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Title: Cooperative Catalogers' Lived Experience Implementing Resource Description and Access: Developing Best Practices for Creating Global Metadata

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Abstract

Through the lens of Bijker's (1995) social construction of technology (SCOT) theory, this phenomenological study examines the lived experience of catalogers and metadata specialists implementing Resource Description and Access (RDA) to create bibliographic records that are interoperable within and outside of library catalogs. During this transformative time, even the models and principles on which RDA is based are evolving. RDA is the first step in improving access to information and, it continues to evolve in order to meet its stated objectives. Other standards for encoding and systems for displaying bibliographic data must also further develop to effect the change. This study sought to capture the perspectives and lived experiences of catalogers and metadata specialists in multiple types of libraries fulfilling their foundational purpose: to create metadata that improves accessibility to quality information resources for all.

Keywords: RDA, SCOT, library cataloging.

Cooperative Catalogers' Lived Experience Implementing Resource Description and Access: Developing Best Practices for Creating Global Metadata

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Chapter 1: Introduction

Access to relevant, trustworthy information has become more challenging with the advent of the Internet and the World Wide Web. This has a profound effect on most aspects of daily life, culture, and society. Information is almost instantaneously available around the world to anyone with an internet connection (McCathieNevile & Méndez, 2007). This can lead to information overload. "Information can be empowering, but it also can be overwhelming. Information overload resulting from the proliferation of online resources will only get worse unless the technical, social, and policy issues associated with access to information are addressed" (Borgman, 2003, p. 268). In addition to whether it is relevant, not all information is trustworthy (Stebbins, 2015). The proliferation of Google gives the public easy access to a huge amount of information resources of varying quality, making it just as easy to find poor, incorrect information as it is to find quality, trustworthy information.

The purpose of libraries is to connect people with ideas. Moreover, librarians are educated at the graduate level not only to identify and select quality materials that will support the information needs of the communities they serve, but also to organize those resources in a way that provides members of the community with easy access to them. As Svenonius (2000) affirms, "The most dramatic twentieth-century event to affect the organization of information is, of course, the computer revolution. It has changed the nature of the entities to be organized and the means of their organization" (p. 13).

Resource Description and Access (RDA) (Oliver, 2010) is a new library cataloging code created in response to the proliferation of publications and expansion of bibliographic resources and types of resources. "RDA is a package of data elements,

guidelines, and instructions for creating library and cultural heritage resource metadata" (RDA Toolkit, 2016, para 1). RDA was developed by the Joint Steering Committee (JSC) for the Development of RDA, a committee of leading library institutions. It is now overseen by the RDA Steering Committee (RSC) and published by the American Library Association (ALA), the Canadian Federation of Library Associations, and Facet Publishing, the publishing arm of the Chartered Institute of Library and Information Professionals (CILIP). As library collections have changed, models of the bibliographic universe and descriptive cataloging standards have changed as well. Following testing in 2011 by the Library of Congress, National Library of Medicine, and the National Agricultural Library and subsequent recommendations, RDA implementation in 2013 did not mandate libraries to use the new standard. The timetable for implementation is not standardized in cataloging practice due to numerous constraining factors involving resources such as time, training, expertise, and funding resulting in uneven usage.

RDA has fundamentally changed the way catalogers and metadata specialists describe resources. In combination with the proliferation of information in the world, this creates a twofold problem. First, it is difficult for catalogers and metadata specialists to follow new cataloging codes that are evolving and have multiple models for implementation. The conceptual models on which the new cataloging codes such as RDA are based have changed and require new assumptions, theories, models, practices, and tools. Second, the public is more challenged than ever to access trustworthy information. When taken together, this twofold problem forms a new reality for librarianship and the rapidly changing nature of the information ecosystem. While there have been some online questionnaires and informal surveys used to investigate catalogers' and metadata

specialists' implementation efforts using new cataloging codes (Park & Tosaka, 2017), there is a need for research-based evidence about the firsthand experiences of catalogers and metadata specialists who have used new cataloging codes (Halpern, Eaker, Jackson, & Bouquin, 2015).

Purpose of the Study

The purpose of this study was to investigate the lived experience of catalogers' and metadata specialists' implementation of RDA and to fill the gap in the literature. The results of this study provide essential information pertaining to the struggles and successes of those in the cataloging field upon which best practices for RDA implementation may be developed. The design of this study enabled catalogers and metadata specialists to share their firsthand experiences about implementing RDA. The central research question for this study is: ***What are the meanings, structures, and essence of the lived experience of catalogers and metadata specialists implementing Resource Description and Access (RDA)?***

Cataloging is the Foundation of Librarianship

Catalogers' and metadata specialists' expertise in organization of information is important because it is arguably the bedrock of the foundation of the library. For library users to benefit from access to trustworthy information, it is necessary for catalogers and metadata specialists to establish comprehensible order among information resources. According to CannCasciato (2010) and Osburn (2009), library catalogers and metadata specialists perform the foundational service of organizing information about library resources to connect people and ideas. In addition, librarians share a set of professional values including access, confidentiality/privacy, democracy, diversity, education and

lifelong learning, intellectual freedom, preservation, the public good, professionalism, service, social responsibility (ALA, 2006). According to Snow (2011), librarians have responsibilities to vet and select trustworthy resources and manage collections using agreed upon standards for describing resources. Further, Bade (2007) asserts that catalogers and metadata specialists use specialized skills to create bibliographic records that act as surrogates describing the actual resource.

Catalogers interpret and apply standards. Catalogers' and metadata specialists' specialized skills are well documented in library and information science publications. For example, Hoffman (2012) explored the specialized preparation catalogers and metadata specialists need for discerning and using judgment to interpret details in the midst of competing requirements and complexity. Joudrey and Taylor (2018) point out that catalogers and metadata specialists must interpret and apply content standards, such as RDA, and encoding standards, such as machine-readable cataloging (MARC). MARC is "the standard format for all catalog and authority records that contain standardized and encoded descriptions of library sources since the 1960s" (Gilman, 2018, p. 83). Catalogers and metadata specialists must keep up with trends in technology and lead change by applying new technology to cataloging problems (Hagler, 1997). Catalogers and metadata specialists use judgment to interpret content standard in conjunction with knowledge of their community's needs (Bair, 2005; Hasenyager, 2015).

Communities of catalogers and metadata specialists collaborate with each other to pool their skills to compose resource descriptions that will open the bibliographic data they create into the new technological environments (Sprochi, 2016) like the web. However, as librarians collaborate, their choices and solutions often bring about

unanticipated complications. For example, a complication sometimes experienced is determining the level of description needed to locate a specific resource beyond the title and author, such as year of publication or publisher. Content standards for description have evolved to resolve dilemmas of this type and bring bibliographic data into the current information environment. According to S. D. Miksa (2009), the international cataloging community has engaged in efforts to "address a constantly changing information environment, the emergence of new forms of information resources and increasing density of networked information systems" (p. 47). While striving to retain continuity with past standards, RDA's theoretical underpinnings fundamentally change its application to describing resources using relational and contextual metadata. This broadening scope occurred in response to and in order to meet the challenges of the digital domain (Tillett, 2011). This increase in scope and complexity explains the need for today's cataloging librarians to have increased and highly specialized skills for resource description.

Catalogers provide bibliographic control. Libraries' collections of resources are collections of the world's knowledge. According to Joudrey and Taylor (2018), catalogers and metadata specialists provide bibliographic control for collections of library resources through description, subject analysis, classification, and call number assignment. Through contributing bibliographic records to shared databases, catalogers and metadata specialists make it possible for library users to locate needed information and solve problems.

The choices that catalogers and metadata specialists make when creating bibliographic records have the potential to help, or harm, library patrons and others. For

example, there has been a recent, ongoing debate (Fox, 2018) surrounding terminology used as a subject heading to reference a work about a person who is a noncitizen of the United States by using either the term "illegal alien" (ALA, 2016, para 1) or "undocumented immigrants" (ALA, 2016, para 1). This particular example creates the potential for misrepresentation and misinterpretations of individuals who are in the process of becoming legal citizens. When librarians improve access to sources through use of consistent standard for description, they are serving the needs and common good of the local community. By contributing bibliographic records to shared databases, catalogers and metadata specialists support the common good and improve global access to these collections of resources.

Catalogers contribute to the common good. Catalogers and metadata specialists are professional librarians whose specialization is in cataloging and who strive to achieve best practices for implementing RDA. They share with all librarians the core values of librarianship, one of which is related to achievement of the common good of all people (Beghtol, 2008). If the common good is to be achieved in today's society, from an information science perspective, access to information for all must continue to be improved and increased. Marcum (2001) defines the common good as "the well-being of a community considered as a whole. Pursuing the common good involves thinking about how the various parts and their interrelationships can be maintained, developed, and corrected so that the whole community flourishes" (p. 73). The social justice of access to information for seekers is intended to promote the dignity and freedom of every person; to maximize benefits and minimize harms; and support equitable and fair treatment for all.

Specifically, catalogers and metadata specialists make possible access to information by labeling, maintaining, and updating interrelationships among resources, that is, applying content standards for the benefit of the communities they serve. RDA, as a content standard, can serve as a bridge between the legacy catalog (F. Miksa, 2012), which contains records created with metadata standards that preceded RDA, and the bibliographic access mechanisms of the future (Wilson, 1985). Legacy bibliographic records are not clearly apparent or visible at all, to search engines

In terms of searchability and user experience, library catalogs have not met the expectations and requirements of users for quite some time (Borgman, 2003; Calhoun, 2006; Connaway, Johnson, & Searing, 1997; S. D. Miksa, 2009; Parry, 2014; Weinberger, 2012; Yee, 2011). Combined with the need for moving "bibliographic data out of traditional silos and into the 21st century web environment" (Sprochi, 2016, p. 135), best practices for implementing RDA will also require technological advancement. Technological advancements that make library metadata records visible to systems outside the library catalog create improved opportunities for libraries to fulfill user information needs. Current online public access catalogs (OPAC) and integrated library systems (ILS) need to become more functional. Unfortunately, as Yee (1999) asserts, even the "more customizable [library catalog] systems put more of the burden for effective OPAC design on the shoulders of librarians in the libraries that purchase these systems from vendors…in which poor system design prevents librarians from being able to achieve optimal customization" (p. 2). According to Hillmann (2014), this stalemate between librarians and OPAC designers regarding OPAC functionality stands in the way of forward progress and has been an unfortunate reality for too long. Implementing

RDA, making bibliographic records searchable with linked data and the Semantic Web (Yoose & Perkins, 2013), may overcome this problem with OPACs and achieve the librarians' goal of serving the common good.

Theoretical Framework

Viewed through the lens of transformative change (Frederick, 2016), RDA has the potential to solve some of the challenges that catalogers and metadata specialists face and provides a reasonable next step for advancing the organization of information (Bianchini & Guerrini, 2015). Throughout this report of research, the process of changing cataloging rules is addressed as a transformative process. Transformative means the process of changing dramatically in shape and form (Brenndorfer, 2016).

RDA is a good example of a phenomenon that can be interpreted as both simple and complex and is intended to be flexible enough to evolve as library resources and user information needs change. It is important to understand that RDA is not a display standard, nor a metadata schema. Instead, "RDA is a set of guidelines that indicates how to describe a resource [which]…encourages the description of relationships between related resources and between resources and persons or bodies that contributed to creation of that resource" (Oliver, 2007, p. 251). RDA objectives include continuity, responsiveness to user needs, comprehensiveness, extensibility, and adaptability, which are all goals associated with making the metadata included in bibliographic records interoperable with the Semantic Web (Campbell, 2007). However, bibliographic description and metadata creation at the current, initial stages of RDA implementation continue to be record centric and rooted in linear time instead of moving existing boundaries forward (Allison-Cassin, 2012; Van Ballegooie & Borie, 2014). During

periods of constant change, unchanging core values and ideals bring stability and help to make sense of change. Carr (2014) cautions that "libraries should transform in ways that are shaped first and foremost by the awareness that library collections are for use and that the nature of these collections should align with the nature of user needs and preferences" (p. 161). When it is fully implemented, RDA has great potential to transform access to quality information and further improve access to trustworthy information.

Definition of Terms

It is my intention to use the most commonly utilized definition of terms unless a specific aspect or nuance is required for clarity. Terms can have different connotations and meanings, for example a digital library, which according to Reitz (2010) is "a library in which a significant proportion of the resources are available in machine-readable format (as opposed to print or microform), accessible by means of computers. The digital content may be locally held or accessed remotely via computer networks." In this study, digital library is likewise broadly defined to be any library having digital content as part of their collection and not just special digitized collections in archives or institutional repositories. Table 1 provides a glossary of acronyms used in the study. Other specialized terms are defined below.

Bibliographic record. According to Reitz (2010) a bibliographic record is "an entry representing a specific item in a library catalog or bibliographic database, containing all the data elements necessary for a full description, presented in a specific bibliographic format." In this study, bibliographic data and bibliographic record are used interchangeably.

Bibliographic universe. The bibliographic universe in this study is basically all of the things a library might collect and need to organize, or more broadly is "the realm related to the collections of libraries, archives, museums, and other information communities" (Galeffi, Bertolini, Bothmann, Rodríguez, & McGarry, 2016).

Cataloger's judgment. Cataloger's judgement is defined by Hasenyager (2015) as "the decisions catalogers make while creating bibliographic records" that include the information that appears in the record, where it may exist in the record, or whether to leave it out entirely. Cataloger's judgement is based on the education, training, and practice of applying cataloging rules, "even though there may not be an exact rule to meet every scenario in order to meet the user's need" (p. 16). Cataloger's judgment requires interpretation of cataloging rules, local cataloging practice, and local users' needs.

Cataloging code. According to Reitz (2010) a cataloging code is "a detailed set of rules for preparing bibliographic records to represent items added to a library collection, established to maintain consistency within the catalog and between the catalogs of libraries using the same code." In this study, the investigation centers on the phenomenon of the implementation of RDA as a new library cataloging code created in response to the expansion of bibliographic resources.

Closure. A social construction of technology (SCOT) theory term, closure is the solidification of meaning and decrease in interpretive flexibility that leads to closure. In this study, closure represents when a consensus among the various viewpoints of the artifact leads to the process of stages of stabilization and agreement on meaning. In this study, I use artifact instead of "artefact" as used by Bijker (2009) for clarity and consistency.

Cooperative Cataloger. Cooperative cataloger refers to librarians who contribute metadata records to and download for use in their own library catalogs metadata records from databases of millions of records that describe resources in libraries (Library of Congress, 2019). Cooperative is used as a specialized term referring to how bibliographic records are shared between libraries. Along with the term collaborative as an adjective to describe the catalogers and metadata specialists referred to in this study, cooperative is used in the sense of working together toward a common goal.

