Proceeding out beyond the research questions, discussion also yielded implications for three larger intellectual areas within which this study was situated. For value theory and the

study of values, findings concerning RDA demonstrate the utility of values as an analytical lens for the study of standards and other community artifacts, as well as the applicability of traditional value dimensions. For the study of standards, research here highlights the importance and necessity of values within these documents, while introducing further considerations of their documental/enacted duality. For knowledge organization and library and information science, work with RDA shows that while key community values may be embedded in standards, others may be absent or challenged. Further consideration of community values, as well as the role of human values in knowledge organization, is warranted. The presence or absence of such values in standards shape how knowledge organization is carried out in various settings.

CHAPTER 7

CONCLUSION

7.0 Introduction

This chapter serves as a conclusion to the document, and is intended to recapitulate and highlight important aspects of the present study. This begins with a reintroduction of the purpose of the study, its background and objectives, and its overall methodological design. Results and findings are then summarized, including the broader implications of this work for the major research areas in which it was situated. Theoretical and practical contributions from this work are then reviewed, alongside a consideration of its limitations. This chapter concludes with a look toward future work intended to build off the design and findings from the present study.

7.1 Background & Objectives

Values are deeply held beliefs in the preferability of certain ways of acting or being (Rokeach, 1968). Systems of values are attributed to individuals and groups, but may also be embedded in their artifacts in influential but less obvious ways. Among technological artifacts, standards are a particularly compelling choice for value analysis as they represent and perpetuate community agreements on ideal practice. Little work has previously examined the role values play in standards, particularly those for knowledge organization, and how these values are interpreted and enacted by those who use these standards. Understanding the values associated with knowledge organization standards is a crucial step toward organizing and using knowledge and associated technologies more effectively, responsibly, and in line with community values.

Given this, I sought to design a study capable of eliciting values from such a standard, while at the same time examining the effects of these values.

The study of values has its origins in philosophy where it is known as value theory, referring not to a singular, formal theory, but rather, a discipline of inquiry (Orsi, 2015). Inquiry into values has since flourished in other domains, especially the social sciences (Clawson & Vinson, 1978). Within information science, values have been prominent in several streams of research, including professional ethics (Gorman, 2015; Koehler, 2015), information behavior (Lilley, 2012), and design (Friedman, Kahn, & Borning, 2002; Shilton, Koepfler, & Fleischmann, 2013). In all domains, the content-analytic tradition of studying values associated with artifacts is referred to as value analysis (White, 1951). Value analysis has been applied to a range of materials, from textbooks (Dhand, 1967) to tweets (Fleischmann et al., 2012), though prior to the present study, it had not been applied to knowledge organization standards.

Standards serve to enable collective human activity but are often taken for granted in the process, leading to difficulties in discerning their role and effects (Busch, 2000; Bowker et al., 2009). There exists a wealth of critical inquiry into the perspectives of standards and their implications, including foundational work by Bowker and Star (2000) and Lampland and Star (2009). Key to such work is the insight that standards are both documents and enactments, and both of these aspects must be explored (Palme & Pargman, 2009). Within information science, there exists a strong history of standardization, especially in cultural heritage settings such as libraries (Delsey, 1989). Ostensibly, these standards are premised on the value of access to information and the support of user needs, but how well they express these or other values had not yet been explored (Dobreski, 2017).

Despite the body of critical research on standards, very few studies have explicitly addressed the values associated with these documents and their enactments (Ransom, 2003; Young, 2003; Palme & Pargman, 2009). Attention to these values is critical, particularly for knowledge organization standards, which generate influential and widely used systems and data products. Among knowledge organizing settings, libraries presented a compelling option to conduct such an analysis due to their strong history of standardization and asserted community values (Gorman, 2015). Within this setting, the recently adopted *Resource Description and Access* (RDA), an influential, international standard guiding the creation of bibliographic records and data for the library catalog, represented a promising investigative opportunity.

Through an examination of RDA, the goal of the present study was thus to increase understanding of how values manifest in knowledge organization standards and how these values are enacted by practitioners in everyday applications. The primary subjects of interest in the study were both the knowledge organization standard RDA and the practitioners who work with this standard to generate data. The research was designed to address three major research questions:

RQ1: What values are expressed, and to what extent, in the text of RDA?

RQ2: How are values in RDA recognized and responded to by practitioners?

RQ3: How are values communicated by standards for knowledge organization?

To address these research questions, I designed and implemented a multistage, qualitative, exploratory study based on the strategies and findings from two prior, preliminary works. In planning the present study, I selected specific methods capable of addressing major research questions, while also suitable for dealing with challenges such as the difficulties

particular to values elicitation and the implicit nature of document interpretation. In the first phase of the present study, I performed two rounds of mixed/inductive content analysis, aimed at eliciting the values expressed by the text of RDA as well as the common communicative and rhetorical structures utilized by the document. The source of data for this phase was the text of the RDA standard, including the 38 chapters of the main text as well as the 13 appendices. Codes developed during this process were organized into two frames: one for values, and one for structures. In the second phase of the study, I conducted semi-open interviews with 20 RDA catalogers to reveal more about how the values in RDA are recognized and responded to in practice. Participants were recruited via professional listservs; criteria for inclusion in the study was the performance of RDA cataloging as part of job duties, previous consultation of the text of RDA itself, and the ability to speak English. Interviews took place over the phone or via Skype. Beyond general questions about their setting and work, participants were asked to read and respond to three excerpts from the text of RDA as well. Combined analysis of the results from both phases involved the finalization of coding frames, comparison of data within and between phases, and the development of larger themes related to cataloger backgrounds, settings, attitudes, and interactions with RDA.

7.2 Findings & Implications

In the first phase of research, value analysis yielded a preliminary frame of 39 distinct values expressed within the text of RDA; these values were arranged into seven major categories reflecting their common origins and functional relations to information resources and descriptions. The Principles-Based category, reflecting well-established principles of description along with RDA's asserted objectives and principles, was the most represented through

valuations in the text. This finding demonstrates that the text of RDA does indeed emphasize the concepts that it claims to value. Additional content analysis focused on communicative and rhetorical structures in the text yielded a frame of 18 distinct, recurring structures. These structures were identified through a combination of linguistic and typographical conventions, and were seen to vary in terms of rhetorical force. These findings showed that RDA communicates through a fairly well-defined set of structural conventions, while also suggesting some structures to be more innately valuating than others. A combined analysis of values and structures then looked for meaningful patterns in the way certain values are communicated in the text. Within the findings, different values were indeed observed to have different communication patterns in RDA, as realized through the previously identified structures. The most routine, directive structures were found to frequently co-occur with valuations of *Consistency*, suggesting this coupling as status quo in terms of how standards communicate uniformity. In contrast, the more idiosyncratic User Needs values were found to be more associated with conditional statements. These structures frequently asked the cataloger to consider the importance of particular user tasks while making a decision. This pattern suggests conditional directions in standards to be a key place in which more specific values beyond uniformity rise to the surface. Overall findings showed that certain structures are more conducive to conveying values, and may be more conducive to certain types of values in particular.

The second phase of research yielded data from the inductive analysis and value analysis of interviews with 20 RDA catalogers. Results of the inductive analysis revealed major themes which helped provide further context for the catalogers, their backgrounds, settings, and responsibilities. Overall, participants were an experienced group of catalogers, who saw access as a primary institutional goal which their work supported, though the purpose of this access

varied depending on setting. Overall, catalogers viewed RDA positively, particularly for its implications for access, though they were more critical of other aspects of the standard such as its language. Results of the value analysis of interviews led to the development of a new values category for the study's values frame, the Situational values, bringing the final frame to 45 values. The Situational values are seen to reflect the personal and practical settings and perspectives of the catalogers. Catalogers also mentioned many of the values previously elicited during the first phase, with a heavy focus on User Needs values, especially *Access*. A comparative value analysis then compared the results of first phase value analysis with the perspectives of the catalogers for three specific excerpts of RDA. Results showed a notable overlap, suggesting the presence of some commonality in value apprehension when working with RDA. Beyond this, however, important differences existed among catalogers. Of particular interest was the observation that only catalogers working with non-English materials were aware of *English Language* valuations in the sample passages. Differences such as these suggested a tendency for catalogers to humanize and add their own working situations to standards, and demonstrate the interpretive and contextual nature of working with these documents. Overall, findings offered evidence of cataloger perceptions of values in RDA, as well as potential value conflicts between the catalogers and this standard.