FRBRization. According to Reitz 2010 FRBRization is "the attempt to model in bibliographic systems the entity structure described in Functional Requirements for Bibliographic Records (FRBR), based on the concepts of work, expression, manifestation, and item." This study will discuss the FRBRization potential for library catalogs to share linked data by contextualizing the relationships among and between resources.

Interpretive flexibility. In this study, interpretive flexibility is one of the key concepts of Bijker's (1995) SCOT theory to examine the technological changes in organizing the bibliographic universe. Interpretive flexibility is when the system is no longer deemed acceptable by one or more relevant social groups, the interpretive flexibility of the artifact is again examined or "deconstructed" and negotiated from each perspective.

Metadata. Metadata is data about data. According to Reitz (2010) metadata is "Structured information describing information resources/objects for a variety of purposes." In this study, metadata is the descriptive information which facilitates access for people to locate the information they search for (Calhoun, 2007).

Relevant social groups. Relevant social groups develop when people form homogenous groups based on a shared perspective of a technological artifact; similar to a community of practice members share consensus regarding the artifact. In this study, the primary relevant social group consists of the cataloger and metadata specialist participants interviewed for this research.

Semantic Web. For this study the Semantic Web refers to the third iteration of the World Wide Web, which started with Web 1.0 (consisting of a web of static documents), is currently the Social Web (2.0), and is progressing toward a web of linked data: "the Semantic Web is an extension of the current web in which information is given well-defined meaning, better enabling computers and people to work in cooperation" (Berners-Lee, Hendler, & Lassila, 2001).

Stabilization. A SCOT theory term, stabilization is when there is consensus on the meaning of a technological artifact among the various viewpoints of relevant social groups. In this study, stabilization is revealed in the interviews documenting each of the 15 participants' unique narrative (Dalbello, 2005b).

Technological frame. A SCOT theory term, the technological frame provides the boundaries or the structure of how the artifact is explained and constructed. In this study, the technological frame of the phenomenon of implementing RDA shapes the lived experience of catalogers and metadata specialists to provide framing for interaction with the artifact. The artifact is the object of attention, and in this study the library catalog as a technical system viewed as somewhat closed but becoming more open and maturing.

Scope and Assumptions

While sensitive to the fact that library catalogers and metadata specialists are involved in a wide range of descriptive metadata activities, the scope of this investigation is centered specifically on bibliographic description, that is, description of the resources typically found in library collections and described in library catalogs. It excludes the contents of leased databases of electronic resources except as they may be incorporated into library catalogs. The focus is on a single cataloging code: RDA. It is beyond the scope of this study to include the multitude of metadata schemas and content standards proliferating in cultural heritage institutions. In the limitations, geographically this study is limited to the central U.S.

My philosophical worldview and ethos are described in more detail in chapter 3 in the Epoche section. The following are the main assumptions that frame this study. I assume that library catalogers and metadata specialists perform the foundational service to connect people and ideas, which is the function of the library (CannCasciato, 2010; Osborn, 2008). Due to the library's special function in society, catalogers and metadata specialists have a unique ethical responsibility (ALA, 2016). Also, as professionals, catalogers and metadata specialists develop special skills that set them apart from other librarians. Catalogers and metadata specialists contribute to the common good and to the building of a just society through their work to connect people and ideas. This work places the human person at the center. Because of this, catalogers and metadata specialists have the power to help or harm on an increasingly global scale (Bair, 2005). I also notice that the principles and rules that catalogers and metadata specialists abide by

and share are transforming rapidly, making it difficult for catalogers and metadata specialists to follow rules and fully execute their foundational purpose (Cerbo, 2011).

Limitations

There were some limitations created by methodological choices in this investigation. The first limitation is common to qualitative research as a whole because it is not statistically generalizable. The second limitation of this study is the selectivity bias inherent in obtaining participants from an existing group, since the group was small and geographically homogeneous. This study uses a relatively small data pool in contrast to the total number of catalogers and metadata specialists involved in RDA implementation. While the RDA practice group from which participants were selected does not continue to meet as a group, most of them continue to be involved in the work of RDA implementation and `they welcomed this opportunity to share their stories. The final limitation is the fact that RDA is an evolving standard and is still being updated.

Significance

The significance of this study is that it can help to clarify catalogers' and metadata specialists' best practices and serve to inform and improve library users' access to trustworthy information. This research delved into how the implementation of RDA has affected cataloging librarians who provide the foundational work of organizing and describing resources in library collections. This research is important now because of the anxiety librarians experience caused by numerous changes to the cataloging standards (Martin & Mundle, 2014). Anxiety about cataloging rules among catalogers and metadata specialists is not a new phenomenon (Kreighbaum, 2013), but it is an urgent situation if ignored. In addition, the historical reality of updates to the rules, as evidenced

by what Osborn (1941) referred to as a "crisis in cataloging" (p. 393), is not new. Peggy Johnson (Taylor, 2012) recalls the switch to Anglo-American Cataloguing Rules, 2nd edition (AACR2), "as a traumatic process" (p. 122) and rues the lack of focus on training and preparation. Library catalogers and metadata specialists perform the foundational service to connect people and ideas, which is the function of the library (CannCasciato, 2010; Osburn, 2009). When the performance of this work is interrupted, the connections are interrupted as well.

Summary

I have observed that catalogers and metadata specialists are striving to achieve the best practices for implementing RDA in a way that reflects the overall values of librarianship including equity of access to information. There are many technical aspects to this ongoing evolutionary process. Research and experience point out to me that the granularity of description is significant because it helps the seeker to differentiate between similar resources in order to find the specific one that will meet their information need.

The major issues and controversies surrounding RDA implementation include differences of opinion regarding ideological, technical, practical, and theoretical implications of what the guidelines achieve in practice. Controversies relate to differing opinions about the directions in which cataloging would best move and, ultimately, to uncertainty about the future. Different opinions are a boon since working toward consensus, although challenging, can bring together solid and satisfying solutions that address the whole of the complex issues. A unifying way of thinking presents an opportunity to capture the perspectives and lived experiences of catalogers and metadata

specialists concerning the effects of RDA standards on fulfilling their purpose. This study sought to learn from their struggles and successes and to fill the gap using phenomenology to capture the firsthand experiences of catalogers and metadata specialists that I have identified in the existing research literature.

Chapter 2: Literature Review

RDA (Oliver, 2010), a new cataloging code created in response to today's proliferation of publications and expansion of bibliographic resources, has fundamentally changed the way catalogers and metadata specialists describe resources. The problem this study addresses is twofold. First, it is difficult for catalogers and metadata specialists to follow new cataloging codes that are evolving and have multiple models for implementation. The conceptual models on which the new cataloging codes are based have changed and require new models, philosophies, practices, and tools. Secondly, the public is more challenged than ever in accessing trustworthy information. Together this forms a new reality for librarianship and the rapidly changing nature of the information ecosystem. A developing body of library and information science research literature addresses RDA implementation from an administrative perspective (Tosaka & Park, 2013). However, while there have been some online questionnaires and informal surveys of catalogers' and metadata specialists' implementionation efforts (Park & Tosaka, 2017), there is a need for research-based evidence (Halpern et al., 2015) about the firsthand experiences of catalogers and metadata specialists.

The peer-reviewed, research-based literature on this topic includes an investigation of RDA implementation from an administrative perspective rather than a personal perspective. The administrative perspective of RDA implementation takes a top down approach by examining questions related to administrative aspects like developing training, workflows, and budget considerations. The personal perspective, on the other hand, involves revealing the individual's struggle to develop a new knowledge base on which to make "cataloger judgements" (Intner, 2006). Thus, the gap this research intends

to fill is to examine the experiential evidence of everyday encounters with implementation of RDA among catalogers and metadata specialists.

This literature review provides the background related to RDA necessary for a discussion of catalogers' and metadata specialists' individual experiences with development and implementation. It is beyond the scope of this paper to provide a detailed history of cataloging and the evolution of cataloging theory. However, a brief overview of its evolution provides context and allows exploration of parallels to the current situation, including strategies that have worked before and may be applied in new ways. This review of the literature will start with a retrospective overview on cataloging influences in order contextualize the evolution of the library catalog, situate RDA as a cataloging code, and describe the effects of transformative change. This review will then sort investigations of RDA implementation into administrative and personal perspectives. Finally, this review will address the use of the social construction of technology (SCOT) as a theoretical lens for data analysis. It will conclude with the idea of the common good of public access to trustworthy information produced through the work of catalogers and metadata specialists as social justice.

Evolution of Cataloging

Numerous changes in society, technology, and access to information important to libraries in the United States began to emerge starting in the nineteenth century. These include the Industrial Revolution, the library field developing as a profession, and the rise of philanthropy and Carnegie-funded libraries. The Industrial Revolution led to increased urbanization, education, and literacy. Technological developments abounded, including the emergent use of electricity for lighting and, in libraries, the development of the card

catalog (Rubin, 2010). In the latter quarter of the century, several changes occurred almost simultaneously, particularly in 1876, which saw the establishment of the American Library Association, the first publication of the Library Journal, and the introduction of the Dewey Decimal Classification (DDC) system. Formal library education and an expansion in the number of libraries also began in this period.

As libraries and collections grew, catalogs became more essential in organizing and locating specific items or additional resources. This led to the development of the card catalog and systems of classification, which were among the most critical transformative technological changes in terms of libraries in the nineteenth century (Beghtol, 2009). Early catalogs described library resources shelved in closed stacks, requiring the librarian to look up their location in the book catalog and retrieve them for the patron. The book format for shelf listing made it difficult to update the catalog because the changes would have to be neatly annotated in the available space. Gibbons created an early card catalog utilizing the back of playing cards (Battles, 2003). Although Dewey did not invent the card catalog, he did much to improve both its functionality and use, providing a simple and straightforward method for organizing books and locating them (Lerner, 2009). Card catalogs gave the ability to insert additional items as required. This ability to update the card catalog easily facilitated and revolutionized keeping track of a library's holdings (Wiegand, 1996).

Objectives of the library catalog. According to Cutter (1904), the end user-focused objectives of the library catalog were:

1. To enable a person to find a book of which either {is known}.

(A) the author

(B) the title

(C) the subject

2. To show what the library has

(D) by a given author

(E) on a given subject

(F) in a given kind of literature.

3. To assist in the choice of a book

(G) as to its edition (bibliographically).

(H) as to its character (literary or topical). (p. 12)

User centeredness is at the heart of library professional service. Combined with the emerging classifications systems, card catalogs helped libraries provide better service and access to information for users. Classification systems provide structure for organizing and arranging library collections that are described in the catalog. The DDC system was a notable development that led to more independence for library users, because having open stacks meant users could find books on their own through browsing the stacks or the catalog, without the intervention of a librarian. Organizing the books by subject in positions relative to each other rather than a fixed shelf location allowed the system to adapt to the actual items present in the library. This practical innovation made it possible to make room for the addition of both more books and new topics within the defined classes to both the catalog and the stacks. Although there are valid criticisms of the DDC as a biased system with problems in accommodating new disciplines and technology not anticipated when it was invented, it is still the most widely used system in libraries in the world (Rubin, 2010). Table 2 contains a chronological summary of early

cataloging and classification systems and their founders to contextualize the evolution of these systems.

Cataloging rules and principles. Just as classification systems provide structure for organizing and arranging library resources described in the catalog, the catalog itself and the rules for creating bibliographic records that represent library resources also make trustworthy information resources more accessible. Libraries make trustworthy information resources more accessible by agreeing to use a shared set of rules for creating bibliographic records. The rules increase consistency and improve the quality of the metadata contained in bibliographic records. Rules also make possible collaborative cataloging, that is sharing of bibliographic records between libraries, enabling libraries to share the time and effort of describing resources.

Cataloguing rules developed by Panizzi, Cutter, and Lubetzky became, in turn, the Paris Principles, the first Anglo-American cataloguing rules (AACR), International Federation of Library Associations and Institutions' (IFLA) ideal of universal bibliographic control, the creation of the International Standard Bibliographic Description (ISBD), and AACR2 (Denton, 2007; El-Sherbini, 2013). Cataloging rules evolve and are regularly revised to align with the resources they are designed to make accessible (Clarke, 2015; Theimer, 2012) and the expectations of the end users.

AACR2 was also not initially completely accepted and implemented when it was introduced in 1978. Libraries began adopting the standard following the Library of Congress' (LC) lead in 1981 (Taylor, 2012). Similar to RDA, AACR2 created controversy in the cataloging community. Some of this was due to perceived structural problems and lack of coverage for different formats of materials. However, Taylor

(2012) shares her personal perspective of AACR2 implementation and characterizes the evolution of a "new set of cataloging rules that merely represent the next step in a continuum of progress toward better catalog access" (p. 124).

Cataloging means more than providing the basic descriptive data such as title and author. It involves making resources more equitably accessible through assigning relevant subject headings and using appropriate classification for colocation with like items (Bair, 2005). Users search bibliographic records in the OPAC to find resources in the library's collection. Creating the surrogate representation of the resource requires skill and judgment on the part of the cataloger and metadata specialist because they are striving to make the item easily accessible to their user (Bair, 2005; Snow & Hoffman, 2015). Libraries make trustworthy information resources more accessible through agreeing on a shared set of rules for creating descriptions (Yee, 2011). The phenomenon of the book, the library catalog, and even the library itself can be viewed as a technology for storing ideas for people to interact with and access. Osburn (2009) presents the library as a "cultural technology" which preserves the human record whose larger purpose or "function is stewardship of the social transcript" (p. 258). The evolution of technology will potentially allow the cataloger and metadata specialist to better support the patron to accomplish the IFLA-LRM (2017) information user tasks: find, identify, select, obtain, and explore information.

Catalogs and scarcity of attention. Library catalogs were historically created to provide access to small, local collections of books (F. Miksa, 2012). Those who sought access to these items were likely to go to the library building to take their time, peruse, and borrow them. Now, with the abundance of access to information online, the situation

has changed (Gleick, 2011). The Internet has fundamentally changed the way people seek information and library catalogs "are no longer the first place people come for information...[and must] compete effectively for user attention" (Hillmann, 2009, slide 3). In other words, present day information seekers are more likely to be utilitarian in their approach and "satisfice" (Prabha, Connaway, Olszewski, & Jenkins, 2007) with Google due to the overwhelming abundance of resources, even in libraries. "Satisficing" combines satisfy and suffice to describe choosing convenience over quality when a quick search results in a good enough result instead of the best source (Connaway & Faniel, 2015).

The library catalog, however technologically advanced, remains invisible to web search engines due to the lack of interoperability between library systems and Internet search systems. This trait hides the best information sources in silos, e.g. the library catalog, and contributes to information seekers avoiding OPACs (Leckie, Givens, & Campbell, 2009). Making the information interoperable and visible to search engines on the web may slow the current trend of utilizing Google as a primary source of information and the library catalog as the last choice (Asher, Duke, & Wilson, 2013). Since one aim of RDA was created to fulfil is interoperability with other search systems, like web-based search engines, RDA implementation is the beginning step toward making the bibliographic information in catalogs visible.