Following both phases, combined analysis of all the data yielded further findings of note. The finalized frame of values associated with RDA contained 45 values arranged into 8 major categories. Principle-Based values and those associated with User Needs carry particular emphasis, with *Access* arguably serving as the most important or “final” value. In interacting with RDA, catalogers were aware of values, particularly those related to user needs, as well as values related to their respective contexts. Many contextual and other factors, however, affected

their perceptions and enactments of values. Within RDA, values were communicated through 18 recurring rhetorical structures, which varied in their association with values. Most prominent were the relationships between directives and the *Consistency* value, and conditionals and the User Needs category of values. Other means of value communication beyond rhetorical structures are also important though, and require further investigation. Comparisons of findings with formal values statements in the library and information science community raised questions concerning the presence of legacy values and apparent challenges to human values such as privacy. In highlighting the inextricable place of values in standards and the importance of the dual documental/enacted nature of standards in understanding this, findings from this study hold significance to the broader areas of value theory and the general study of standards as well.

As shown in this study, standards are not neutral. They bear discernible ideals and priorities that can be uncovered through value analysis. As a knowledge organization standard, RDA exhibits a core set of values focused on traditional principles of description and the needs of users, with access holding particular importance. These values reflect those of the larger library and information science and knowledge organization communities, though not without certain value conflicts. Like all artifacts, standards have the capacity to both uphold and violate important community values. In encapsulating and enforcing community ideals, standards are a valuable site of investigation concerning communities, their values, and their ethics. While attention to these artifacts is critical, the dual documental/enacted nature of standards must not be overlooked, and value analysis of standards must encompass their enactment by practitioners in real working environments. As demonstrated here, value analysis represents an effective approach in uncovering key value commitments in standards and their enactments. The use of

such critical perspectives in evaluating our information practices and artifacts is crucial in upholding responsible, ethical approaches to information.

7.3 Contributions & Further Implications

A key contribution of this work has been the application of values as an analytic lens in the study of standards. Though multiple streams of research have long been focused on the perspectives, biases, and social implications of knowledge organization standards, this study is the first to employ values as a conceptual frame for these issues. This opens up further opportunities for the use of values as evaluative and comparative tools in the study of standards. Further value analysis of standards may build off the present study's findings concerning the rhetorical and genre aspects of procedural standards and their associations with value expression. Beyond illustrating that values are indeed embedded in standards, this work demonstrates that values are in fact a useful and integral part of standards, and the consideration of values should play an active role in standard design. This holds implications for VaD approaches, showing standards as a promising site of research, along with the resulting data and interfaces associated with these standards. Finally, this study also affirms that standards are more than just documents; they are value-driven, community-based enactments. This dual documental/enacted nature requires that subsequent value analyses of standards look beyond the documents and toward the communities and environments in which they are situated and enacted in order to more fully understand the roles and implications of values.

This work makes contributions to value theory and the study of values and ethics as well. While the presence of values in artifacts has been previously explored, this study offers new insight into the ways values manifest in a key community artifact: the standard. The application

of value analysis to this previously unexamined genre of document demonstrates the usefulness of this approach while also yielding findings on the particular ways in which these documents communicate value. At the same time, this work suggests several departures from traditional value theory when considering standards. Most importantly are: 1) the reframing of value systems as pools of values waiting to be prioritized upon enactment, and 2) the contextual nature of the instrumental/terminal value distinction in standards. Findings also contribute to the understanding of the relationship between asserted and functional values, and position standards as enactments that serve to mediate this relationship. In doing so, standards were shown to have unavoidable ethical implications. Standards such as RDA embody a conception of rightness for a practice or product, and can be taken as reflections of the ethical stances of their respective communities. Standards are thus an important site of investigation concerning ethics, particularly in the information domain. Ethical approaches to information and technology warrant the use of critical perspectives in evaluating our practices and artifacts. Standards serve as both practice and artifact, and as shown in this study, yield rich results when evaluated through value analysis.

This work also offers a unique contribution to the study of RDA and other knowledge organization standards. Much of the previous work examining RDA has been focused on its implementation. The value-analytic approach here represents a new stream of RDA research that is possible as this influential standard becomes more commonplace in more settings. The frame of values developed in this study provides new perspectives on RDA and its implications, while at the same time highlighting value mismatches and unintentional legacy values that must be further examined, particularly concerning the challenged international applicability of this standard. Comparison with asserted value statements, especially those from the library and information science communities, raise questions concerning the role of human values in RDA

and other standards. These findings add to ongoing discussions of information ethics, and are of assistance to the information profession in critically exploring the values associated with their work.

For practice, this study yields important implications for catalogers and other knowledge organization practitioners, with a particular focus on education. Though formal cataloger education and training was not an area deeply explored in the present study, its bearing on standard and value enactment was apparent. For practitioners, induction into community values is an important and perhaps overlooked aspect of education and training. Catalogers have already begun to develop an internalized, professional value system before approaching their work with standards such as RDA, indicating the importance of formative education. In both classroom teaching and on-the-job training of catalogers and other knowledge organization workers, community values should be addressed explicitly; doing so provides a structured opportunity to impart intended values that will help guide these workers in a practice that is heavily dependent upon judgment and decision making. Many decisions in the text of RDA hinge upon cataloger understanding of user needs and access, further indicating the importance of these concepts in education as well. To navigate these conditional instructions, catalogers must understand user information behavior and system functionality, as well as the difference between the two. As such, information behavior and general system design are crucial aspects of education and training for catalogers and all knowledge organization workers.

Notable implications are apparent for those who design, write, and maintain standards as well. Findings from this study show that values are an inextricable part of standards, and play a critical role in their acceptance among their intended communities. Standard designers should thus examine the values of the community they are designing for; they must determine which

values they are attempting to uphold, and which might be inadvertently threatened by certain design decisions. Such consideration, as well as the implementation of VaD research and practices, will allow standards to meet their functional objectives while fulfilling community values. Other value-aware practices in standards are recommended for making the role of values more apparent and effective. Standards should define the concepts that are important; these definitions may be more effective if they are within the instructive portions of the text, rather than relegated solely to the document's glossary. Standards should move beyond definition and also explain why a concept is important as well. This allows more consistent interpretation and enactment by practitioners and could also prevent "role creep," the unintentional enshrining of instrumental values as terminal ones. These practices can help practitioners keep sight of what is important when working with a standard.

7.4 Limitations

In the design and implementation of this study, I have attempted to mitigate potential limitations where possible. Even so, I recognize that important limitations remain. These must be considered when evaluating the findings and overall success of the present study. One general limitation stems from the overall scope of the study: in focusing on one particular standard, the generalizability of the results of this study is more limited. Though implications for additional knowledge organization standards can be seen, future study with other standards is required to more fully explore the generalizability. Additional limitations stem from my methodological choices as well as my own role as researcher, as described below.

As a method, value analysis is a specialized form of content analysis, designed to elicit values from documents and other communicative artifacts. This approach brings inherent

limitations, especially concerning what kinds of values may be elicited. It's possible that some influential values are too implicit in texts such as RDA to be fully recognized by the value analysis procedure used in this study. Larger, more diffuse values may also be missed by this fine-grained, heavily content-based approach. As a descriptive method, it is generally recommended that content analysis be combined with other methods in order to yield a fuller picture of underlying motivations (Creswell, 2009). Interviews served that role in this study, and though combination with additional methods could have provided stronger triangulation of results, opportunities for this exist in future work as described below.

Limitations of the study's other major method, qualitative interviews, are largely associated with the sample size and characteristics. In this study, purposive sampling was used to recruit eligible catalogers from various settings, with sample size determined by saturation of the values frame (Guest, Bunce, & Johnson, 2006). Recruitment through three professional listservs limited the overall reachable population, however, and voluntary participation raises the possibility that participants self-selected in systematic ways; participants in this study were, overall, experienced catalogers who felt confident in their use of RDA. Less experienced and confident catalogers may have been more reluctant to take part in this study. Though the values frame reached saturation during this study, systematic similarities among participants may have limited the emergence of further values, especially Situational values. I speculate that additional Situational values associated with RDA could be uncovered through exploration of more diverse practitioners and implementation settings. Due to some of the more homogenous aspects of the participant group, especially their focus on academic libraries, value enactment differences related to setting and work type were not fully explored here. Finally, while social desirability bias in the interviews was addressed through the use of indirect questioning, it is possible that

some level of bias remained in responses to other questions. For example, no participants mentioned the *Cost Efficiency* value in discussing their work, though it is possible that certain decisions are being made based on economic reasons. Overall, while data in this study offered only an initial exploration of the enactment of RDA and its values, this could be followed up on through future work involving additional interviews, observations, and other methods.

Finally, in employing a qualitative research design, I must acknowledge my own role as a research instrument and the limitations this brings. In exploring emerging questions and issues, qualitative research relies heavily on the researcher to interpret and make meaning of the results (Creswell, 2009). In the qualitative content analysis procedures, inductive development of codes was based solely on my understanding and interpretations of the text; this process was facilitated by my prior years of experience in working with and teaching RDA though. In administering interviews with my participants, I may have influenced their responses through my own presence and actions. Interview protocols concerning values pose particular problems in this regard, as interviewers can invoke a social desirability bias in subjects (Fleischmann et al., 2012). While this may not be entirely avoidable, I was able to address this through the use of indirect questioning concerning three excerpts from the text of RDA (Fisher, 1993). Lastly, the study's overall findings are based on my interpretations and ability to assemble and make meaning of the results.

Despite these limitations, this study presented a novel exploration of the presence and role of values in the RDA standard and its enactment by practitioners. In doing so, this study was intended as an initial, qualitative exploration into the intersection between standards and values. Future work in this area can build on the approach and findings presented here while taking these limitations into consideration.

7.5 Future Work

Numerous opportunities exist to build on findings from the initial exploration of values associated with RDA presented here. This study's values frame presents one such opportunity. Future work examining RDA or other knowledge organization standards may produce a more condensed frame of values, or provide further insight through alternate categorization and organization. Many opportunities exist for deeper study of a wider range of RDA practitioners as well. Though participant settings in the present study covered a range, it was not exhaustive, and further exploration of catalogers in other settings and with other work habits is warranted. Though excluded from the scope of the present study, the interpretations of RDA catalogers who do not ever consult the standard itself are also of interest in examining the larger implementation and implications of RDA. At the same time, cataloger interpretations of RDA and its values may differ during real-time, actual working conditions, suggesting the need for additional methods beyond those employed here. Additional information on RDA values and value enactment could thus be elicited through approaches such as:

- Surveys designed to reach a wider, more varied audience in a larger range of settings and with a larger range of working styles
- Observations and other ethnographic techniques to gain richer information on specific value enactments when working with standards

Moving beyond RDA into the wider range of knowledge organization standards, further application of value analysis to other standards is an obvious next step. Even more important, however, will be the opportunities for comparative analysis this will bring, including:

- Comparison of value systems for knowledge organization standards
- Elicitation and comparison of additional communicative structures in standards and their value affordances
- Cross-standard examination of the co-occurrences between specific values and structures in knowledge organization standards

As shown in the present study, value analysis offers a useful lens in evaluating technological artifacts and practices. Further development of this research approach, however, is contingent upon the expansion of our conception of value analysis beyond the standards, not only to their enactment by practitioners, but also to the wider value ecosystems in which standards are situated. Any domain can be viewed as a collision of multiple value systems, with values from individuals, institutions, and artifacts interacting in specific ways. While this study focused on one standard and its interpretation by those who use it, this represents an excerpt of a much larger ecology of values. The establishment and perpetuation of values may be traced back to institutions or standard designers, as well as forward into systems and users. Thus applications of value analysis to texts, practitioners, institutions, communities, domains, systems, and data all hold promise. Further study in this area can leverage other streams of values and ethics research in order to better understand how value interactions affect action and motivation within a community, and the specific role that standards play. The scope of such a research agenda appears daunting, though approachable next steps from the present study would include interviews with RDA authors and designers, as well as value analysis of the influential Library of Congress best practices guides and instructive documentation.

Of the additional areas in which to extend a broader value analysis of standards, metadata is of particular interest. Knowledge organization standards are used to generate large amounts of metadata, and though cultural heritage knowledge data is typically confronted by users in the context of traditional discovery tools such as catalogs, this domain has become increasingly interested and active in the Semantic Web (Marden et al., 2013). This data has been created under a particular community's value system, though linked data approaches to data publishing and dissemination have the potential to deliver this data into new settings, and to communities that may have different value systems. For instance, name authority data from the RDA standard contains personal information like birth date and gender that may be seen as a violation of privacy in other web settings. This data is now being incorporated into large-scale data projects such as VIAF and DBpedia (Lehmann et al. 2015), resulting in its combination with and presentation alongside data of different origins. As cultural heritage data becomes increasingly enmeshed with the wider online information environment, further understanding of metadata as a value-bearing artifact and the implications of this are critical. Next steps in including metadata in the broader value analysis of standards include:

- Value analysis of bibliographic records and other cultural heritage metadata, and comparison to values elicited from standards and practitioners
- Closer examination of cultural heritage metadata in the context of other online environments, especially DBpedia/Wikipedia
- Case study examination of BIBFRAME, the emerging semantic encoding standard for library metadata, including value analysis techniques
- Values and design approaches to building and evaluating linked data presentations and interfaces for cultural heritage metadata

7.6 Summary

The goal of this study was to increase understanding of how values manifest in knowledge organization standards, and how these values are responded to by practitioners. To achieve this, a multistage, qualitative, exploratory research approach was designed, using the knowledge organization standard RDA as a site of investigation. This study was designed around three major research questions: What values are expressed in the text of RDA? How are values in RDA recognized and responded to by practitioners? How are values communicated by standards for knowledge organization? Data was generated from content analysis and interviews, and included a frame of values associated with RDA and its enactment, a frame of communicative structures employed by the text, and inductive findings on cataloger attitudes toward and interactions with RDA. Findings showed that RDA upheld its design principles through the expression of principles-based values and values associated with user needs. These values were communicated through a set of routine structures such as directives and conditionals. In their usage of RDA, catalogers placed greater emphasis on values associated with users and their perspectives, and saw access as the most important value within this standard. Findings contribute to the study of RDA and knowledge organization, as well as the broader areas of value theory, the study of standards, and library and information science communities. The study faced limitations stemming from the selected methods and the interpretive nature of qualitative work, though these were mitigated as much as possible. Building from this study, future work will entail the expansion of value analysis into other aspects of working environments in which standards are situated, including the metadata produced by knowledge organization standards. This study demonstrated the utility of value analysis in approaching standards and their

implications, a methodology that warrants further consideration in the study of standards in all domains.

APPENDIX A

SUMMARY OF PRELIMINARY STUDY 1 (CONTENT ANALYSIS)

For this preliminary study, the main population of interest was the body of knowledge organization standards used in the cultural heritage domain. Following common definitions of cultural heritage (Trant, 2009; Vecco, 2010), I limited the study specifically to library, archive, and museum settings. Within each of these three settings, I then identified the current *de facto* descriptive knowledge organization standards through review of literature (Elings & Waibel, 2007; Joudrey et al. 2015). Four standards were selected: *Describing Archive: A Content Standard* (DACS) for archives, *Cataloging Cultural Objects* (CCO) for museums, and both *Angelo-American Cataloging Rules, 2nd Ed.* (AACR2) and *Resource Description and Access* (RDA) for libraries due to the current transitional status between the two standards. During content analysis work, sampling is often needed to help generalize results to a larger population of interest, with random sampling specifically recommended (Neuendorf, 2002). As the scope and coverage of these standards varies however, I chose to employ purposive sampling, with the goal of identifying and investigating only the most comparable, corresponding portions of each standard. In reviewing all of the elements prescribed by each standard, I attempted a semantic alignment of elements associated with works and persons. During alignment, I sought elements with only the most immediately comparable definitions (i.e., exact matches rather than close matches). Through this process, four comparable elements were determined: Title, Work Dates, Personal Name, and Personal Dates. Content analysis was limited to the rules associated with these four elements in each of the four standards (see Table 52).

Standard	Personal Name	Personal Date	Title	Dates (Work)
CCO	A.1.2.1-A.1.2.1.2.2	A.1.2.2.3	1.2.2	4.2.3
DACS	10.1-10.3	11.1	2.3	2.4
AACR2	22.1-22.3, 26.2	22.17	1.1A-1.1E	1.4F
RDA	9.2-9.2.3, 9.19	9.3.2-9.3.3	2.3	6.4, 2.7.6, 2.8.6, 2.9.6, 2.10.6

Table 52. Analyzed passages of the standards during preliminary phase.