Many assert that RDA cannot realize its full potential for interoperability in the current ecosystem due to constraining factors such as legacy encoding standards, immature solutions, and lack of resources such as cost, expertise, personnel, and technical solutions (Calhoun & OCLC, 2009; Tosaka & Park, 2013). One reason for these claims

is that impact and implications of technological change in the organization of knowledge are hard to describe since they are ongoing and have somewhat become a moving target (El-Sherbini, 2018). Although it is possible to predict some possible paths, it is still premature to study what technological advances may occur or how they will shape users' expectations in regards to the potential uses of the library catalog (Calhoun, 2006). Currently the future of how the catalog will look or how the evolution will come about exceeds the possibilities of our imagination and understanding, as the foundational models are abstract and hard to visualize (Scharmer, 2016). This is similar to the phenomenon of an online encyclopedia such as Wikipedia (Waller, 2011), which seemed unlikely not too long ago.

Bibliographic Data. Sharing the time and effort of describing bibliographic resources using agreed upon standards is how catalogers and metadata specialists contribute their skills to improve and make information more accessible with high quality data. As library catalogs became automated, bibliographic records were encoded in a computer readable exchange standard known as MARC (MAchine Readable Cataloging). MARC was very innovative when introduced by Henriette Avram in the 1960s (Tennant, 2004). The MARC encoding format allows bibliographic records to be machine actionable: shared, downloaded, and uploaded among libraries and between libraries and vendors of bibliographic records such as LC or Online Computer Library Center (OCLC) (Coleman, 2005). However, MARC is not interoperable with external systems like web search engines.

Resource Description and Access

In 1997 the cataloging community discussed putting together a new edition of the Anglo-American Cataloging Rules (AACR2), meant to become AACR3, in order to respond to new types of resources that now need to be described in bibliographic records, especially new formats such as electronic resources. This discourse was the impetus for what became RDA. Designed to update bibliographic description and contribute to the preservation of the human record, "RDA is a package of data elements, guidelines, and instructions for creating library and cultural heritage resource metadata that are well-formed according to international models for user-focused linked data applications" (RDA Toolkit, 2016, para 1). The RDA Toolkit is the official expression of the RDA rules. RDA seeks to begin the process of moving bibliographic resource description away from its origins in a card catalog environment to become more internationally and technologically interoperable in order to meet end user expectations and requirements.

On March 31, 2013, LC began implementing RDA, that is, following the RDA rules for creating new bibliographic records. Because cooperative cataloging is so widespread in the US, LC's and other U.S. national libraries' decision to fully implement RDA meant that all libraries that were using these bibliographic records in their local systems were essentially starting to use RDA. RDA, as with its predecessors AACR and AACR2, is interoperable with international cataloging principles for standardization and sharing (Oliver, 2010). It is also designed to be both forward and backward compatible with existing bibliographic records. By organically growing from the foundations of AACR2 and incorporating format neutral language, RDA is poised for inclusion in new technological environments to describe all types of resources for numerous organizations

and communities. Further, by both incorporating, as AACR2 did, and moving beyond aspects of the ISBD from IFLA to the family of conceptual models of Functional Requirements for Bibliographic Records (FRBR) (1998), RDA seeks to stay on the leading edge of cooperative and standardization efforts in line with the global community of catalogers and metadata specialists and the Statement of International Cataloguing Principles (ICP) (Galeffi et al., 2016).

Structures and tools associated with using RDA include the RDA Toolkit and the new encoding standard under development, BIBFRAME. In "2012, the Library of Congress announced BIBFRAME, short for Bibliographic Framework, a new contender in the struggle to replace the venerable MARC with a more modern metadata encoding format" (Kroeger, 2013, p. 873). With RDA vocabularies now published on the web, efforts to end the invisibility of bibliographic records to web systems are being realized through efforts such as OCLC's WorldCat and Worldshare. Other initiatives, such as Zepheira's Libhub and BIBFRAME, are also making library data more apparent on the Web (Fons, 2016; Miller, & Ogbuji, 2015).

RDA incorporates the five tasks that bibliographic records should help a user do: 1. Find descriptions that match a user's search; 2. Identify that a description that has been found is for the thing that was sought; 3. Select from multiple possible descriptions the thing that best suits the user need's; 4. Obtain the actual thing or item; and 5. Explore the connection and context between resources (Žumer & Riva, 2017). In addition, navigation to the resource and understanding are parts of this process of users interacting with a library catalog (Galeffi et al., 2016; Mering, 2014; Willer & Dunshire, 2013). RDA's objectives include continuity, responsiveness to user needs, comprehensiveness,

extensibility, and adaptability that are all goals associated with making the metadata included in bibliographic records interoperable with the Semantic Web.

RDA is supposed to be a start toward making the metadata included in bibliographic records interoperable with the Semantic Web (Campbell, 2007). However, the technology and the ideas behind RDA are not yet mature enough to allow the full realization of RDA's proposed potential because we are still using MARC (Tillett, 2011). The MARC format contributes to bibliographic data being kept in silos since it was created to print catalog cards and has not fully evolved to the current online environment (Coyle, 2017).

Abstract Models as basis for RDA

FRBR is a member of a family of abstract models that are collectively referred to as the Functional Requirements (FR) family of models. FRBR is the original abstract, conceptual model of the bibliographic universe upon which RDA is based (Carlyle, (2006). In 1998, IFLA released a report called Functional Requirements for Bibliographic Records. According to Tillett (2004), the "FRBR entity-relationship model is a conceptual model, which means it's a generalized way to look at our bibliographic universe of things that libraries collect or want to make known to our users" (p. 3). The FRBR model created the potential for library catalogs to share linked data by contextualizing the relationships among and between resources. In 2005, the Joint Steering Committee, who is responsible for updates to AACR, made the decision to restructure the new rules they were drafting to align them with FRBR.

The concepts behind FRBR have been around since the beginning of cataloging (Kreighbaum, 2013), but FRBR also brings a completely new mindset to bibliographic

organization. FRBR fulfills the original cataloging foresight of Cutter (Denton, 2007). FRBR is what the original designers of cataloging theory had in mind, and it will be even more relevant as relationships become increasingly visible to digital agents, like Siri, Alexa, or Cortana (López, Quesada & Guerrero, 2017). However, FRBR also recognizes the user as a principal part of the process and not outside of it. FRBR makes catalogs more intuitive by helping users find, identify, select, obtain, and explore the information resources they are seeking and showing relationships between resources and resource attributes creators and their works in bibliographic records. FRBR brings to bibliographic description a new mindset by requiring with the cataloger and metadata specialist to determine level of entity at which a resource is being described. FRBR sorts bibliographic resources into one of 4 distinct entity levels: work, expression, manifestation, or item (WEMI). Similarly, with FRBR comes the need to create explicit descriptions of bibliographic relationships. Relationships are described using links between and among entities and entity attributes, and they form a “logical hierarchy” that allows that the "properties of higher-level entities can be inherited down the hierarchy" (Glushko, 2013, p. 247). RDA, being based on FRBR, retains this emphasis on relationships.

In addition to FRBR, the FR family of conceptual models includes Functional Requirements for Authority Data (FRAD, 2009), Functional Requirements for Subject Authority Data (FRSAD, 2010), the FRBR Library Reference Model (FRBR-LRM, 2016), and now the consolidated high-level IFLA-LRM (2017) model. The development of the IFLA-LRM (2017) required a redesign of the RDA Toolkit, called the 3R Project, the purpose of which is to review, restructure, and redesign RDA to reflect this new

consolidated model. These changes, along with BIBFRAME, will "profoundly affect how library bibliographic data is recorded, stored, and retrieved. These initiatives will also allow library holdings…to be visible on the Web and discoverable for users, and, therefore, sharable with other cultural resource communities" (Sprochi, 2016, p. 129). However, the staged development and publication of the FR family of conceptual models resulted in incompatible differences between earlier and later models in the FR family as understanding and requirements changed and evolved. This creates the challenge for catalogers and metadata specialists as it is difficult if not impossible to implement RDA when the conceptual models on which it is based have changed and require new models, philosophies, practices, and tools.

Transformative Change

According to Welsh's (2018) interactive visual online timeline of cataloguing codes (see Figure 1), the rapid pace of advances in cataloging standards is unprecedented in the history of library cataloging. The cataloging field experienced a relatively steady state for over a century. The current transformation of not only the rules of cataloging, but the underpinning model, in the form of RDA and the FR family of conceptual models, makes for a difficult time of adjustment for catalogers and metadata specialists. Catalogers and metadata specialists use critical theory to look at the functions and practices of organizing resources from new perspectives (Leckie et al, 2009). They seek to carry forward the best aspects of the past without outdated structures and constraints (Diao & Hernández, 2014). Today, despite the transition from cards to computers, the paradigm of the card catalog is still firmly entrenched in the field, and catalogers and metadata specialists are just now imagining how to see past it to new models and

possibilities (Denton, 2007; F. Miksa, 2012). Potential solutions are in development in the near future to address this concern (Seeman & Goddard, 2014). Weinberger (2012) advocates for reconceiving the "library as platform" as a way to provide better access and change library success measurement to circulating ideas instead of items.

The potential future of technology evolution means that libraries' resource descriptions will be part of the apparent web instead of the invisible web. The librarians' role in this evolution can evolve with the technology, remain relevant, and provide access to the have-nots, or those who are just overcoming the digital divide (Clark, 2010) with the access they could not otherwise afford. Libraries are imperative to providing access to information for many people (Jaeger, Bertot, Kodama, Katz, & DeCoster, 2011). The "critical importance" and the value of cataloging librarians according to the Association for Library Collections and Technical Services (ALCTS) Cataloging and Classification Section Executive Committee (2007) is that they "envision bibliographic control of collections of the world's knowledge and implement this vision to create local, regional, and international catalogs and digital access systems" (Lead section, para. 1). Linked data and the Semantic Web are examples of future technologies that will make this possible (Tillett, 2011; Yoose & Perkins, 2013).

Some see RDA as radical (Welsh & Batley, 2012) or transformational (Brenndorfer, 2016). Others consider that RDA has gone too far (Gorman, 2007) or not far enough (Coyle & Hillmann, 2007). In fact, there still exists a lack of consensus among catalogers and metadata specialists about if, when, and how to implement RDA due to this diversity of beliefs, opinions, and understanding (Coyle & Hillmann, 2007; Gorman, 2016; Rose, 2012; Sanchez, 2011). As Wacker and Han (2013) point out, "No

formal evaluation has taken place of cataloguer reaction to RDA implementation" (p. 40) as they adjust to the challenges brought about by the changes. Change is daunting, and much of the literature introduces the topic of RDA implementation by acknowledging that cataloging is changing (S.D. Miksa, 2007). Therefore, unsettled emotions and reactions to the reality of change are expected since the process is in flux (Bothmann, 2011).

In addition to clearly depicting recent advances in cataloging standards as transformative change, the body of literature related to RDA implementation includes encouragement for additional investigation to reveal the reaction of current cataloging practitioners. Specifically of interest is practitioners' ability to assist understanding and facilitate necessary course corrections as solutions for the complex challenges facing the bibliographic organization community are implemented (Brenndorfer, 2016; Sanchez, 2011; Tosaka & Park, 2013; Wacker & Han, 2013; Welsh & Batley, 2012). In order to make clear the gap that this research intends to fill, the next two sections will examine the existing research literature about RDA implementation by sorting it into two perspectives administrative and personal.

Administrative Perspective

Research that takes the collective perspective of RDA implementation takes a top down approach by examining questions related to administrative aspects of implementation. Much of the current literature only briefly touches on RDA as a vehicle to enable linked library data to move forward (Alemu, Stevens, Ross, & Chandler, 2012) or laments what is lost from AACR2 (Gorman, 2016). It does not give insight on how current practitioners and educators view RDA implementation other than addressing how

it has affected administrative aspects such as training and workflows. Some have honed in on specific modifications introduced by RDA such as the General Materials Designator (GMD) field (Kalwara, Dale, & Coleman, 2017). But this literature does not address how hybrid catalogs affect access or how cataloger judgment is used. Most research focuses only on the standard itself, training, or management efforts, or on very theoretical or technical aspects of the content standard and costs (Maurer & Panchyshyn, 2014).

Martin and Mundle (2014) review cataloging and classification literature from 2011-12, during a time of preparations for a "new cataloging code to be implemented, an impending new syntax for holding catalog data, and potentially a complete paradigm shift moving away from thinking about individual records to triples of information that can be linked together on the fly" (p. 244). Park and Tosaka (2015) have collaborated on several surveys of cataloging and metadata specialists to capture their experience around RDA implementation. Tosaka and Park, (2013; 2014) have focused on training issues, gaps, and what processes were most helpful for practitioners. Long (2018) summarizes research literature on the topic of RDA implementation in large U.S. libraries, noting along the way, that there is far more cataloging research focused on academic libraries. According to Long (2018), reports on RDA implementation research include pre- and post-implementation research: training, perceptions of RDA, anticipated and actual impact on users and ILS systems, adoption rates, and GMD questions. Prior to the implementation of RDA, catalogers and metadata specialists were trying to understand the new code and how it was going to work (Cronin, 2011). At that time, the literature on RDA concentrated on explaining and touting the merits of RDA.

Personal Perspective

The RDA implementation research that takes a personal perspective involves revealing the individual's struggle to develop a new knowledge base on which to make "cataloger judgements." While there is a plethora of rhetoric on the topic of RDA implementation from the personal perspective in arenas like blogs (Cooke, 2015), listservs, trade publications, and conference reports, "there is a critical research need to examine practitioners' views on the new cataloging code" (Tosaka & Park, 2013, p. 652), for there is very little research being done to fill this need. During many of the presentations and workshops preceding LC's implementation of RDA, it was common to speak of users in regards to RDA as interchangeably being both the end users (McCutcheon, 2012), as in library patrons, and catalogers and metadata specialists who are describing the resources for the end users to access the information. "Cataloging research should be geared toward understanding the perspectives of the information producer and consumer, thereby enhancing the application of library cataloging skills to serve information access" (Lundgren, 2011, p. 36). In decrying their lack of influence and involvement, Lundgren (2011) points to the fact that catalogers and metadata specialists often are not consulted in automation decisions, designs, and developments, even though bibliographic records populate online catalogs and discovery systems.