Elo and Kyngäs (2008) indicate that a crucial, initial step in content analysis is deciding upon a unit of analysis. Initially, I had considered analyzing at the numbered rule level, i.e., treating each separately numbered passage as a discrete unit. However, even separately numbered sections in some standards could be quite lengthy, and express a number of different ideas or instructions. Ultimately, I chose the sentence level as the unit of analysis for each of the standards. Though this level of analysis is rather fine-grained, it worked well with the grammatical structures employed by each of the standards and allowed for a sufficiently detailed examination of potentially complicated passages. With the unit of analysis confirmed, I began a first round of open, inductive coding of the identified passages within each standard, focusing specifically on any perceived value expression. Coding was conducted in the NVivo software, with each sentence receiving as many codes as were applicable, or no codes if no value was perceived. During the process, I performed constant comparison of the data to the emerging codebook, developing code definitions as coding progressed and consulting them frequently. Code grouping, condensing, and structuring were also employed during this process in order to facilitate codebook development and later thematic analysis (Dey, 1993). Following the conclusion of the first round of coding, I returned to all sentences that have been coded as containing values and began a second coding task, this time looking for valuating structures

within these specific sentences (e.g., priority lists, options, alternatives). These codes were similarly developed using an open, inductive approach, constant comparison, and iterative structuring. Sentences were coded with as many valuating structure codes as applicable, or no code if none could be discerned.

APPENDIX B

CANDIDATE VALUE CODES FROM PRELIMINARY STUDY 1

Across the excerpts of all four standards, a total of 665 sentences were identified as expressing one or more values. This included 168 sentences in AACR2, 74 sentences in DACS, 191 sentences in CCO, and 232 sentences in RDA. Through a process of open, iterative coding, these sentences were assigned to one or more of 21 value codes and 4 sub-codes (see Table 53). As sentences could express multiple values, a total of 932 instances of value expression were identified within the 665 sentences.

Name	Description	Example
Access	Access is explicitly mentioned, or direct implications for end user access through indexing or retrieval are highlighted	"Date information must be formatted consistently to enable retrieval on dates." (CCO)
Accuracy	Accurately reflecting the nature of an item, what is found on the item and the order in which it is found	"Give the date as found in the item even if it is known to be incorrect." (AACR2)
Agent Intent	Recognizing and respecting the intent of and agent such as a creator	"Omit the surname and term of rank if the person does not use a term of rank or a substitute for it." (RDA)
Clarity	Emphasizes making sure information is clear or simple and that the user understands what they see	"The term(s) used to describe the nature of archival materials should be comprehensible to the institution's patrons." (DACS)
Common Usage	Preferring forms of terms as they are generally, commonly used	"If the forms of a name vary in fullness, choose the form most commonly found." (AACR2)
CU/frequency	The most frequently used in general	"If different forms are found in reference sources in a language preferred by the agency creating the data, choose the form that occurs most frequently." (RDA)
CU/relevant works	Usage in only relevant works, such as those associated with a person	"If the name of a person is found only in a romanized form in his or her works, use it as found." (AACR2)

CU/scholarly sources	Common usage as it appears in scholarly and reference sources	"It is required to record at least one name—the preferred name, which is the name used most often in scholarly literature to refer to the person or corporate body." (CCO)
CU/users	Usage by common users or in common discourse	"Commentary: Variant names are created to help users discover materials that have been classified under one name but a user might reasonably expect to find material using another name." (DACS)
Completeness	Emphasis on collecting/recording all information possible, recording information to the fullest extent	"In case of doubt about which is the latest form, choose the fuller or fullest form." (AACR2)
Conciseness	Preferring information recorded as concisely as possible, including abbreviating and use of succinct elements	"Titles should generally be concise and specific to the work." (CCO)
Consistency	Preference for doing something in a consistent manner	"Give elements of data in the order of the sequence of the following rules, even if this means transposing data." (AACR2)
Creative Responsibility	Recognizing and respecting the notion of creative responsibility	"If responsibility for the creation of the materials is dispersed among more than three persons, record the name of the individual whose material predominates." (DACS)
Differentiation	Clearly distinguishing entities or terms from each other	"Include the month or month and day if needed to distinguish one access point from another." (RDA)
English Language	Prioritizing English over any other languages	"Give any subsequent parallel title that is in English." (AACR2)
Institutional Preference	Prioritizing institution's preference, usually for language or format of an element	"Record dates in terms of the calendar preferred by the agency creating the data." (DACS)
Item in Hand	Prioritizes information from the item in hand as opposed to the work or variations among other manifestations	"In case of doubt, choose the spelling found in the first item catalogued." (AACR2)
Meaningfulness	The general meaningfulness of a piece of information	"In the absence of a meaningful formal title, a title must be devised." (DACS)
Prominence	Prioritizing information that is displayed more prominently or manifests more predominately	"If there is more than one parallel title proper, record the titles in the order indicated by the sequence, layout, or typography of the titles on the source or sources of information." (RDA)
Recency	Prioritizing information that is the most recent	"Visual resources collections should prefer the current owner's or repository's preferred title, if known." (CCO)
Reliability	An explicit preference for information from a reliable source	"Take the information from any reliable source, including the internal evidence of

		the materials being described." (DACS)
Something over Nothing	Recording any information is preferred to recording nothing, even if the information may be incorrect, but with no explicit implications for access	"Do not leave the date fields blank." (CCO)
Standards	Preferring information from a formal standard; referring to additional standards for guidance	"Birth and Death Dates should be controlled by rules in ISO or W3C standards (see Chapter 4: Stylistic, Cultural, and Chronological Information)." (CCO)
Vernacular Language	Prioritizing a vernacular language over any other languages	"For persons active after that date, choose the form in the person's native or adopted language." (RDA)
Western Culture	Prioritizing or giving particular attention to aspects of Western culture, such as calendars, systems of religion or government	"For Earliest and Latest Dates, translate the dates into the proleptic Gregorian calendar." (CCO)

Table 53. Values expressed in descriptive standards.

APPENDIX C

CANDIDATE VALUATING STRUCTURE CODES FROM PRELIMINARY STUDY 1

The 665 sentences coded as expressing one or more values during the initial round of content analysis were subjected to a second round of content analysis, focusing specifically on the grammatical or functional structure of these sentences. Through a process of iterative, open coding, 14 different, non-exclusive structures were noted (see Table 54). Of the 665 sentences, 658 of them displayed a recognizable structure: 167 sentences in AACR2, 72 sentences in DACS, 191 sentences in CCO, and 228 sentences in RDA. As sentences could exhibit multiple structures, a total of 734 structures were noted within these sentences.

Structure	Definition	Example
Alternative	Offers an alternative to a preceding instruction, which may or may not be taken	"Alternative: Choose a well-accepted form of name in a language and script preferred by the agency" (RDA)
Commentary	Includes explicit commentary, as well as definitional passages and passages meant to explain concepts or practices to the reader	"The terms of rank in the United Kingdom peerage are duke, duchess, marquess (marquis), marchioness, earl, countess, viscount, viscountess, baron, and baroness." (AACR2)
Discouragement	Discourages but not does forbid something	"Expression of dates as all numerals is discouraged due to the differing conventions in the order of information." (DACS)
Do/Must/Should	States the following is to be done, must be done, or should be done; it is required to do this	"Choose the name used most often in authoritative sources and scholarly literature." (CCO)
Do Not	States the following is not to be done, should be omitted, or avoided	"Do not record a date for naturally occurring objects that have not been packaged for commercial distribution." (AACR2)
Encouragement	Suggests, encourages, or recommends, but does not prescribe or require something	"Consistent style, grammar, and syntax are recommended." (CCO)
Example	Gives an example, with or without using the phrase "for example"	"Titles for well-known works commonly become authoritative through publications and scholarship (for example, Mona Lisa)." (CCO)

Exception	An exception to a preceding instruction	"Exception: Inaccuracies. For a serial or an integrating resource, correct obvious typographic errors in the title proper." (RDA)
Footnotes	Footnotes or endnotes appearing in the text	"[1] The devised title should not be mistaken for a statement or abstract of the content of the unit being described; the devised title simply names the unit as succinctly as possible." (DACS)
If Important	States the following is to be done if the cataloger decides it is important	"For an updating loose-leaf, supply the date of the last update if considered important." (AACR2)
If Possible	Urges to do something where or if at all possible	"Use the following syntax: YYYY-MM-DD (year, month, day, separated by dashes), if possible." (CCO)
If, Then	Conditional directions following and if this, then do that pattern; may contain multiple conditions to be met	"If such a name does not convey the idea of a person, add in parentheses a suitable designation in English." (AACR2)
Option	Passages offering an optional instruction; presents options that catalogers or institutions may do without explicit conditionals; may present a list of options from which any may be chosen	"Optionally, record pseudonyms and other identities assumed by a person as variant names." (DACS)
Priority List	Presents several options to be taken in the order given	"Determine a preferred name for person from the following sources (in order of preference): a)the preferred sources of information (see 2.2.2) in manifestations associated with the person; b)other formal statements appearing in manifestations associated with the person; c)other sources (including reference sources)." (RDA)

Table 54. Valuating structures in descriptive standards.

APPENDIX D

SUMMARY OF PRELIMINARY STUDY 2 (OBSERVATIONS)

This preliminary study was conducted in conjunction with a separate study headed by Dr. Rachel Clarke of Syracuse University. This research project was designed to explore the concept of repertoire in library cataloging, and was focused specifically on knowledge organization workers in library settings. Thus, my observation data only includes practitioners working with AACR2 and RDA; practitioners working with DACS or CCO (archive and museum settings) were not included. Given the difficulty in establishing and accessing the total population of interest, convenience sampling was employed in recruiting participants. Criteria for participation included general regional proximity to Central New York, employment in a professional capacity in a library, and performance of cataloging tasks as 50% or more of regular duties. Staff directories for library institutions in the regional area were reviewed in order to identify persons working in cataloging, and recruitment occurred through directed emails to these individuals. Response to the recruitment email and participation in the study were voluntary. Though sample size in an exploratory, qualitative study is often dictated by saturation (Guest, Bunce, & Johnson, 2006), no specific sample size was specified or sought during this preliminary study. Due to its association with a larger, separate study, all recruitment and study protocols for the observation phase were reviewed and approved by the IRB.

During the observation sessions, the lead researcher and I were present with the participant in their workspace. Participants were asked to carry out their normal cataloging duties for up to 1 hour, while narrating their actions. Researchers prompted for additional information at times as necessary, and took notes during the process. Subsequent to the sessions, I transcribed

the audio files, and entered these as textual documents into my installation of the analysis software NVivo. My researcher notes from each session were also entered as documents within NVivo, with a separate document for each participant. The other researcher's notes were not included in my analysis conducted for this preliminary study.

My analysis focused on session transcripts and my personal researcher notes taken during sessions. During analysis I examined two things in particular: interactions with standards, and expressions of value. Interactions with standards were indicated within my researcher notes, and inductively coded during the analysis process. Example observations here include direct use of the text of a standard, use of a secondary source or cheat sheet, and reliance on memory of a standard. Any relevant verbal expression within the transcript data was also coded with an interaction type. In coding for value expressions, I utilized a mixed approach, relying on the previously constructed values codebook from the content analysis phase, but developing new codes as necessary. Working at the sentence level, I coded transcript data for any perceived expression of value, focusing particularly on passages with explicit valuations. Examples include expressions such as, "This is important because..." or "I always do this because..." New, inductively developed value codes were arranged into the values codebook as needed.

APPENDIX E

INTERACTION TYPES FROM PRELIMINARY STUDY 2

Five participants took part in the observation sessions. Participants were all full-time employees in library settings; three worked in academic institutions (P2, P4, P5), one worked in a public institution (P1), and one worked for a K-12 school system (P3). All participants cataloged with RDA (P1, P4, P5), AACR2 (P3), or both (P2). Their years of experience ranged from 1 to over 30. Three participants were female and two were male.

Coding of the observation notes and session transcripts revealed relatively few interaction types. Five distinct interaction types were witnessed, with a sixth interaction type, “*Consults standard directly*,” included for reference (see Table 55).

Interaction Types	Participants
Consults standard directly	none
Works from memory of standard	P1, P2, P3, P4, P5
Uses pre-existing records as source/template	P1, P2, P3, P5
Uses pre-existing template	P3, P4
Consults listservs for standard information	P2
Uses best practices documentation	P5

Table 55. Participants’ interactions with descriptive standards.

APPENDIX F

INTERVIEW PROTOCOL



SCHOOL OF INFORMATION STUDIES
343 Hinds Hall, Syracuse, New York, 13244

Values in Knowledge Organization Standards: A Value Analysis of RDA: Interview Protocol

In this interview, I am interested in learning more about values of the cataloging standard RDA, as interpreted by catalogers. Values are basically things that are important, or strong preferences. Things like happiness, wealth, and efficiency may all be seen as values, for example.

During the interview, I'll ask three main sets of questions: first about your general professional background, then about cataloging in general, and finally we'll look at three specific passages from RDA together and discuss.

Feel free to speak in your normal, working terminology. I'm comfortable with cataloging terms, and I'll ask if I need any clarification. You are not being tested or quizzed. During this interview, there are no right or wrong answers. There is a range of ways in which catalogers approach their work. I'm interested in hearing your thoughts and practices.

General Questions

Could you briefly describe your cataloging background to me? What general cataloging work have you performed during your career (original, copy, authorities, training, supervision), and for how long?

Briefly describe your current position and responsibilities.

How do you feel your position supports the goals of your institution?

Cataloging Questions

When were you trained on RDA, and how?

How often do you consult the text of RDA, and under what circumstances? Do you consult other documentation about RDA (best practices, cheat sheets)?

Why do you think cataloging is an important task?

What do you think makes an RDA record good?

RDA Questions

I've provided you with the text of three passages of RDA. Next, we are going to read through these, and then I am going to ask you a few questions about each one

Passage #1: This passage is from chapter 3, which concerns describing carrier aspects of a resource.

3.1.4.3 Recording Predominant Carrier Type and Extent in General Terms

For a manifestation consisting of many different types of carriers, record:

- a) the predominant carrier type ([3.3](#))

and

- b) the extent of the manifestation as a whole, describing the units as *various pieces* (see [3.4.1.5](#)).

EXAMPLE

sheet

27 various pieces

Predominant carrier type and extent recorded using a general term

Record details of the pieces in a note if considered important for identification or selection (see [3.21.2.3](#)).

Optional Omission

If the number of units cannot be readily ascertained or approximated, omit the number.

EXAMPLE

sheet

various pieces

Predominant carrier type and extent recorded using a general term, omitting the number of pieces

Optional Addition

If the carriers are in a container, name the container and record its dimensions (see [3.5.1.5](#)).

EXAMPLE

sheet

42 various pieces

Predominant carrier type and extent recorded using a general term

box 20 × 12 × 6 cm

Dimensions of the container

For instructions on recording extent for a comprehensive description of a collection, see [3.4.1.11](#).

Questions for Passage #1:

Can you briefly explain this passage in your own words?

What is prioritized in this passage? What gets deprioritized? What specifically does RDA emphasize about the record creation process here?

Passage # 2: This passage is from the chapter on corporate bodies. This specific rule concerns preferred names for corporate bodies.

11.2.2.5 Different Forms of the Same Name

This general instruction applies to a name of corporate body that appears in different forms in manifestations associated with this body.

When appropriate, also apply these special instructions:

spelling (see [11.2.2.5.1](#))

language (see [11.2.2.5.2](#))

international bodies (see [11.2.2.5.3](#))

conventional name (see [11.2.2.5.4](#)).

If variant forms of the name are found in manifestations associated with the body, choose the name that appears in the preferred sources of information (see 2.2.2).

Variant forms do not include changes of name, i.e., names that the body has abandoned in the past or adopted for the future. For a change of name, see 11.2.2.6.

If variant forms of the name appear in the preferred source of information, choose the form of the name that is presented formally. If no form is presented formally, or if all the forms are presented formally, choose the most commonly found form of the name.

If there is no most commonly found form of the name, choose a brief form of the name. The brief form may be an initialism or an acronym. The brief form must be sufficiently specific to differentiate the body from others with the same or similar brief names.

EXAMPLE

AFL-CIO

not American Federation of Labor and Congress of Industrial Organizations

American Philosophical Society

not American Philosophical Society, Held at Philadelphia, for Promoting Useful Knowledge

Euratom

not European Atomic Energy Community

Zhongguo di zhi ke xue yuan

not Zhongguo di zhi ke xue yan jiu yuan

Maryknoll Sisters

not Congregation of the Maryknoll Sisters of St. Dominic

EuroSSC

not European Conference on Smart Sensing and Context

If there is no brief form of the name that is specific enough to differentiate two or more bodies with the same or similar names, prefer a form found in reference sources over the official form.

EXAMPLE

Metropolitan Applied Research Center

Official name. Brief form sometimes used by the center, MARC Corporation, is the same as the name of another body located in New York

Variant names. Record other forms of the name as variant names (see 11.2.3).

Questions for Passage #2:

Can you briefly explain this passage in your own words?

What is prioritized in this passage? What gets deprioritized? What specifically does RDA emphasize about the record creation process here?

Passage #3: This passage is from Appendix F, which provides additional instructions on choosing forms of names. This specific rule concerns Arabic alphabet names made of multiple parts.

F.1.1.2 First Element

For a name made up of a number of parts, record the part or combination of parts by which the person is best known as the first element of the preferred name. Determine this from reference sources. When there is insufficient evidence available, record the first part of the name as the first element.