European researchers were more likely to use qualitative interviews or focus groups to get the personal perspectives of catalogers and metadata specialists (Ducheva & Pennington, 2017). After the publication of RDA, German researchers conducted focus-group interviews with catalogers and metadata specialists from 18 academic libraries from all 6 German regional library networks. During the interviews, catalogers and

metadata specialists were asked several questions on how self-confident they felt about implementing RDA. The German catalogers and metadata specialists were more approving of RDA than the interviewers expected (Wiesenmüller, 2017). Not all countries are achieving RDA implementation equally, likely due to language and cultural issues. Researchers in Turkey had different results; some catalogers and metadata specialists were using different rules which created problems since the country has no national cataloging policy. The results showed that catalogers and metadata specialists from Turkey lacked knowledge and expertise in implementing RDA (Atılgan, Özel, & Çakmak, 2015). Philippine catalogers and metadata specialists see both pros and cons associated with RDA implementation in their country (Acedera, 2014; Santos, 2017).

Social Construction of Technology (SCOT) Theory

I selected Bijker's (1995) social construction of technology (SCOT) theory as the theoretical framework for this study based on its strength to address emerging technologies. SCOT "is a theory for technological development, and its basic premise states that technologies emerge from social interactions among social groups and actors" (Prell, 2009, p. 2). SCOT considers failures and rejections as well as successful technological innovations based on the perceptions regarding the necessity of the technology by "relevant social groups" (Bijker, 1995). Olsen and Engen (2007) assert, "Inside the SCOT framework, the theory opens for many different factors shaping technology under development and many potential outcomes of the innovation process" (p. 459). SCOT's philosophical paradigm is constructivist as it sees social influences affecting how technology takes hold. Osburn (2009) presents the library as a "cultural technology" which preserves the human record whose larger purpose or "function is

stewardship of the social transcript" (p. 258). Taken together, this means that the social construction of technology is a relevant theoretical lens through which to view the themes related to the lived experiences of catalogers and metadata specialists involved in RDA implementation.

Carr (2014) promotes the continued use of Ranganathan's five laws of library science and asserts that "the actions of user communities shape a technology's meaning and…advocates that librarians use the laws' SCOT-based principles as a guide to navigate through a period of transformative change" (p. 152). This is particularly apt in regards to the fifth law: A Library is a Growing Organism (Connaway & Faniel, 2015).

Although there is a theoretical connection noted in the literature of diffusion of innovations in regards to adoption of RDA (Hunt, 2013) or linked library data (Moulaison & Million, 2014), Frederick (2016) sees cataloging changes as more evolutionary. As Frederick (2017) points out, technology is not necessarily disruptive in the sense that as a user of electronics, one is not required to be an expert or engineer to use it effectively. In addition, technological advances, especially communications technologies, are constrained by society until the need for the innovation becomes commonly accepted (Bijker, Hughes, & Pinch, 1987; Winston, 1998).

Bijker et al. (1987) introduced the beginnings of SCOT theory to provide an alternative viewpoint to technological determinism. Technological determinism is a reductionist doctrine that suggests that a society's technology determines its cultural values, social structure, or history (Klein & Kleinman, 2002). Human agency and autonomy contradict technological determinism with the constructivist viewpoint, asserting "technology does not determine human action, but that rather, human action

shapes technology" (Ruzic, 2011, p. 259). SCOT theory combines the three diverse strands of the "science, technology, society" (STS) drive, the sociology of scientific knowledge, and the history of technology. Berger and Luckmann (1966), introduced the tension involved in technological evolution overcoming the natural tendency of the material world toward entropy. Entropy is a complex term associated with uncertainty and instability (Shannon, 1948). Entropy is associated with information and involves mathematical formulations for disruptions or interference called attenuation or "noise" in communication theory (Shannon & Weaver, 1998). Entropy is a measurement of the capacity to change or amount of disorder in a system which "will always increase on its own. The only way to make things orderly again is to add energy. Order requires effort" (Clear, 2017), and chaos is how disorder gets created (Gleick, 1987). Knowledge grows through a sociological integration between forces of stability and chaos (Berger & Luckmann, 1966; Shera & Egan, 1951). From this phenomenological approach, the "social construction" of knowledge (Berger & Luckmann, 1966) grew to encompass the study of science and technology. Technical artifacts are seen as constructed, and the ways in which society influences and accepts technological developments is the thrust of the social construction of technology theory (Bijker & Law, 1995).

The SCOT framework has been used in other library-related research, especially in digital libraries (Saracevic, 2000). Dalbello (2005a) used the SCOT theory as part of her methodology along with theories of social change and organizational rationality in her phenomenological study of an emergent national digital library program. She asserts that SCOT "debunks an image of technology as a mere thing (tool, tangible outcome, mere instrument) and introduces the notion of technology as a sociotechnical artifact.

Technology, therefore, exists in the world of objects, processes, knowledge, and symbols" (p. 398), and it is particularly relevant to see the library as a communication technology. An alternative use of SCOT by Kilker and Gay (1998) examines "system and user-centered frameworks for study and evaluation. It recognizes that different audiences associated with a digital library (from designers to different groups of users) have different interpretations: they evaluate a digital library differently and use a different terminology" (p. 60).

SCOT's key concepts include: relevant social groups, interpretative flexibility, stabilization, closure, technological frames, micro political power strategies, semiotic power, and semiotic structures. According to SCOT, people form homogenous groups, or relevant social groups, based on a shared viewpoint similar to a community of practice, share consensus regarding the artifact. An artifact is the object of attention, in this study the library catalog as a technical system viewed as somewhat closed but becoming more open and maturing. Interpretive flexibility is the quality seen when the system is no longer deemed acceptable by one or more relevant social groups, the interpretive flexibility of the artifact is again examined or "deconstructed" and negotiated from each relevant social group's viewpoint. Stabilization occurs when consensus as to meaning is reached among the pertinent relevant social groups. Stabilization, or the solidification of meaning and decrease in interpretive flexibility, is what leads to closure. Finally, the technological frame is how the artifact is explained and its meaning constructed by the relevant social groups. Framing provides the boundaries or the structure of the meaning of an artifact to a relevant social group, thus, prior to closure, there will likely exist multiple interpretations of the artifact by different relevant social groups within the

technological frame. SCOT was used as a theoretical lens to view the themes that emerged from the data that were collected: the participants' interviews and researcher notes. Table 3 contains a concept summary of key SCOT terms. In addition, Figure 2 illustrates how the first 4 concepts along with the library catalog as the artifact are interrelated. The main reason the answer to this question is significant is that RDA is meant to serve as a critical first step to providing information seekers with access to trustworthy information.

Contributing to the common good and social justice

Access to information is a common good, and bibliographic records describe information resources for information seekers, that is, they provide access to the information resources. Libraries bridge gaps and span the digital divide. Digital equity is another way libraries contribute to the common good. Digital equity is a broader concept for bridging the digital divide which incorporates digital literacy, social equity as well as access (Resta & Laferrière, 2008). Thus, catalogers and metadata specialists perform an important customer service function to assist users to complete the tasks required to locate the resource they are seeking (Bair, 2005). When RDA is used, then equity of access to information is more likely to be achieved. This is why it is important to make implementation of RDA easier in order to enhance and contribute to the common good.

The principles that underlie RDA serve the common good by seeking to improve access to the resources that the bibliographic records describe. Both the substantive and procedural aspects of the common good are relevant. The substantive aspect of the common good means what is valued is shared in common. The procedural aspect means that it is through participation that it is achieved. In addition, the common good and

public good are often used interchangeably to connote the awareness and intention of seeking the good of all as well as for each unique individual.

Social justice, a significant topic for society today, is becoming more widespread in the library and information science field, which is appropriate since librarians promote and contribute to a just society as part of their daily duties and outreach in the library and for the community (Marcella & Chowdhury, 2018). For example, social justice was recently the theme of the Association of Library and Information Science Educators (ALISE) 2015 conference (Jaeger, Taylor, & Gorham, 2015; Jaeger, Shilton, & Koepfler, 2016; Mehra, Rioux, & Albright, 2009; Mehra & Rioux, 2016; Oliphant, 2015; Rioux, 2010). Schroeder and Hollister (2014) define social justice "as a concept concerning the ways in which resources and power should be shared across society" (p. 6).

The purpose of this research then is to contribute to the common good by making RDA implementation easier through better understanding of the implementation experience. By creating interoperability between library systems and other search systems, RDA has the capability of broadening access to information that libraries create in the form of bibliographic and authority records, making those records, and the resources they represent, accessible to anyone searching the Web instead of only those who search a library catalog. "The social justice of equity of access is not only right in itself but of benefit to the individual and society--the greater good" (Gorman, 2015, p. 216). If RDA standards are associated with improving access to library collections, then when librarians use RDA, they will be moving toward the social justice goal of making information in library catalogs useful and library collections will be easily and more often accessed.

Summary

This chapter began with a brief overview of the evolution of the library catalog. Then RDA was explained, followed by the effects of transformative change. Next, the top down administrative perspective and the more inductive personal perspectives found in the literature provided background for the emerging themes and a basis to differentiate the approach chosen for this study to examine the experiential evidence of everyday encounters with implementation of RDA among catalogers and metadata specialists. Bijker's (1995) social construction of technology (SCOT) theory of sociotechnical change was then described, and finally, this review concluded with a description of the way that the work of catalogers and metadata specialists contributes to the common good and social justice.

Due to the lack of literature covering the experience of cataloging practitioners implementing RDA, this research intends to provide a starting point toward new solutions and understanding and enhancing the provision of the common good by libraries. Encouraged by an article about RDA research potentials in the June 2009 Association for Information Science and Technology (ASIS&T) bulletin, I was able to narrow down my topic for this dissertation proposal. An examination of the implementation of RDA may uncover and stimulate understanding of the boundaries and objectives of the catalog for all types of libraries (S. D. Miksa, 2009). As cataloging librarians are at the forefront of RDA implementation, it is beneficial to understand their lived experiences.

Chapter 3: Methods

The problem this study addresses is twofold. First, it is difficult for catalogers and metadata specialists to follow a new cataloging code that is evolving and has multiple models for implementation. The conceptual models on which RDA is based have changed and require new assumptions, theories, models, practices, and tools. Secondly, the public is more challenged than ever to access trustworthy information because of the proliferation of easily accessible information that is not necessarily vetted for quality. When taken together, this twofold problem forms a new reality for librarianship and the rapidly changing nature of describing information resources for findability in information ecosystems. While there have been some online questionnaires and informal surveys used to investigate catalogers' and metadata specialists' implementionation efforts using new cataloging codes, there is a need for research-based evidence about the firsthand experiences of catalogers and metadata specialists who have used new cataloging codes (Halpern et al., 2015; Park & Tosaka, 2017). The purpose of this study is to fill the gap in the literature by creating new knowledge and understanding of catalogers' and metadata specialists' experiences of RDA implementation. This will, in turn, increase a knowledge base for improving best practices and serve to inform and improve library users' access to trustworthy information.

Phenomenology

This study is designed as qualitative research using the foundational philosophy of phenomenology as described by Moustakas (1994). I used the psychologist Moustakas' approach because it is systematic and provides guidelines for assembling textural and structural descriptions from which themes emerge. The goal of

phenomenology is to learn the meaning of a phenomenon as it is known by experience (Budd, 2005). Moustakas highlights the lived experience aspect of a phenomenological research approach as "what an experience means for the persons who have had the experience…to provide a comprehensive description of it. From the individual descriptions general or universal meanings are derived, in other words the essences or structures of the experience" (p. 13). Participants' stories about their experience with RDA implementation is the primary source of data in this research (see Figure 3), with an intention of being open to following insights that emerge from an examination of the lived experience of the participants (Moustakas, 1994). Figure 3 is my conception of the use of Moustakas' (1994) concepts of noema and noesis as I used them in this study. Noema is what was felt and is used to create the textural description of the participants' experience. Noesis is how the phenomenon was experienced by the participants and is used to create the structural description of each participant's experience as well as a collective structural description of the phenomenon. Through the use of both noema and noesis and the overlap between them, the lived experience of the phenomenon is captured. Following Moustakas' recommendations and the examples of other researchers like Polkinghorne (1989); Moerer-Urdahl and Creswell (2004); and Creswell (2007), I studied the chosen phenomenon RDA implementation by first bracketing my biases and presuppositions (Husserl, 1931); interviewing participants and taking notes; identifying meaningful statements and themes; and organizing my findings about the essence of the experience. By allowing each participant to share their unique story, questioning prompted the revelation of additional aspects.

Central to using phenomenology is Husserl's (1931) concept of bracketing. "Husserl called the freedom from suppositions the *Epoche,* a Greek word meaning to stay away from or abstain" (Moustakas, 1994, p. 85). Husserl asserts that the natural world around us can be bracketed in order for the researcher to grasp the meaning or the essence of a phenomenon. Through bracketing, the researcher can "set aside prejudgments, biases, and preconceived ideas" (p. 85) and investigate the social world and discover how people in their daily work and life interact in the social world, as it is natural to them. A phenomenological approach to studying RDA implementation enabled me to discover and learn from the experience of catalogers and metadata specialists. This was in contrast to past quantitative research studies that mainly asked quantitative questions about things like the number of libraries implementing RDA (Hennelly, 2016), or other metrically oriented investigations such as the number of RDA records showing relationships that are present in a shared database (Park & Morrison, 2017).

Research Question

The research question in this study is: What are the meanings, structures, and essence of the lived experience of catalogers and metadata specialists implementing Resource Description and Access (RDA)?

Study Participants and Recruitment

To study the experience of RDA implementation, participants were selected from among members of a group of 40 librarians and staff volunteers from public, school, medical, special, and academic libraries in the Midwestern United States. The RDA practice group, which had formed in 2012 as a forum for RDA learning and practice, met monthly for approximately one year from 2012 to 2013. Meeting together enabled

participants to proactively discuss, prepare, practice skills, and learn from one another. Although the original RDA practice group (of about 40 members) no longer holds formal meetings, the participants' experience of RDA implementation continues through their work at their individual libraries as well as through informal interactions among group members.

Polkinghorne (1989) recommends that phenomenological studies utilize a range from 3 to 30 interviews. Creswell's (2007) approach calls for interviewing between 5 and 25 people who have experienced the phenomenon. Participants in my study population consisted of 15 interview participants from academic (7), public (3), law (2), medical (2) and special (1) libraries. This met the intention of interviewing the willing and active members of the group for "saturation" (Creswell, 2007, p. 160) achieved as was recommended. According to Creswell (2007), "the researcher attempts to saturate the categories—to look for instances that represent the categories and to continue looking (and interviewing) until the new information obtained does not further provide insight into the category" (p. 160).

From a master listing of names of individuals in the RDA practice group, I created a comprehensive chart of names and contact information that was used to invite participants and to schedule interviews. In addition to participants' past membership in the RDA practice group, selected participants in this study consisted primarily of current and engaged members of the state library technical services round table (TSRT). The TSRT continues as a community of practice and provides support for each other in RDA implementation issues and solutions. This small subset of the regional cataloging community has had several years to experience and reflect on the experience of RDA

implementation and provided insights from their individual experiences and group interactions.