Variant names. Record other forms of the name as variant names by applying the following instructions, as applicable:

- a) record a form of name using another part as the first element if the name might reasonably be searched by that part
- b) record a form of name resulting from a different transliteration, if considered important for identification or access (see [9.2.3.9](#)).

Questions for Passage #3:

Can you briefly explain this passage in your own words?

What is prioritized in this passage? What gets deprioritized? What specifically does RDA emphasize about the record creation process here?

Final Question

If you had to summarize RDA and its instructions in one sentence, what would you say?

APPENDIX G

RECRUITMENT MATERIALS

Values in Knowledge Organization Standards: A Value Analysis of RDA: Recruitment Email

Barbara H. Kwaśnik · bkwasnik@syr.edu

Brian Dobreski · bjdobres@syr.edu

Recruitment Email Script – for Listserv Distribution

Syracuse University's School of Information Studies is currently seeking catalogers to participate in a research study.

The study, "Values in Knowledge Organization Standards: A Value Analysis of RDA," is designed to reveal practitioner perspectives on the values associated with the cataloging standard RDA. Participants will take part in one-on-one interview over the phone or Skype, during which they will be asked questions about the RDA standard and about specific passages of RDA that will be provided during the interview. Participation will require about 45 minutes of time, and participants may receive an Amazon gift card valued at up to \$20 at the conclusion of the session. All information recorded during the session will be kept confidential.

We are seeking participants who perform cataloging of library materials using the RDA standard, and who have consulted the text of RDA directly (as opposed to only secondary documentation). If you are eligible and are interested in participating, or would like further information about the study, please contact the student investigator Brian Dobreski (bjdobres@syr.edu), or the faculty advisor Barbara Kwaśnik (bkwasnik@syr.edu).

Thank you for your consideration,

Brian Dobreski
Barbara Kwaśnik
Syracuse University School of Information Studies

We will request distribution of this message on the following listservs:

RDA-L, hosted by the American Library Association
OLAC-L, hosted by OCLC
OCLC-CAT, hosted by OCLC

APPENDIX H

CONSENT FORM



SCHOOL OF INFORMATION STUDIES
343 Hinds Hall, Syracuse, New York, 13244

Values in Knowledge Organization Standards: A Value Analysis of RDA

To be read aloud to participants prior to all interviews:

My name is Brian Dobreski, and I am a doctoral candidate at Syracuse University. Under the supervision of my advisor, Barbara H. Kwaśnik, I am inviting you to participate in a research study. Involvement in the study is voluntary, so you may choose to participate or not. This consent procedure will explain the study to you, and please feel free to ask questions about the research if you have any. I will be happy to explain anything in detail if you wish.

I am interested in learning more about values of the cataloging standard RDA, as interpreted by catalogers. You will be asked to participate in a one-on-one interview, over the phone or Skype, in which you will be asked questions about RDA and specific passages of this document. This will take approximately 45 minutes of your time. All information will be kept confidential.

I will assign a number to your responses, and only I and my advisor will have the key to indicate which number belongs to which participant. In any articles I write or any presentations that I make, I will use a made-up name for you, and I will not reveal details or I will change details about where you work and your job.

I request your permission to audio record the interview. Only I and my advisor will have access to the audio recordings. I will transcribe the audio recordings and use the transcripts to help with data analysis. After transcription, the audio recordings will be deleted.

For participation in this study, you will receive an Amazon gift card valued at up to \$20. If you begin the interview session but decide to withdraw partway through, you will be compensated with an Amazon gift card at a pro-rated rate: for participation of more than 25 minutes, then you will receive the full amount. For participation of less than 25 minutes, you will receive \$10. If you withdraw before the beginning of the interview session, no compensation will be awarded.

The benefit of this research is that you will be helping us to understand values associated with the RDA standard and the data it is used to produce. This information may help library data be better and more responsibly utilized, and may improve cataloging education and training. Personally, you may benefit by gaining insight into your working practices and professional priorities.

The risks to you of participating in this study are as follows: there is a small chance that processes or opinions shared during the interview, if disclosed, could be embarrassing or affect your employability and reputation in the professional community, depending on the nature of your responses. These risks will be minimized by the following procedures: 1) offering clear information about the risks as part of the informed consent protocol, thus allowing you to opt out of the risk; 2) explaining that there are no right or wrong answers to any questions asked during the interview; 3) anonymizing the actionable data through the removal of your personally identifying information; and 4) keeping the data confidential by storing identifiable data on protected computers and networks and limiting access to the two researchers.

If you do not want to take part, you have the right to refuse to take part, without penalty. If you decide to take part and later no longer wish to continue, you have the right to withdraw from the study at any time, without penalty.

If you have any questions, concerns, or complaints about the research, please contact Brian Dobreski at bjdobres@syr.edu or 315-443-4905. If you have any questions about your rights as a research participant, you have questions, concerns, or complaints that you wish to address to someone other than the investigator, or if you cannot reach the investigator, please contact the Syracuse University Institutional Review Board at 315-443-3013.

Do you have any questions?

Are you age 18 or older?

Do you wish to participate in this study?

Do you agree to be audio recorded, knowing this is not required for participation in this study?

How can I provide you with a copy of this consent script?

APPENDIX I**VALUE CO-OCCURRENCE DATA**

Table 56 presents the full matrix of value co-occurrences observed within the text of RDA. Values co-occurring only with themselves are excluded from this table. The raw data here supplements the fuller discussion and consideration of value co-occurrences in section 4.1.8 of this document.

	Any Source	Cataloger Judgment	Clarity	Completeness	Conciseness	Consistency	Continuity	Cost Efficiency	Creative Responsibility	Differentiation	Earliest	English Language	Flexibility	Formality	Institutional Preference	Item in Hand	Originating Language	Prominence	Recency
Any Source	243	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6	0	0	0
Cataloger Judgment	0	5	0	0	0	0	0	0	0	0	0	0	0	0	4	0	0	0	0
Clarity	0	0	390	0	36	9	0	0	2	8	0	55	0	0	2	1	6	0	0
Completeness	0	0	0	38	0	1	0	0	1	0	0	0	0	0	0	0	1	0	0
Conciseness	0	0	36	0	126	5	0	0	0	1	0	7	0	3	1	0	2	2	0
Consistency	0	0	9	1	5	588	0	0	0	1	1	13	0	0	0	1	3	1	0
Continuity	0	0	0	0	0	0	11	0	0	0	0	0	0	0	0	0	0	0	0
Cost Efficiency	0	0	0	0	0	0	0	2	0	0	0	0	1	0	0	0	0	0	0
Creative Responsibility	0	0	2	1	0	0	0	0	58	0	0	0	0	0	0	1	0	6	0
Differentiation	0	0	8	0	1	1	0	0	0	143	0	2	0	0	0	0	0	0	0
Earliest	0	0	0	0	0	1	0	0	0	0	30	0	0	0	0	19	0	1	1
English Language	0	0	55	0	7	13	0	0	0	2	0	111	0	0	0	0	0	1	0
Flexibility	0	0	0	0	0	0	0	1	0	0	0	0	9	0	0	0	0	0	0
Formality	0	0	0	0	3	0	0	0	0	0	0	0	0	12	0	4	0	0	0
Institutional Preference	0	4	2	0	1	0	0	0	0	0	0	0	0	0	130	2	8	1	0
Item in Hand	6	0	1	0	0	1	0	0	1	0	19	0	0	4	2	165	0	4	3
Originating Language	0	0	6	1	2	3	0	0	0	0	0	0	0	0	8	0	99	2	0
Prominence	0	0	0	0	2	1	0	0	6	0	1	1	0	0	1	4	2	62	0
Recency	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	3	0	0	48
Representation	0	0	4	0	0	3	0	0	1	1	0	1	0	1	0	4	0	1	0
Source Attribution	1	0	2	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0
Standards	0	0	0	0	0	6	7	1	0	0	0	0	2	0	2	0	0	0	0
Usage	0	0	0	0	0	3	0	0	0	1	0	0	0	1	5	1	1	0	0
Agents	0	0	1	0	0	0	0	0	0	0	2	2	0	0	3	3	2	1	0
Frequency	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1
Preferred source	0	0	1	0	0	0	0	0	1	0	0	0	0	1	0	3	0	4	0
Relevant works	0	0	2	1	0	0	0	0	4	2	0	0	0	0	5	0	5	2	1
Scholarly sources	0	0	0	1	0	0	0	0	5	1	1	0	0	0	12	5	10	1	1
Users	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
User Needs	0	0	5	0	0	0	0	0	0	4	0	0	1	0	3	1	0	0	0
Access	0	0	4	1	1	0	0	0	3	0	0	0	0	0	0	0	0	0	4
Explore	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Find	0	0	1	0	0	0	0	0	0	5	0	0	0	0	0	0	0	0	0
Identification	1	0	13	0	4	0	0	0	0	13	0	0	0	0	1	0	0	0	4
Obtain	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0
Selection	1	0	0	0	2	0	0	0	0	4	0	0	0	0	0	0	0	0	0
Understand	0	0	1	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0
Western Culture	0	0	0	0	2	9	0	0	1	1	0	2	0	0	1	0	0	0	0

Table 56. Value co-occurrence data.