Data Collection Methods

The interviews and researcher notes were my source of unique experiences and emergent common themes. As Moustakas (1994) recommends, my participants' stories about their experiences with RDA implementation through the RDA practice group era to the present was the primary source of data in this research. I was open to following insights that emerged from this examination of the lived experience of the participants. As recommended by Moustakas, participants were considered co-researchers who were fully informed about the inquiry objectives and their roles.

Individual interviews were used to collect the participants' responses and researcher notes about their experiences and perspectives. Participants' stories were gathered using semi-structured interviews and open-ended questions (Appendix A). Zoom, a digital video conferencing tool, was used to conduct, record with camera and audio, and transcribe the interview responses. Open-ended questions allowed participants to provide information as it spontaneously unfolded during the interview.

Once Institutional Review Board (IRB) approval was obtained, participants were contacted, invited to participate in the study, and given an informed consent document (Appendix B) that explained the research parameters. By signing and returning the consent document, participants indicated their willingness to participate. Interviews were scheduled for a mutually agreeable time. No more than two interviews were scheduled per day to allow for the recordings to process and the researcher to remain open and receptive. Following each interview, participants were asked to review the transcribed

interviews following Merriam's (2009) guidance for "taking data and tentative interpretations back to the people from whom they were derived and asking if they are plausible" (p. 229). I included a summary and full transcription of the interview for the participants to verify that their responses had been captured accurately through member checking (Creswell, 2007; Moustakas, 1994). This was a means to increase the trustworthiness of my results.

Data Analysis

I analyzed my data using Moustakas' (1994) modification of van Kaam's (1959, 1966) method of data analysis, which is described in eight analysis steps. This started with Epoche of my own views and bracketing of theories and findings in the literature and utilizing the complete transcripts of all the participants (see Table 4 for steps and definitions). Similarly, following Moustakas (1994), Vagle (2014) employs a van Kaam-style method as a phenomenological analysis option, starting with a holistic view for significance and narrowing through highlighting to select key themes and going line by line for details:

1. Listing and preliminary grouping of meaningful statements.
2. Reduction and elimination to determine invariant constituents.
3. Clustering of invariant constituents.
4. Final identification of the invariant constituents by application--validation.
5. Individual textural description.
6. Individual structural description.
7. Textural-structural description. (p. 103)

As my judgment was set aside, I viewed the transcript with a fresh perspective. Next, with an open mind, various points of view units of meaning (horizons) were identified describing the what of the phenomenon of RDA implementation in a textual description. Then, the how, or structure of the experience, was intuited and imagined in relational themes. These two aspects were then combined and synthesized to form the essence of what was observed. Each individual interview conducted in the same way in order to fully extract meanings and themes and reach saturation. When this occurs, an overall representation of the whole group's essence of experience can coalesce.

My preparations for analyzing data from my research was ongoing and included keeping an open mind and fresh perspective; learning to be responsive instead of reactive, flexible versus rigid; being adaptive and intuitive; and becoming a very good listener. This included a focus on endeavoring to hone my note taking skills as well as planning and having a session to practice recording and organizing the interviews. I continue to learn how to be self-reflective, which started as a way to be prepared to encourage the reflective sharing of the participants.

The data of the phenomenon being studied is the perceptions of catalogers and metadata specialists preparing for and implementing RDA. Following Moustakas' (1994) guidance, data was gathered through interviews and researcher notes to garner their unique experience and perspective and to identify themes that emerged from the ongoing interaction and support as members of a professional organization. These emergent experiences contributed to my understanding of how professionals and practitioners are interacting with and adapting to the shifts in the cataloging field and gave me a different perspective than reports that are more technical or written at a higher-

level viewpoint. The perspective I sought was from the personal frontlines. For each individual textural description of the experience, I am describing the noema, which is what was felt, basically "the what" of the experience. I first describe what I learned in my analysis of the data. I then include transcribed quotes from the participants to illustrate their lived experience.

For each structural description of the experience, I am describing the noesis, the feeling, "the how," or structure, of the experience, which is the dynamic result based on the textural description and the imaginative variation, which encompasses possible or fanciful perspectives. Creswell (2013) elaborates on the phenomenological approach to data analysis as starting first with bracketing by the researcher in order to acknowledged and set aside personal bias. Second, textural description, the what of the experience, begins with horizonalization of relevant quotes and assigning an equal value. Third, these relevant parts are grouped into units of meaning. Fourth, textual description are illustrated with relevant quotes from the data. Fifth, the structural description are created to present the dynamic reflection, or how, of the experience. Sixth, the phenomenon's essence is revealed by the invariant themes emerging from the data.

Downloading each automated Zoom transcript preceded my own transcription process. I established a template and protocol for each transcript to include the participant identification (i.e. participant one), date and time of the interviews, the number of attendees (2 in all cases), the transcriber initials (my own, kmw), the length of the interview, the 3 associated files (from Zoom), and the comment identification conventions of annotating participant comments or responses with a capital P followed by a colon (**P:**) at the left margin and interviewer questions or comments were labeled with

an I followed by a colon (**I:**) at the left margin. This resulted 418 pages of transcription. After I reviewed the recording again with the annotated and corrected transcript, I made a summary of the interview and emailed it to each participant for them to review. Although this process took much longer than I had originally anticipated, the increased familiarity with the data made it very worthwhile. The time spent was beneficial because it provided a more holistic sense of the interview and deepened my understanding. Sharing the summary and complete transcript of their interview with each participant allowed them to confirmation their statements as a way of member checking and allowed them to provide any additional thoughts, information, explanation, and/or clarification without feeling obligated to do so. Several participants offered small contextual corrections and clarification regarding institution names or incorrect comment tagging. This provided verification and increased the trustworthiness of the findings and contributed to a more complete and rich description of their unique experience (Creswell & Miller, 2000).

Data analysis started in earnest with the completed transcripts and the summaries that had been sent to the participants for their review following Moustakas' (1994) recommended steps of listing and finding preliminary groupings. Next, reduction involved considering each new experience in and of itself, and elimination consisted of removing redundant elements. This was followed by clustering and grouping together, and thematizing by identifying the emergent topics, the invariant constituents. This led to the final identification of the invariant constituents and themes by application. By using the relevant, validated invariant constituents, or topics and themes suggested by the questions asked (Appendix A), I constructed a framework to structure the summary of

each participant's experience to include the person (Interview Queston 1), the place where RDA is encountered (Interview Queston 2), barriers, successes (Interview Queston 3), meanings (Interview Queston 4), and what they see in the future (Interview Queston 5). This summary helped me to filter and narrow the interview and encapsulate the resulting textural description. The creation of a structural description followed. From the individual textural and structural descriptions, elements and themes were identified and a composite description was presented.

The interviews yielded the data I analyzed; the transcriptions and my researcher notes. When the transcription was completed, I first reviewed it to capture an overall understanding of the responses. Then I made a summary to be sent with the full transcript to the participants for their review. Then I coded the data for description and themes (Creswell, 2014). After reading the material for the first time, I broke it down into manageable parts and then labeled the parts for descriptive purposes. Then I grouped the parts into major topics or themes. As the phenomenon became revealed in the experience of the participants, I described it in detail to allow the essence to be revealed. I then looked back at what was revealed about the phenomenon in light of the current state described in the literature as well as my own perspective, that is, what I had set aside in order to be present to the participants, so that I could see what was congruent with expectations and what was a novel discovery. I then reviewed limitations and considered possible directions for future research. In addition, pragmatic recommendations and best practices emerged from the results of this research and are shared in the concluding chapter. As this is a qualitative approach, its aim was not to

determine causality, but to present instead an accurate, engaging, and thorough description (Moustakas, 1994).

Theoretical Framework

Bijker's (1995) social construction of technology (SCOT) theory provides characteristics and boundaries for scrutinizing technological innovations. Bijker held that like science, technologies are socially constructed. SCOT theory was created in response to technological determinism, a view that things are just the way they are without consideration for the influence of culture, economics, and other social influences, in an oppositional way. Scholars now consider SCOT to be the leading theory about how technological evolution occurs. According to Bijker, technologies, or innovations, shape and organize the world and our lives. However, individuals and groups decide which technologies are useful and meaningful for solutions. In this study, I used SCOT theory to view the mechanisms by which the social and technical norms of the group affected their interaction with RDA. I used it to identify and explain a range of factors that constrain and/or drive the implementation of RDA as a technology and that may or may not cause it to become functionally successful. Table 2 contains a concept summary of key SCOT terms and Figure 2 illustrates how relevant social groups, interpretive flexibility, technological frames, and stabilization and closure along with the library catalog as the artifact are interrelated, and how these first 6 concepts of SCOT were used to interpret the lived experiences of librarians involved in RDA implementation.

Validation of this Research

Often the research literature offered a collective insight into a particular whole library's narrative without giving voice to the individual and unique perspectives. The

more granular approach of interviewing individuals in my study was an effort to take time to capture and reveal many strands individually. This level of scrutiny was selected to find significant insights that may have been previously overlooked. This level of scrutiny may also unlock potential new solutions for discerning new pathways through uncertain territory and encourage reflective practice or alternative and innovative collaborative and peaceful progress. The analysis process, according to Moustakas (1994), was an attempt to uncover and identify the underlying structures of the participants' own experience of RDA implementation and the essential aspects or underpinnings of their consciousness of the ongoing process.

Role of the Researcher

I have worked as a cataloger for approximately eight years. I am well versed in the language of cataloging and understand the technical terms and jargon. I have experience with applying RDA for original as well as copy cataloging. Upon reflection, I can see how my eclectic path has led me to investigate this development as I learned the details of information and communications technology from the ground up. I have participated in introducing advancing technology and switching my perspective from my favored role as a technician involved with the details to the role of project manager entrusted with the big picture. This experience has supported my learning about the background for this phenomenon.

Researcher's Background

In an effort to follow Moustakas' (1994) recommendation that a researcher addresses their *ethos,* I share these details about my evolution as a person and scholar.

Epoche. When the RDA practice group formed in 2012 as a forum for RDA learning and practice experiences of RDA implementation, I had begun to get more involved with professional development and educational experiences. I joined my state library association, including the technical services round table, and attended my first library conference. Although I was not a participant of the RDA practice group, I did attend professional meetings, conferences, and educational workshops with group members, and this provided an opening for inviting them as participants for this study.

I share their overall positive attitude toward RDA as a first step as well as the frustration at immature technological solutions. The way in which these forty forward thinking catalogers and metadata specialists worked together to prepare proactively for the evolution of cataloging rules is exemplary and the basis for their selection to share their experiences for this research. The leadership, courage, confidence, and positive attitude demonstrated by the group who took the initiative to implement and share a record of their process for others who are implementing and learning about these changes are noteworthy qualities worthy of emulation.

My interest in learning about new technology has led to my fascination with linked library data possibilities on the Semantic Web and my pro RDA bias. I am excited by the possibilities the future holds when we can see beyond the paradigm of the card catalog. I am also a proponent of aligning my professional service with core values and providing opportunities to improve access to information. I believe in upholding the dignity of the person and equitable opportunity as social justice. My initial inspiration to include the idea of the common good was bolstered by a series of social media posts with the hashtag Hornets for the common good: #Hornets4theCommonGood by Emporia State

@emporiastate. All of the posts were inspiring, but a quote from Louis D. Brandeis posted on 23 Aug 2015, was particularly apt: "What are the American ideals? They are the development of the individual for his own and the common good; the development of the individual through liberty; and the attainment of the common good through democracy and social justice." This was encouraging and timely for me in focusing my research purpose since libraries are associated with liberty, democracy, and education.

Education. Originally, I had thought I would write about something involving administration or organization in the sense of managing a group of people, which would flow from human resource management, images of organization as portrayed by Morgan (1997), or learning organizations by Senge (2006). Then I realized there was another side to my education, the technical trainer side. This side encompasses a love of computers, databases, technology, and the simplicity of working with information electronically. I saw in this side an avenue of research that would be systematically straightforward and seek to reveal the most efficient manner in which to proceed to converting siloes of library data into linked data so it could populate the Semantic Web with its valuable and painstakingly procured and perfected descriptions of resources. This further evolved into a much more personal pursuit to elucidate the lived experience of catalogers and metadata specialists who are on the front line of implementing the evolving cataloging standards. Hoffman (2008) provides a good definition of this evolution in my thinking when she says that professional catalogers and metadata specialists work in the background to make resources discoverable by searchers.

My doctoral cohort, colleagues, and professors challenged me to realize my viewpoint was often squarely situated in a radical humanist position (Burrell & Morgan,

2007). This led to the realization that the unique perspectives of individuals proved more in alignment with the questions I was considering. My understanding of the problem evolved through searching the spectrum of the literature from social media through scholarly literature and from dogmatic and traditional through progressive and radical positions. I thereby found merit in many of the viewpoints and concerns portrayed, and it brought full circle the desire to investigate the implicit and individual insights of this particular group. Due to the lack of literature covering the firsthand accounts of experiences of cataloging practitioners implementing RDA, this research intends to provide a starting point toward new understandings and possible solutions. The information shared by my participants may ultimately help to improve understanding of and create better user services for accessing and cataloging bibliographic information.

Ethical Standards

I strove to maintain the highest possible ethical standards and respect for human subjects of research throughout this research. I provided an explanation to my participants prior to interviews so they could decide whether they wished to participate in the study (informed consent, Appendix B). I informed my participants that there would be no penalty of any kind if they chose not to participate or to stop participating at any time. This study involved conducting interviews with adults who participated in the RDA practice group to prepare for implementation. Participant confidentiality was important, and I assured the participants that their identity would not be revealed. Participants were numbered for the study. No injury was expected to or did occur as a result of taking part in the study. Participant's answers are anonymized and shared using a number schedule to minimize the risk of attribution. I have made every effort to protect

the confidentiality of the participants and safeguard their privacy and human dignity as is consonant with social justice and the common good. The informed consent form (Appendix B) was collected and is stored separately from their identifying numbers. It is password protected so that it cannot be connected to the answers from the interview (Appendix A). IRB approval for this research was obtained before beginning the study. The researcher completed the required training and has been recently recertified to study human subjects.

Timeline for Study

The interviews were scheduled and recorded in late December 2018 and January 2019 following the proposal presentation and acceptance in November 2018 and IRB approval December 2018. With data collection completed, the findings from the data analysis and the study outcomes were written for defense of the completed dissertation in spring 2019.

Chapter 4: Findings

The problem this study addresses is twofold. First, it is difficult for catalogers and metadata specialists to follow a new cataloging code that is evolving and has multiple models for implementation. The conceptual models on which RDA is based have changed and require new assumptions, theories, models, practices, and tools. Secondly, the public is more challenged than ever to access trustworthy information because of the proliferation of easily accessible information that is not necessarily vetted for quality. When taken together, this twofold problem forms a new reality for librarianship and the rapidly changing nature of describing information resources for findability in information ecosystems. While there have been some online questionnaires and informal surveys used to investigate catalogers' and metadata specialists' implementionation efforts using new cataloging codes, there is a need for research-based evidence about the firsthand experiences of catalogers and metadata specialists who have used new cataloging codes (Halpern et al., 2015; Park & Tosaka, 2017). The purpose of this study is to fill the gap in the literature by creating new knowledge and understanding of catalogers' and metadata specialists' experiences of RDA implementation. This will, in turn, increase a knowledge base for improving best practices and serve to inform and improve library users' access to trustworthy information.

The findings in this transcendental phenomenological study reveal the lived experience of catalogers' and metadata specialists' implementation of RDA. The results of this investigation provide essential information pertaining to the struggles and successes of those in the cataloging field as best practices for RDA implementation are in development. The design of this study enabled catalogers and metadata specialists to

share their firsthand experiences of implementing RDA. Bijker's (1995) social construction of technology (SCOT) theory served as a lens through which to view the lived experiences of catalogers and metadata specialists involved in RDA implementation.

This investigation centers on the phenomenon of the implementation of RDA as a new library cataloging code created in response to the expansion of bibliographic resources as experienced by a group of catalogers and metadata specialists in the Midwest United States. This research understands that RDA has fundamentally changed the way catalogers and metadata specialists describe resources. This chapter presents findings that emerged from data collected through interviewing fifteen participants. I conducted semi-structured interviews consistent with transcendental phenomenology on the topic of their experience with implementing RDA. The recorded interviews lasting between 16 1/2 to 45 minutes, for a total of 481 minutes (8 hours) of interviews. The interviews were conducted using Zoom, a digital video conferencing tool, which allowed participants from distant locations such as New York, North Carolina, and Ireland to participate. How these participants experience and understand the phenomenon revealed important insights.

Starting with Epoche as advised by Moustakas' (1994), I set aside my own experience in order to be open to and conscious of the experience of the participants by seeking to capture the emergent significant statements in their answers in the semi-structured interviews. By bracketing out my own experience using Epoche, I was able to remain sensitive to emergent themes from the participants' stories during my data collection and analysis. This allowed me to be consciously mindful of the unique

perspectives and experiences. Bracketing, or Epoche, allows presuppositions to be set aside, for a time, in order to be mindful and aware, especially during interviewing and data analysis. Transcendental phenomenology is so named because of this phenomenological reduction (Moustakas, 1994). The steps of phenomenological reduction include identifying individual horizons, creating clusters of meanings, and creating individual textural descriptions as well as a structural description of the experience. This process reduces distraction and increases the focus necessary for the researcher to be present to the emergence of the experience and to capture the meanings, structures, and essence of the lived experience.

In the next section, I have laid out a textural and structural description of each participant's experience. This is followed by the broader elements and resulting themes. The chapter concludes with a composite description of the meanings and essence of the phenomenon.

Textural Description of Participant One

Participant One (P1) enjoys cataloging as a full-time staff member in an academic library at a university since 1995, and prior to that she served as student worker. P1's career moved on a progression through circulation, reference, interlibrary loan, and reserve media before settling into cataloging. When the technical services department at the library where P1 worked was disbanded in 2014, P1 moved to the Archives and Special collections department, which presented the fun challenge of describing "the most interesting materials in the library" as well as becoming familiar with other metadata standards such as Describing Archives: A Content Standard (DACS) and Encoded Archival Description (EAD) in ArchiveSpace for the creation of finding aids.

P1 is the most experienced MARC record cataloger and metadata specialist currently working in the library. She primarily uses RDA for original cataloging. When copy cataloging, her library deems upgrading existing AACR2 and hybrid records to full RDA "too time consuming." However, in using the OCLC Connexion client to create bibliographic constant data files, P1 created RDA templates for different types of records to simplify inclusion of all required elements of description and create compliant user-friendly records, "that have all the information that my patron could possibly need in order to find" the resource they are looking for.

Because its cost is often perceived as a barrier to access to the full RDA rules for small libraries, P1 feels fortunate to have access to the RDA Toolkit. The RDA Toolkit was written as "standard neutral" as possible, while acknowledging its limitations. These limitations include being "long and unwieldy" and retaining "somewhat arcane language." This means cataloger judgment is now more necessary when using RDA for deciding how to describe things and how to interpret the guidance it provides, which P1 finds challenging. However, the flexibility in RDA is not necessarily a bad thing, because having the rules be too rigid is also not good. Part of what makes it so difficult to "wrap our mind around it," for P1, is that the RDA Toolkit does not include concrete examples on mapping the abstract standards. While admitting to looking to the Library of Congress and other big institutions for guidance and examples for how to apply the rules, P1 uses the RDA Toolkit as needed to look things up, especially in regard to relationship designators and to find the best descriptors available.

Another barrier P1 shared is the need for an updated encoding standard to replace MARC, since "RDA can't achieve some of the things it's designed to achieve until we

move to BIBFRAME or some other linked data standard that is capable of encoding things in the way RDA wants to describe them." New capable systems and improved infrastructure are also necessary to utilize RDA fully, since it is meant for expressing relationships more explicitly in linked data applications and "move in a direction that will make it possible to describe some of these things in greater levels." P1 envisions that a visual based, keyword capable, or other new search system will be designed to contribute to the common good of improving access to the user RDA is moving toward.

Structural Description of Participant One

Cautiously optimistic about RDA implementation, P1 is a seasoned and resourceful cataloger who enjoys the challenge of complicated and complex cataloging and metadata standards. P1 is proud to have been involved with the forward-looking RDA practice group, with people who met together in a grass roots educational effort to examine the changes in great detail and learn from each other. While approving RDA as an important first step and sufficient content and display standard, P1 concedes that library metadata also needs to be interoperable with an updated encoding standard in the current messy digital environment. As a technically savvy, design informed, forward thinker, P1 is prepared for whatever innovations are presented and remains open to designing solutions for the future.

Textural Description of Participant Two

Participant Two (P2) identifies as "a nonprofessional in a professional world." She has worked as a non-degreed library specialist since the early 90s. She started part time as a media specialist assistant at a local high school, and 10 years later moved to the local public library. She then started working full-time as a cataloger and moved to the

central library where the technical services are centralized, when her public library was annexed. She does not plan to retire any time soon, so she continues as a lifelong learner to pursue professional development opportunities and following the small steps of how the field of cataloging is progressing.

While P2 uses RDA when copy cataloging, principally she uses it for original cataloging to ensure she "gets it right." Specifically, she seeks "to make sure that you're doing it as correctly as possible since you are making it from scratch and for other people to use." Although her department does have access to the RDA Toolkit, she sees it as a "slog" to use because it ought to "be much more accessible and much handier to use." This means that she finds it easier to use other bibliographic records as an example than trying to "find it in the toolkit." She balances the need for consistency in shared records with the requirements for display to her local users. This means after creating a record, and uploading it to the shared database, she takes the extra step to "tweak it with whatever local practice you use" to accommodate the local online public access catalog display overlay and other local requirements.

Structural Description of Participant Two

P2 had great insights, especially regarding how long it seems to be taking to make progress: "That's always the piece that feels kind of clunky about the whole process is that it seems to take an awful long time to move these things a short way." As for being a part of the RDA practice group, she enjoyed feeling part of an inclusive group that collaborated together to learn, regardless of professional status. She unabashedly asks questions and admits she pragmatically figures out how to do things correctly, "the brass tacks," without worrying about the philosophy of deeper theories. She is proud of the

work that she does describing resources to provide access and celebrates that "describing resources for access, gives a meaningful way to tell lay people what catalogers do."

Textural Description of Participant Three

Participant Three (P3) has over 30 years' experience working in libraries, and she earned her MLS in 1994. She has served as a catalog reference librarian at a law library for over 17 years. She does authority work, contributes authority records to a master database (the national authority file), and is involved with personal name records, digital initiatives, the institutional repository, and maintains a faculty bibliography. She also taught cataloging for about 5 years.

For P3, during normal cataloging and original cataloging, even copy cataloging, RDA is involved. She is glad to maintain her expertise and is cautious when answering questions to be as correct as possible. She expresses concern about staying abreast of changes. She admits that she still views cataloging in terms of "AACR2 which had 8 areas of description." Prior to RDA implementation, her participation in the RDA practice group made it easier and fun to learn things with other catalogers rather than having to "learn on my own." P3 found value in learning from and/or along with catalogers in other contexts across multiple formats of libraries: public, academic, larger, smaller. It was a good experience to share that with the different types of people in different types of libraries.

P3 has access to the RDA Toolkit but sees its cost as a barrier for a smaller library who cannot afford it. She also believes that the expected RDA Toolkit changes and restructuring (3R) will potentially be a barrier since the transition to RDA is not complete, making it seem more "nebulous." She sees the terminology being introduced

with FRBR and RDA (i.e. WEMI) as meaningless to information seekers. She is also frustrated with some limitations of library systems and catalogs. "When [the] public interface side doesn't search and display all information, the user then is being denied access to certain things." This results in further nonuse and isolation of the library catalog and the available resources it describes, which P3 thinks can be overcome by "getting library data, the information in our catalogs, out of silos." She is hopeful about RDA and the changes it means for our habits and ways of thinking because it will lead us to "experience some wonderful developments since we are not limited by space on a card."

Structural Description of Participant Three

P3 is a sought-out expert and mentor who is accustomed to aiding other catalogers in the local area. In that role, she empathizes with others' struggling with the financial barrier to access to the RDA Toolkit. She is a practical cataloger whose philosophy of cataloging is "Think of the end user and what am I doing that helps them? Doing this so people can find these things, you must provide the information so they can do that." She shared the motto often used in her section of her library: "It's all about the metadata." This reflects her belief that the importance of quality metadata ought to lead those outside of the cataloging department to the realization of the value and visibility of the work of catalogers. She struggles with maintaining her significant expertise and being underappreciated and the lack of understanding amongst the people involved in the ongoing process, including catalogers, information architects, and computer scientists learning to better communicate since "RDA is a commitment the cataloging world has made but remains to be seen." This is because RDA is just the first step, and an encoding

solution must be matured and implemented along with new systems made to be interoperable and able to handle and display the new types of bibliographic data.

Textural Description of Participant Four

Participant Four (P4) is a dedicated librarian with over twenty years of experience working in a library. She started her career in libraries working at a law library doing interlibrary loan and then became the evening circulation supervisor there. After five years, she became the acquisitions assistant in this library. Around this time, she became a heavily involved member of the close-knit technical services round table in her state library association, when, in her words "they roped me in." In 2005, she became the head librarian at an art museum, "having to do everything" since she only had a part time assistant. This was for her "where I got my feet wet with cataloging." She finished her MLS during this time, and the following year, started a university library position as the Technical Services Librarian. Since 2015, she has served as Branch Manager of a public library with little to no cataloging work to do.

P4 shouldered a change in her day to day work when she moved from a position of cataloger at an academic library to one as a public library branch manager, and that seems to color her responses to the questions in the interview. She wanted to share her experience with the RDA practice group, because she feels some nostalgia for her days as a cataloger and her work with the group and the connection to the important, positive, and inclusive "partnerships, community, network, and colleagues, of folks out there doing technical services." Her TSRT involvement, the university technical services librarian position, and involvement with the RDA practice group, led to her egalitarian

style leadership. She was instrumental in the formation of the RDA practice group from which participants in this study were selected.

As a cataloger, P4 experienced RDA predominantly while working as a technical services librarian at an academic library, and as the leader and participant of the RDA practice group. For her, RDA seemed like a door to the future of information retrieval using linked data, as a discovery system in the fullest sense of the term, for helping people to discover the information they need. She asserts the need for bibliographic records and library metadata creation to evolve beyond the card catalog paradigm and to transform library metadata into something simpler to use for information seekers, so that "when they come to a place where they're looking to find information, that it really doesn't have any links or throwbacks to how things were organized and structured before." She clearly experienced RDA as a way to achieve one of the big goals of librarianship: improving access to information.

Since P4 has "stepped back from the realm" of cataloging in technical services, she feels that she is lacking a current insider perspective on RDA implementation but believes that the decrease in complexity and "increased discoverability" sought for the current iteration of RDA will not be accomplished until integrated library systems (ILS) can take greater advantage of the robust, rich metadata that is created by using RDA. By "not allowing for that full RDA experience," the ILS constrains the advances in information retrieval that RDA makes possible, although P4 acknowledges there have been improvements, and that "it is difficult to have all the pieces come together, so we are not fully there, and RDA is not fully realized."

Her depiction of successful implementation of RDA is that catalogers understand the rules and how to apply them, and especially how the RDA practice group was "able to teach each other about it so that we can go forward." No matter what format of information resource is being described, electronic or physical, successful RDA implementation means "we must be able to have much more flexibility in and laying out that information for the end user—the patron."

Structural Description of Participant Four

P4 misses her conscientious cataloger identity, the challenges she faced, and humbly leading the RDA practice group. However, she is steadfastly focused on taking care of her personnel in the public library in her current role as branch manager. She sees the future of RDA as realizing a new conception of discovery systems with linked data. She is happy that this seems to be happening, at least from the patron's standpoint: but "from the staff view, on the other hand, [the ILS] is still broken." While very humble about her own contributions, she feels a strong sense of pride in the RDA practice group's accomplishments and the recognition earned by those accomplishments. This is particularly evident in her belief that RDA can take us from library catalogs in the old-fashioned sense to discovery services in which people do not have to think so hard about making connections between bibliographic records and therefore between resources for themselves--she is proud to have been a part of making that happen.

Textural Description of Participant Five

Participant Five (P5) has worked in libraries for 18 years and is currently a digital tangible media cataloger responsible for providing bibliographic control and access to tangible media and digital resources available from the collections she describes and

maintains. She started her library career working in a public library as a paraprofessional doing copy cataloging with LC subject headings and Dewey Decimal Classification. After completing her bachelor's, she then attended library school with a technical services/cataloging emphasis. After working for five years at the public library, she went to work at a medical library that specialized in bio medical science, where she cataloged resources using MESH (medical subject headings), and NLM (National Library of Medicine classification system, similar to LC classification system). As a faculty member at this library for about 11 years, her role includes other duties involving research, writing, teaching, reference, and committee work. Since so much of her time is used for other duties, she has little time for her "first love": cataloging. She is in a small, 2-person department of a medical library, which has more electronic resources than print, because they are more current.

P5 believes that because it was created for describing digital resources in an online environment, RDA is more global, and because it is rooted in FRBR with its focus on relationships, P5 says RDA "has more impact on the public than the medical library." Even so, better collation and indexing would equal more meaningful display of results, by showing relators to explicitly state the relationship between an agent and a resource, for example a creative role such as author or illustrator using the new descriptive relator terms. She finds it a little disappointing that search results displayed by the ILS are not drastically different yet with RDA and wants to see the bibliographic "records that we create, being used, being discoverable, being findable." She foresees systems that can use RDA to improve indexing and searching. She hopes RDA will continue to change through the years, become more defined and keep momentum to become better and more

useful. Since in the next 5 to 10 years, traditional cataloging will evolve into something new, it still means "collections need to be described by a cataloger-metadata specialist to tell the computer what to do because machines can't do everything."