	Representation	Source Attribution	Standards	Usage	Agents	Frequency	Preferred source	Relevant works	Scholarly sources	Users	User Needs	Access	Explore	Find	Identification	Obtain	Selection	Understand	Western Culture
Any Source	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0
Cataloger Judgment	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Clarity	4	2	0	0	1	0	1	2	0	0	5	4	0	1	13	0	0	1	0
Completeness	0	0	0	0	0	0	0	1	1	0	0	1	0	0	0	0	0	0	0
Conciseness	0	0	0	0	0	0	0	0	0	0	0	1	0	0	4	0	2	0	2
Consistency	3	0	6	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	9
Continuity	0	0	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cost Efficiency	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Creative Responsibility	1	0	0	0	0	0	1	4	5	0	0	3	0	0	0	0	0	0	1
Differentiation	1	0	0	1	0	0	0	2	1	0	4	0	0	5	13	3	4	3	1
Earliest	0	0	0	0	2	0	0	0	1	0	0	0	0	0	0	0	0	0	0
English Language	1	1	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	2
Flexibility	0	0	2	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
Formality	1	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
Institutional Preference	0	1	2	5	3	0	0	5	12	1	3	0	0	0	1	0	0	0	1
Item in Hand	4	0	0	1	3	0	3	0	5	0	1	0	0	0	0	0	0	0	0
Originating Language	0	0	0	1	2	1	0	5	10	0	0	0	0	0	0	0	0	0	0
Prominence	1	0	0	0	1	0	4	2	1	0	0	0	0	0	0	0	0	0	0
Recency	0	0	0	0	0	1	0	1	1	0	0	4	0	0	4	0	0	0	0
Representation	149	0	0	0	0	0	1	2	0	0	0	2	0	0	1	0	0	0	0
Source Attribution	0	102	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0
Standards	0	0	84	0	0	0	0	0	0	0	2	0	1	2	2	0	0	0	0
Usage	0	0	0	39	1	0	0	2	0	0	0	0	0	0	0	0	0	0	1
Agents	0	0	0	1	37	0	0	1	3	0	0	0	0	0	0	0	0	0	0
Frequency	0	0	0	0	0	9	0	3	3	0	0	0	0	0	0	0	0	0	0
Preferred source	1	0	0	0	0	0	15	3	2	0	0	0	0	0	0	0	0	0	0
Relevant works	2	0	0	2	1	3	3	64	39	4	0	0	0	0	0	0	0	0	1
Scholarly sources	0	0	0	0	3	3	2	39	90	4	0	0	0	0	0	0	0	0	0
Users	0	0	0	0	0	0	0	4	4	8	0	2	0	0	1	0	0	0	0
User Needs	0	0	2	0	0	0	0	0	0	0	24	0	1	6	5	1	4	3	0
Access	2	1	0	0	0	0	0	0	0	2	0	181	0	0	129	0	4	0	0
Explore	0	0	1	0	0	0	0	0	0	0	1	0	1	1	1	0	0	0	0
Find	0	0	2	0	0	0	0	0	0	0	6	0	1	18	7	3	4	6	0
Identification	1	1	2	0	0	0	0	0	0	1	5	129	1	7	381	4	140	4	0
Obtain	0	0	0	0	0	0	0	0	0	0	1	0	0	3	4	5	4	1	0
Selection	0	0	0	0	0	0	0	0	0	0	4	4	0	4	140	4	142	2	0
Understand	0	0	0	0	0	0	0	0	0	0	3	0	0	6	4	1	2	6	0
Western Culture	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	67

Table 56 continued. Value co-occurrence data.

APPENDIX J

PARTICIPANT DEMOGRAPHIC DATA

Table 57 presents a full view of the demographic information collected on participants of this study. This data serves as a supplement to the discussion and consideration of participants and their demographics presented in section 5.1.1 of this document.

	Gender	Total Experience (years)	RDA Experience (years)	Setting	Country	Focus	Supervisory Experience	Training Experience	Authority Work
P1	F	17	5	academic	U.S.	serials	X	X	NACO
P2	F	6	4	national	non-U.S.	general	X		non-NACO
P3	F	25	3	museum	non-U.S.	monographs, serials		X	NACO
P4	M	35	5	academic	U.S.	authorities only		X	NACO
P5	F	13	8	academic	U.S.	music	X	X	NACO
P6	M	11	2	academic	U.S.	general			none
P7	F	4	4	academic	U.S.	general, special collections	X		NACO
P8	F	8	8	public	U.S.	general		X	NACO
P9	M	20	7	academic	U.S.	monographs, special collections			NACO
P10	F	10	7	public	U.S.	special collections	X	X	none
P11	M	7	2	public	U.S.	general			none
P12	F	13	5	academic	U.S.	special collections		X	NACO
P13	F	20	7	academic	U.S.	media			none
P14	F	25	7	academic	U.S.	special collections		X	NACO
P15	F	22	5	academic	U.S.	monographs		X	NACO
P16	M	8	5	academic	U.S.	monographs		X	NACO
P17	M	20	8	academic	U.S.	general		X	NACO
P18	M	4	4	national	U.S.	media			NACO
P19	F	18	6	academic	U.S.	children's materials	X	X	NACO
P20	M	5	5	academic	U.S.	monographs, music	X	X	NACO

Table 57. Full view of participant demographics.

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VITA

BRIAN DOBRESKI

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RESEARCH FOCUS

Socially informed approaches to knowledge organization through the critical examination of practices, perspectives, and standards

EDUCATION

- | | | |
|------|--|---------------------|
| 2019 | Ph.D., Information Science and Technology
Dissertation: "Values in Knowledge Organization Standards: A Value Analysis of Resource Description and Access (RDA)"
Advisor: Barbara Kwaśnik | Syracuse University |
| 2006 | Master of Science in Library and Information Science | Syracuse University |
| 2004 | Bachelor of Music | Nazareth College |

PUBLICATIONS

Peer-Reviewed Journals

- 2018 **Dobreski, B.** & Huang, Y. Ontology informed design to advance developers' informal online learning. *Educational Technology & Society*, 21(3), 23-34.
- Rossini, P., Stromer-Galley, J., Kenski, K., Hemsley, J., Zhang, F., & **Dobreski, B.** The relationship between race competitiveness, standing in the polls, and social media communication strategies during the 2014 US gubernatorial campaigns. *Journal of Information Technology & Politics*, 1-17.
- 2017 **Dobreski, B.** & Kwaśnik, B.H. Changing depictions of persons in library practice: Spirits, pseudonyms, and human books. *Knowledge Organization*, 44(8), 656-667. **Bob Williams History Fund Best Paper Award.**
- 2016 Qin, J., **Dobreski, B.**, & Brown, D. Metadata and reproducibility: A case study of gravitational wave research data management. *International Journal of Digital Curation*, 11(1), 218-231.

Peer-Reviewed Conference Proceedings

- 2018 **Dobreski, B.** Toward a value-analytic approach to information standards. In *ASIS&T 2018: Proceedings of the 81st ASIS&T Annual Meeting*. Silver Spring, Maryland: American Society for Information Science and Technology.
- 2017 **Dobreski, B.** Authority and universalism: conventional values in descriptive catalog codes. In *Proceedings from North American Symposium on Knowledge Organization, 2017*. Seattle, Wash.: University of Washington.
- Dobreski, B. & Kwaśnik, B.H.** Changing depictions of persons in library practice: Spirits, pseudonyms, and human books. In *Proceedings of the ISKO UK Fifth Biennial Conference, Sept. 11-12, 2017, London. Conference Best Paper Award*.
- Huang, Y., **Dobreski**. Applying motivational design to support informal learning of universal design for web applications. In *iConference 2017 Proceedings*. New York, NY: ACM Press.
- Huang, Y., **Dobreski, B.**, & Xia, H. Human library: understanding experience sharing for community knowledge building. In *The 20th ACM Conference on Computer Supported Cooperative Work and Social Computing*. ACM.
- 2016 Qin, J., **Dobreski, B.**, & Brown, D. Metadata and reproducibility: a case study of gravitational wave research data management. Paper presented at 11th International Digital Curation Conference, Feb. 22-25, Amsterdam.
- Rossini, P.G.C., Stromer-Galley, J., **Dobreski, B.**, Kenski, K., Hemsley, J., Semaan, B., & Tanupabrungsun, S. 2014 gubernatorial online campaigns in context: the interplay between public opinion polls and campaign communication strategies on Facebook and Twitter. Paper presented at 69th Annual Conference of the World Association for Public Opinion Research (WAPOR), May 10-12, Austin, Tex.
- 2015 Huang, Y., **Dobreski, B.**, Deo, B. B., Xin, J., Barbosa, N. M., Wang, Y., & Bigham, J. P. CAN: composable accessibility infrastructure via data-driven crowdsourcing. In *Proceedings of the 12th Web for All Conference*. New York, NY: ACM.