Structural Description of Participant Five

P5 identifies herself as a medical librarian and cataloger who sees electronic resources used in her current job but wonders and is curious about the real preferences of students who may prefer print books or may not even use library resources. She experiences scarcity in regard to "time to really immerse myself in reading about RDA and going to the RDA Toolkit." Also, she is bothered by the nonchalant attitudes towards the changes affecting libraries in general and bibliographic description in particular held by some librarians and sees their noninterest as a barrier to progress. She is proud of her involvement with the "future thinking and exciting" TSRT group and the RDA practice group. Her professional philosophy is to keep on learning, think about the user and what they want, and to be open and flexible.

Textural Description of Participant Six

Participant Six (P6) worked in her current library from 1972-1976 and again from 1993 to the present. She has held several positions throughout the years and is presently a library director. She is in charge of acquisitions and cataloging and supervises one staff person. She serves as a board member of her library system. She is also an online cataloging instructor. She started cataloging around 1995 and completed her MLS in 2005. She is retiring this summer.

P6 encounters RDA performing original cataloging and updating bibliographic records to RDA standards. She does mostly copy cataloging using bibliographic records

from OCLC. She likes RDA, which seems simpler and not as complex as AACR2. A replacement for MARC has her feeling curious but hesitant. She feels there is still "a lot of work to be done, on getting everything set up, like they want it to be." This makes the current situation challenging since future success of RDA depends on "tying everything together." The upside is that progress is being made in order to get the information out there "so that our patrons can find the materials that they're looking for, and I think part of the goals with the changing of MARC is to try to get our catalogs on to something more like Google."

Structural Description of Participant Six

P6 was pragmatic about her role in the library. She sees attention to detail as important for catalogers to have, and P6 has recognized it in her personality as the aspect that makes cataloging so meaningful and attractive to her. She says that the RDA practice group was "a unique, good thing to be involved with." P6 is optimistic about the near future, despite her imminent retirement, when "everything is going to be linked together and make it easier to find information."

Textural Description of Participant Seven

Participant Seven (P7) is a cataloger and "metadata person" who has been working in libraries for about 10 years. She worked for her state library commission for about 7 years and then at a university law library as the head of cataloging for 3 years. She recently moved to the East Coast where she works from home for a corporation and university organizing their digital files in a kind of a digital asset management role. This work is more focused on metadata, away from MARC, but still focused on organizing information. Also, she continues as an adjunct instructor of cataloging classes.

In her last job, she kept up with standards, although she did not do a lot of original cataloging, so it was mainly just seeing if anything changed and to evaluate copy catalog records. At her state library commission position, P7 stayed current because of her responsibilities for original cataloging of government documents and for training catalogers. This was her position at the time of her participating in the RDA practice group, and it was a time when she was very involved with RDA.

P7 found it to be challenging to justify to her new library the need to subscribe to the RDA Toolkit when she changed job positions, because she no longer was training and had less original cataloging to do. She believes paying an annual subscription fee is a challenge for a lot of people and for a lot of libraries in the current budget environment since it is "hard to justify paying a fee every year to get your cataloging rules." She feels we are constrained by MARC right now, "as if we are still working on catalog cards" and that the ILS and other access systems need to be updated.

For P7, having the online RDA standard in the RDA Toolkit makes it really convenient to click around on hyperlinks. "The links with other cataloging tools is helpful, especially Catalogers Desktop, being able to click back and forth." Success for P7 means to use RDA as seamlessly as you once used AACR2 if you are an established cataloger. That said, it seems that "people coming new to the profession have an advantage. It is easier to learn RDA straight out of the box, versus transferring knowledge from AACR2 rules, and those new to the profession don't have a hard time with RDA." She knows that success depends on a new encoding standard, either BIBFRAME or another MARC replacement. She mentioned that in some ways, library

systems excel, “since they are sophisticated in controlling authority headings and disambiguation.”

RDA conceptually changes things with relationships. It acts as a bridge between the catalog card and linked data environment. For P7, RDA has pretty much lived up to expectations at this point but is now in a holding pattern as it is being revised, “waiting to see what happens with BIBFRAME and linked data.” She understands that the changes are to make it more universally applicable to museums and other cultural heritage institutions and not just libraries. She also knows RDA records make it possible to search in a whole new way since relationships and linked data will facilitate searching beyond known items to easily navigate their relationships, not only between a creator and resource, but also between various resources with faceted characteristics, with linked data technology standards in place. The shift will be toward less local cataloging and more consortia, which means the need for standards will increase as the records will be shared. Also, the shift will improve catalogs so that “we don't have to think about the coding behind it, to become less of a barrier for some people.”

Structural Description of Participant Seven

P7 is an experienced cataloger and skilled educator, who nonetheless felt fear of the unknown at the beginning of preparation for RDA implementation, despite her in-depth knowledge of cataloging, but P7 is now reassured by the slow but steady progress. When the RDA practice group met monthly, she was happy to be part of the group and described how they each took turns teaching the others whatever they were familiar with in their daily work. P7 found working through the process with others is an important learning experience. She holds out hope for improvements in the future.

Textural Description of Participant Eight

Participant Eight (P8) has been a librarian for the Department of Transportation for about 5 years. When in library school, she took two cataloging courses, but P8 had originally intended to become a children's librarian. Instead she took a deep dive into cataloging by going to work for a local ethnic association. In order to continue learning about cataloging, P8 did some refresher courses from the state library commission, and she combined that with receiving some mentoring and personal learning. She then worked in cataloging for the state historical society before taking her current position.

P8 creates hybrid RDA bibliographic records using templates in her integrated library system. She has cleaned up, transformed, converted, and updated records using MarcEdit, a freeware metadata editing software suite, and found it worked very well. She did this just prior to her library's migration from one ILS to another. In her current work, she aims at mid-level cataloging and tries to incorporate as much of RDA as is practical. She is currently trying to decide whether to add relator codes to new bibliographic records and retrospectively to older records in her current ILS.

P8 is frustrated by not having control over the new ILS. She wants "to customize and implement as fully as I would like and make the information display as a cataloger ought to be able to" and believes "you should just be able to have that information in your catalog record." For her this means the catalog is still separate, and the "power of RDA" is not understood by those who design library systems. She desires to have customizable systems and not to have to make compromises and use "work arounds or use hacks." She has made it a priority to ensure that her library catalog now includes

some links to electronic resources, so now people see the catalog as more than just a database of books.

P8 sees RDA as that first step forward, "because we could have just kept going on with AACR2, and MARC. But instead, we chose to stop and look, and evolve, and acknowledge the need to. Change is hard and a challenge, but anything worthwhile is." She sees RDA as more descriptive and puts the emphasis on the description. In fact, it is "right in the title: Resource Description and Access." Being no longer constrained by the catalog card has removed the need for acronyms and jargon, and she knows the importance of that information means: "we don't need to have the key to unlock the code."

Structural Description of Participant Eight

P8 loves being a special library cataloger and had many meaningful things to share about her experience. Her connection with other transportation librarians through a listserv and involvement with a special section in the Special Library Association have made her strongly identify with the small, very tight community. P8 is glad to be a member and thus able to take part in the sharing of best practices. All of her experience has been in special library cataloging, and she loves it. She has a real attention to detail, and P8 cares about the detail, which she sees as why she enjoys cataloging. So, it is not surprising that she participated in the RDA practice group and found it good to have diverse experience to learn RDA and expertise sharing.

Textural Description of Participant Nine

Participant Nine (P9) is a scholarly communications librarian at an academic library. She started her career working in a public library as a copy cataloger in the late

80s. Initially she thought to do reference, then chose technical services. She achieved her MLS in 1992, and in 1993 accepted a librarian position at a marine research station. From there she then transferred to her current library, where she has been engaged in various positions for 24 years. P9 started her work as a cataloger with cataloging monographs. She then became a specialist in map cataloging, special collections, rare books, electronic resources, and then transitioned to organizing information in the institutional repository. She has spent the last 6 years doing mainly scholarly communication work, with metadata and cataloging consulting, as necessary.

As a long-time cataloger and also as repository worker, she is very aware of differences between the AACR2 and RDA bibliographic records. She did research on AACR2, RDA, MARC bibliographic records, focusing on theoretical aspects and history of cataloging. She values her participation in the RDA practice group and helped facilitate and spark the group's inception. She recalls that it was a fun thing to learn RDA together.

P9 believes that catalogers are conscientious and committed to creating consistent bibliographic records with RDA, which is a "testament to catalogers and the standard." However, P9 feels the trend in libraries of reduced technical services staffing is misguided, since cataloging is still relevant for two important reasons. First because of the reality that libraries continue to have legacy metadata records in their catalogs which requires "deep knowledge to create and use properly or fully. And second, we need people so that we can move beyond it." If we remain stuck here, P9 feels it is a lost opportunity.

Structural Description of Participant Nine

P9 continually seeks opportunities to learn new things. Around 1989, she was part of a pool of catalogers retrospectively converting a library catalog from cards to an electronic ILS. She input data from catalog cards which was recorded onto large magnetic tapes that were sent to OCLC to be loaded into the database. It took about two weeks for this work to show up in the online record database. P9 found this work to be contemplative, calming, interesting, and helpful. She is intrigued by the history of cataloging and finds it fascinating how a single person, or a small group can, really make big changes in a field. For example, since the unusual metadata format MARC "was created by a woman, Harriet Avram, at the Library of Congress back in the 60s. Avram was just a very practical and technically savvy person who saw a problem and used her authority, goodwill, and connections."

Textural Description of Participant Ten

Participant Ten (P10) has served as metadata quality librarian for a university digital repository since around 2015. Her specialty has been serials cataloging for an exceptionally long time; in her words, "since shortly after AACR2 was implemented." About ten years ago when the technical services department~~s~~ at her institution grew smaller, she was appointed the principal cataloger. She is active in professional library associations including the American Library Association (ALA), and P10 also contributes her research and writing expertise as a journal column editor.

P10 teaches a distance cataloging course using RDA and is proud of her experience teaching at several different campuses for her university system as an adjunct faculty member. In her daily work, she uses RDA for cataloging serials and e-books

from an open-access digital works imprint that are within the repository. P10 also regularly encounters RDA in authority records, authority control, and quality control of the institutional repositories' metadata. She participated in the RDA practice group and served and supported the RDA practice group with her writing expertise. She lauds the professional and inclusive manner of the group who got together and "didn't focus on the veteran cataloger, but focused on the rural, small community librarian." She stressed the importance of making the new RDA rules accessible to all librarians as a means to improving access for the end user. In a similar vein, she is attracted to RDA since it got rid of the Latin abbreviations and is demystifying cataloging with more user focus in formulating words and helping the user out.

For her writing, teaching, and practice, P10 has researched extensively the ways in which RDA is being updated to be aligned with the IFLA-LRM model, and how it will impact the work of catalogers. She critiques aspects of this consolidation of the Functional Requirements family as being not written in a straightforward manner and for using "highfalutin language." She acknowledges the evidence that there exists among the authors [IFLA's Consolidation Editorial Group (CEG) for the IFLA-LRM and the RDA Steering Committee (RSC) for RDA] an awareness of the need to, as well as an attempt to, make the language more user friendly, "but still has a way to go." Her frustration with the necessity of remaining familiar with legacy codes and being "stuck with MARC, which still goes hand in hand with RDA" while "the rest of the world has kind of marched on" is understandable. She highlights the need to make a priority of the "focus on getting rid of old technology, since we have been preparing for something to replace MARC for a long time." She believes in the need to move forward to work in a non-

MARC environment, make library metadata friendlier to the average person, and to relate resources to one another through links in the Semantic Web.

Structural Description of Participant Ten

P10 strives in her personal mission to try to explain technical terms and jargon to the average person. She feels strongly that the importance of making information accessible to all types of learners from all types of libraries is her calling, "to bridge the gap between haves and have nots." She pragmatically seeks to demystify and streamline jargon and highfalutin language for the betterment of all, which reveals her strong connection to her identity as an educator and librarian seeking to provide access to trustworthy information.

Textural Description of Participant Eleven

Participant Eleven (P11) has served as a university music cataloger at an academic research library since 2015. Librarianship is a second career for her; she has a doctorate in organ and has both taught music and held the position of director of music. She attended library school full-time for her MLS. Around 2012, she took her first library position at a university library when she was hired to become a professional cataloger.

She started "just on the cusp of RDA" implementation and really likes RDA. The fact that she does not feel tied at all to AACR2 is a good thing, in her opinion, as she says, "I don't have as much baggage." Since starting in her current position, she has been involved with RDA in the midst of system migrations and project management. This has also brought the need for teaching and instruction sessions for staff, both professional and

copy catalogers, regarding changes that have happened with RDA. It has also brought forth the necessity for almost continuous updating of documentation and processes.

P11 feels that catalogers need to know where the data they create is going, so she began exploring library data from the standpoint of, "how it is being transmitted into the black box of the discovery layer. We need to add our voice to this greater conversation with public services…systems…and…the vendors who are creating these products as to what we need." This can bring to light what is working well and what is not functioning, especially in light of ongoing changes with RDA. P11 participated in the RDA practice group and found it to be a great way to learn together with librarian colleagues in a supportive group.

Structural Description of Participant Eleven

P11 feels fortunate to work at an academic research library, with a decent sized staff and a supportive department chair. She is grateful to be able to collaborate with associated university librarians, participate in Program for Cooperative Cataloging (PCC) conversations and Name Authority Cooperative Program (NACO) as well as to attend various meetings and conferences such as ALA. In addition, while her institution does subscribe to the RDA Toolkit, Classification Web, and Cataloger's Desktop, she would ideally see all catalogers having access to these tools in order to do the work according to standards. P11 is excited by the current challenges and developments in libraries. P11 believes these are fascinating times to be in the field with some really interesting possibilities of what we could potentially do.

Textural Description of Participant Twelve

Participant Twelve (P12) is currently a collection development manager at a public library and has also served as a branch manager and as the head of the cataloging department, which was her "dream job." This was around 5 years ago, at the time of RDA implementation, when she was a collection processing manager. In addition to her MLS, she has an MA in history. She has over 17 years working at her public library, and also has prior experience with reference (2002), cataloging (1995), and archives (1998).

P12 related that her public library system was not an early adopter during RDA implementation and only went along after they saw that OCLC started utilizing RDA widely and it became the conventional standard. While not resistant to RDA implementation, her library system did not deem it necessary to revise established catalog records to RDA. Instead her department concentrated on applying RDA to incoming and hybrid bibliographic records. She anticipates the time in the hopefully near future when searching online will better connect users to local library materials and resources more seamlessly, whether in academic or public libraries, depending on the preference or location of the information seeker.