Peer-Reviewed Conference Posters

- 2017 **Dobreski, B. & Semaan, B.** Blogging as recovery: the use of blogs by survivors of military sexual trauma. In *ASIS&T 2017: Proceedings of the 80th ASIS&T Annual Meeting*. Silver Spring, Maryland: American Society for Information Science and Technology.
- Dobreski, B.**, Dosono, B., Lee, J., & Semaan, B. Blogging as recovery. *2017 Wisconsin Warrior Summit*.

- 2016 **Dobreski, B.** & Huang, Y. The joy of being a book: benefits of participation in the human library. In *ASIS&T 2016: Proceedings of the 79th ASIS&T Annual Meeting*. Silver Spring, Maryland: American Society for Information Science and Technology.

Qin, J. & **Dobreski, B.** Modeling domain metadata beyond metadata standards. In *iConference 2016 Proceedings*. New York, NY: ACM Press.

Peer-Reviewed Conference Presentations

- 2018 Clarke, R.I., & **Dobreski, B.** “Exploring the Role of Repertoire in Library Cataloging.” Library Research Round Table, ALA Annual Conference, New Orleans, Louisiana, June 21-26.
- 2013 **Dobreski, B.** “Preprocessing Materials for a Remote Storage Facility.” Cataloging and Metadata Management Section Catalog Management Interest Group, ALA Annual Conference, Chicago, Illinois, June 27-July 2.

Manuscripts in Review

- 2018 Clarke, R.I. & **Dobreski, B.** The role of repertoire in library cataloging. *Journal of Documentation*.

DOCTORAL COLLOQUIA

- 2018 Association for Information Science & Technology, Annual Meeting 2018, Vancouver, Canada, November 10-14
- 2017 North American Symposium on Knowledge Organization, Champaign, Illinois, June 15-16

INVITED TALKS

- 2018 **Dobreski, B.** “The Consequences of Classification.” The Helen Benning Regnier Graduate Seminar: Truth and Consequences in the Information Age, Syracuse, New York, July 6-7.

WORKSHOP PARTICIPATION

- 2018 Qin, J., **Dobreski, B.**, Park, J., & Leathers, A. “Ontological Modeling for Special Collections Metadata.” Metadata Modeling, Deep Image Annotation, and KOS Vocabulary Development for Digital Collections of Cultural Objects, ICADL 2018, Hamilton, New Zealand, Nov. 19-22.

AWARDS & HONORS

- 2018 Bob Williams History Fund Research Paper Award
Association for Information Science & Technology
Paper: "Changing depictions of persons in library practice: Spirits, pseudonyms, and human books."
- 2017 Best Paper Award
International Society for Knowledge Organization, UK Chapter 2017 Conference
Paper: "Changing depictions of persons in library practice: Spirits, pseudonyms, and human books."
- 2013 Dean's Commendation
Syracuse University Libraries
- 2004 Jeanne Troy Book Award
Nazareth College

FELLOWSHIPS & BURSARIES

- 2018 Eugene Garfield Doctoral Dissertation Fellowship
Beta Phi Mu

Doctoral Colloquium Bursary
Association for Information Science & Technology
- 2017 Travel Bursary
International Society for Knowledge Organization, Canada & U.S. Chapter

Travel Bursary
Syracuse University Graduate Student Organization
- 2016 Teaching Fellowship
Syracuse University, School of Information Studies
- 2014 IMLS Fellowship
Syracuse University, School of Information Studies

GRANT EXPERIENCE

- 2015 Mobile Crowdsourcing System for Public Safety
Supporting writer, editor for Yun Huang (PI) at Syracuse University
National Science Foundation, CRIL, \$189,141

TEACHING EXPERIENCE

Syracuse University School of Information Studies

Instructor

Cataloging of Information Resources

Mode: online, graduate course

Terms Taught (3): Spring 2013, Spring 2014, Spring 2016

Course Description: Cataloging rules, standards, and metadata schemes, including AACR2 and RDA; bibliographic utilities; formats of print and non-print materials; cataloging software; management issues.

Information Resources: Organization & Access

Mode: in-person, graduate course

Terms Taught (6): Fall 2013, Fall 2014, Fall 2015, Fall 2016, Fall 2017, Fall 2018

Course Description: Introduction to theories, tools, and standards for information organization and access, including cataloging rules and formats, content analysis, indexing, classification, and fundamentals of information retrieval systems.

Information Resources: Organization & Access

Mode: online, graduate course

Terms Taught (1): Summer 2015

Course Description: Introduction to theories, tools, and standards for information organization and access, including cataloging rules and formats, content analysis, indexing, classification, and fundamentals of information retrieval systems.

Metadata

Mode: online, graduate course

Terms Taught (3): Spring 2017, Spring 2018, Spring 2019

Course Description: Introduces metadata modeling, data binding, vocabulary, interoperability, administration, tools, quality control, and evaluation. Examines international metadata standards, activities, and projects through case studies.

Teaching assistant (TA)

Human-Computer Interaction

Mode: in-person, undergraduate course

Terms Taught (1): Spring 2015

Course Description: Human performance characteristics, user computer interaction styles, user interface design alternatives, user interface evaluation methods.

RESEARCH EXPERIENCE

Syracuse University School of Information Studies

Research assistantships

- 2017-2019 Exploring the Role of Repertoire in Library Cataloging
 Conduct observation/think-aloud sessions; qualitative coding; data analysis
- 2015-2016 Domain-Aware Management of Heterogeneous Workflows: Active Data Management for Gravitational-Wave Science Workflows
 Conduct semi-structured interviews; domain analysis; qualitative coding; data analysis; metadata modeling

PROFESSIONAL EXPERIENCE

Syracuse University Libraries

- 2010-2014 Catalog Librarian
 Supervise new titles and projects cataloging carried out by a staff of 11 catalogers; serve as the library's NACO contributor

Sibley Music Library, Eastman School of Music

- 2009-2010 Catalog Librarian
 Perform original cataloging for scores, sound recordings, and monographs; oversee the digitization process for scores from Sibley's collection

Onondaga County Public Library System

- 2007-2009 Automation/Technical Services Librarian
 System administration and technical support of county's shared ILS; perform original cataloging for a variety of materials

Fayetteville Free Library

- 2006-2007 Adult Services/Reference Librarian
 Perform collection development for adult collections including print and media; address patrons' general reference questions

PROFESSIONAL SERVICE

Reviewing

- 2018-present Association for Information Science and Technology Annual Meeting
 2018-present North American Symposium on Knowledge Organization

2016-present iConference

Committee Service

2017-present New Member Engagement, Association for Information Science and Technology
Special Interest Group for Classification Research
2017-2019 Program Chair, International Society for Knowledge Organization, Canada &
U.S. Chapter
2011-2013 Member, Central New York Library Resources Council Digitization Committee
2011-2014 Member, American Library Association, Association for Library Collections and
Technical Services, Cataloging and Metadata Management Section Continuing
Education Committee
2009-2013 Secretary, Beta Phi Mu, Pi Lambda Sigma Executive Board

SELECTED DEPARTMENTAL SERVICE

Syracuse University School of Information Studies

2017-2018 Search Committee, Data Science Candidate Search
2016-2017 Doctoral Programs Committee
2015-2016 Curriculum Committee
2014-present MSLIS Program Committee

Syracuse University Libraries

2012-2013 Web-Scale Discovery Implementation Team
2011 Chair, Technical Specialist Search Committee

Eastman School of Music

2009-2010 UR Research Institutional Repository Administrators Group

MEMBERSHIPS

2010-present American Library Association
Association for Library Collections and Technical Services
2018-present Association for Library and Information Science Education
2015-present Association for Information Science and Technology
2006-present Beta Phi Mu International Library and Information Studies Honor Society
2015-present International Society for Knowledge Organization
2009-present Music Library Association