Of her time in the RDA practice group she recalls that there were catalogers from public libraries and academic libraries who were all enthusiastically involved in learning about RDA. She noted that the whole group shared in the consciousness that it has to be everyone, and "the way we work already within areas of technical services [here] is very cross library and we are good about recognizing that all need a voice, and when we work together, we're going to do better." P12 found her participation in the RDA practice group in particular was a really worthwhile and useful project to be able "to work with

cataloging colleagues on how this actually plays out." This involvement was especially beneficial because of the unfortunate reality that outside of cataloging, "most people don't understand what these things are and why they matter."

Structural Description of Participant Twelve

P12 enjoyed cataloging and found the work of learning about FRBR and RDA changes interesting and challenging. She laments the difficulty of explaining the importance of cataloging and what catalogers are relied on to do to those outside of the library. She has frequently contributed to cataloging listservs and other professional conversations about the need for public libraries to be involved in discourse to bring diverse views to the discussion with Association for Library Collections and Technical Services (ALCTS) forums and committees because "you can't ignore one of the types of libraries, where we may not be at the forefront of change, but it is going to affect us as well and may have different needs than special or academic libraries."

Textural Description of Participant Thirteen

Participant Thirteen (P13) began working as a librarian around 2010, having earned her MLIS in 2011 and her MA in Literature in 2017. She has experience working in academic, public, and special libraries. She now serves as a library director at a small academic institution overseas. Around the inception of RDA implementation while working in a college library technical services department, she was responsible for acquisitions and cataloging as part of a small staff with diverse roles. These other roles included helping with instruction, reference, and serving as a subject specialist librarian. P13 relates her perspective of the effects of RDA implementation as having "not as much impact in my public librarian role, more when behind the scenes cataloging items and

teaching people how to find items: through instruction, primarily in an academic library." This reference librarian perspective on RDA also comes to the fore when she is called to share her RDA experiences with other colleagues.

P13 agrees that RDA's emphasis on relationships among resources is important "when you have like a book that then has a video game that's inspired by it and an audio book and a movie. And you can see how they're all connected, but all very distinct pieces of art." This represents the deeper theoretical and philosophical knowledge necessary for accurate description when deciphering the point at which one resource has undergone enough change that it becomes a new, different resource, as in the case of different book editions in which a publisher has a different foreword, different essays at the end, or different illustrations. Also, connecting these different embodiments may lead to deeper understanding of how the work was translated into the new venue and spark further creation and knowledge expansion.

P13 feels excited about RDA because it "opens the door for a new way of classifying items and it opens up possibility for new things to be discovered." She even envisions wider applications that RDA may enable due to its flexibility and expandability as structured bibliographic data continue to become visible online and as new electronic formats are invented. She finds it really interesting, even fascinating, that expanding the positive effects of linking library data online may "help create a system for websites for determining what little snippet of information you get for search results," so the metadata would be better and improve digital citation practices "by having records for authoritative websites in WorldCat.org" and expanding the stability of links necessary through conventions such as Digital Object Identifier (DOI). A "DOI" is a more persistent alpha-

numeric string to use as a link to online content than the more familiar uniform resource locator or URL (APA, 2010, pp. 188-192).

Structural Description of Participant Thirteen

P13 is idealistic, imaginative, and forward thinking, with an inspiring and fun way of seeing the future, without perhaps an equal grounding in current technical requirements and details of RDA. She is excited by the new possibilities RDA creates for library data. She shared an optimistic if unclear view of the future, along with a deep desire for solutions that help everyone. She envisions new library platforms and media that innovate and perform well for end users, such as a universal e-reader format to supersede current proprietary marketplace systems. It would be truly beneficial if there was a universal e-book platform "because right now we just have all these different e-readers and publishers that provide e-books and it just makes it really hard to make them as accessible as the physical books." P13 also feels that it is very important for catalogers especially to maintain professional networks, and that her participation with the RDA practice group was "instrumental to developing her skills, since a lot of cataloging is done in isolation and the group was a great way to network and learn and kind of share the process of having to transition to a new system."

Textural Description of Participant Fourteen

Participant Fourteen (P14) has a classical background. Her education includes 3 graduate degrees, including a Master of Arts (MA) in Latin, an MA in Classics along with the MLS she earned in 2012, which she started without originally having a goal to become a cataloger. However, she found that she really enjoys cataloging and also likes creating lists and describing things. She began her first position as a librarian in 2011, at

a college library where she also served as an assistant professor. She worked as a library cataloger from 2012 until 2017 at this independent college library, and also has experience as a teaching assistant, circulation page and a women's archive student assistant.

P14's current position is as an instruction and digital services librarian at a college on the East Coast. In her current job, the library uses Library of Congress Classification (LCC), and she mostly does copy cataloging with some occasional original cataloging. When original cataloging, P14 sticks to the basics, and she strives to make the catalog easier to use. Despite her classical background, she is happy to remove the Latin terms and abbreviations from bibliographic records. Due to recent budget cuts, and also to her library's collection consisting of mostly textbooks, popular titles, and research books that already have bibliographic records, she feels that the occasional original cataloging she does do is not enough to stay current with RDA: "it's like a foreign language. So, if you don't use it, you lose it. Cataloging is a skill, and you've got to practice it."

At the college library around the time of RDA implementation, P14 used Dewey Decimal Classification (DDC) and participated in a migration of catalog records from a one ILS to another. She participated in the RDA practice group near the end of the time the group held formal meetings. She learned of the RDA practice group from her involvement in an independent college library consortium during the catalogers' group meetings. Unfortunately, that group also dissolved when they all migrated to new systems, but they stayed in contact so they could share tips and tricks. P14 saw the diverse RDA practice group consisted of catalogers "from all over" in various stages of

their careers and she reveled in the opportunity for connection and as a way to learn "sort of old cataloger tricks."

She realizes that RDA is a standard and a set of guidelines, versus a set of rules that will change as patrons' needs change. This is particularly important, because cataloging means providing access to library resources to patrons and a cataloger's duty to make the record as robust as possible. P14 beliefs that findability can be improved perhaps using metadata like "patron tagging, summaries, reviews, and other resource attributes such as 'it has a green cover'…anything that makes a patron want to look at the book, makes it easier to find, and makes it easier for librarians to find. Catalogs need standards, because the "problem" with data is that it needs to be structured in a certain way. Libraries use machines to help us gather, correlate, and then display metadata on computers, so that people can read it. "So, we do need structure, but not a crutch--a stepping stone for the future and a series of guidelines, a way forward, a tool or a bridge; the next step."

Structural Description of Participant Fourteen

P14 enjoys empowering patrons to find connections between materials so they can learn to explore resources on their own. She feels it is hugely important to be able to find related materials on a topic both personally and professionally, for example to look for a movie that is based on a specific book or set in a certain time period. She delights in "being able to fall down that rabbit hole--being able to create those relationships between ideas and materials and show patrons those relationships is very helpful and also giving the patron the power to explore those relationships." Perhaps BIBFRAME or

linked data will enable FRBRized catalogs or new strategies to better locate resources with whatever the specific attribute is for those looking for materials.

P14 agrees that it is important to share best practices, with a caveat. She feels that it is also necessary to be honest about, and talk about, "what didn't work and compare notes." With the advent of social media portraying our best branded image, it may not occur to us that it is "detrimental to avoid talking about the fact that failure is part of the human experience and how we learn. It's important to be aware of internal bias and pressure to avoid failure which could compromise finding the best solutions." Since RDA is not the end goal, but just the first step in the process of transforming bibliographic description, it is particularly important to consider as the design unfolds.

Textural Description of Participant Fifteen

Participant Fifteen (P15) is currently a branch manager in a public library and has been a librarian since 2011. He was articulate and expressive in sharing his experience of RDA implementation. His first position was as a collection librarian at a public library where he replaced the outgoing cataloger as the librarian performing "back of house type responsibilities." In graduate school, he did not like cataloging class and found it 'super tedious and boring and you can get really into the weeds." He has since come to believe deeply in the importance of cataloging, but humorously shares that "Cataloging is the math of librarianship" sort of like grammar is the math of writing. It is the knowledge you do not know you will need as a student. He understands that it is the rules, the standardization of metadata creation, that help to clarify the message contained in the metadata and makes sure it is transmitted and received correctly to the information

seeker. In the same way, it makes our library collections and resources searchable and findable.

P15 is glad he does not have to catalog in his current job. But P15 is involved heavily with collection development and recognizes that good cataloging is "wildly important" work. His prior experience with RDA involved mostly copy cataloging, with occasional minimal level original cataloging for self-published books. He did not have access to the RDA Toolkit while he was doing this work. Nevertheless, he found RDA to be a time-saver because it sought to streamline bibliographic records, since "the catalog is not going to live in a drawer." He sees RDA as the first step to move past MARC but does not believe that goal has been achieved yet. In fact, in his experience, RDA records do not look different yet from the patron's side. Nor do they yet expose all of the long siloed data to the greater public, which would give them access to better information and thereby assist them to become informed citizens.

P15 cleverly uses metaphors for the catalog and cataloging since they are easier to relate to. Instead of the library as "just a place you went to get books, or where people use the internet" rather than physically searching the catalog, the library is a place where information seeking can be done online. However, catalog data emerged in the MARC format prior to the proliferation of the Internet and are still separate since they were not concurrently decided upon. "When will the two streams come together?" P15 eagerly awaits the time in the near future when librarians will take the leap and "develop a common language (vocabulary) between orderly librarians and the Internet standards approach" which he characterized as the "Odd Couple." Perhaps as libraries recognize the need to change and seek to become more convenient to users, librarians can "drag

along the Internet up to our standards." Convergence between library catalogs and the Internet, that is, becoming integrated with each other, can be "messy and something really great. What we are keeping, what is going, adapting from the other side to do something both beautiful and functional."

Structural Description of Participant Fifteen

P15 is a tech savvy visionary, and while displaying an almost entrepreneurial business sense and user focus, is still thinking about the function of the catalog. He has both a philosophical and practical side as a librarian. Although he is not cataloging anymore, he recognizes the critical importance of cataloging and providing access to trustworthy information, "for the betterment of all mankind," even as he does not identify as a cataloger, but more as an outsider. His participation in the RDA practice made him thankful that there are people that are on the front lines, making these difficult decisions, and dealing with the details to move forward, because it is so necessary.

Themes

Three overarching elements of people, processes, and tools are a useful strategy for characterizing the 7 themes that emerged from the interview data (illustrated in Table 5). The 7 themes are interpretation, isolation, interconnection, integration, implementation, instructions, and infrastructure (illustrated in Table 6). These themes are by no means an exhaustive list of the issues and ideas that emerged from the data analysis, and there are some overlapping aspects to them, but these were the themes that best represented the lived experience shared by the participants at this particular juncture (Table 7). Table 5 presents the textural-structural descriptions from study participants by participant number. Table 6 presents the textual-structural description by themes. Table

7 provides illustrative quotes for textural-structural description by themes. In the following section I will explicate the themes and elements that emerged from the data. Figure 4 situates the 7 discovered themes in the broader elements supporting the common good.

Interpretation. Catalogers and metadata specialists are intentional about interpreting language in order to "crack the code" (P8) of jargon that pervades library work and explain specialized terms in easy to understand words. They understand that words are powerful when used in cataloging work and standards and can help or harm (Bair, 2005; Fox, 2018). Catalogers and metadata specialists act as metadata mediators describing resources to improve access to the trustworthy information collected, organized, and shared by libraries. They seek to simplify, remove "highfalutin" language (P10), and demystify the increasingly complex information landscape and provide support for information seekers. Whereas in AACR2 elements can have multiple types of data, RDA has one type of data per element, such as what can be seen in indexes, phone directories, and citation references. Even the way that RDA is arranged causes some "consternation" for catalogers and metadata specialists used to prior codes (Sprochi, 2016, p. 131). Starting fresh with RDA, instead of having experience with AACR2, makes it easier to learn and apply and to do the work of interpretation. It also leads to an optimistic view of the possibility in the future. The theme of interpretation is encompassed by all of the three overarching elements of people, processes, and tools.

Isolation. Outside of cataloging, "most people don't understand what these things are and why they matter" (P12). Although RDA provides a way for others to understand the work that catalogers and metadata specialists do in a modest way of describing

resources for access (P2), the relegation of technical services to the "backroom" (Rondeau, 2012) or basement and the feeling that their work as not customer service oriented is unhelpful to catalogers and metadata specialists and tends to create a feeling of isolation. Along with downsizing and budget cuts, these feelings of isolation among catalogers and metadata specialists contributes to their feelings of invisibility and being underappreciated. It is an unfortunate reality that when something works well, it is not noticed, thus the inconspicuous nature of the hard work involved in describing library resources correctly and consistently is somewhat incognito.

Similarly, due to the inobtrusive conscientiousness of catalogers and metadata specialists, the siloed library catalog remains somewhat invisible and obscure; separated from other systems for information discovery despite the importance of connecting people and ideas and maintaining the "social transcript" (Osborn, 2009) to further knowledge creation. The theme of isolation is encompassed by all of the three overarching elements of people, processes, and tools.

Interconnection. The participants in this study were selected from a pool of people that came together as a "community of practice" (Young, 2012) from diverse libraries and diverse backgrounds. Their differences included education, expertise, and job title, but they worked together in an egalitarian manner, contributing what they had as a collaborative community. The learning together that they accomplished formed the basis for understanding and applying the new guidance for bibliographic description, RDA in their libraries. Prior to implementation, the RDA practice group made it easier and fun to learn things with other catalogers and metadata specialists rather than having to "learn on my own." (P3). The network they formed provided support for ongoing

professional development and projects. This collaborative learning experience of the RDA practice group could lead to the formation of communities of practice that would eventually create models for professional practice among the library profession (Young, 2012). A possible application of this type of working group could be to bring all of relevant social groups to work together to move forward including information technology, information architecture, systems engineers, and even ILS vendors to do this important work with catalogers and metadata specialists. The theme of interconnection is encompassed by the overarching element of people.

Integration. This theme has a paradoxical aspect, as catalogers and metadata specialists are conscientiously applying principles for describing resources very correctly, despite the nonexistence of "cataloging police" (Bothmann, 2011). They are also very user focused and willing to take additional steps to ensure a record displays correctly for the local user by "tweaking it" (P2). In this way both the structure and flexibility of RDA are integrated in the participants' desire to contribute to the common good, with the cataloger and metadata specialist balancing stability and possibility. Core values are incorporated into the philosophy with which they approach their daily work. Integration also involves informing, balancing catalogers' judgement with the need to meet the needs of the end users of the catalog. Along with their role as interpreters, integration describes a way forward to bridging the gap "so that our patrons can find the materials that they're looking for and I think part of the goals with the changing of MARC, is to try to get our catalogs on to something more like Google" (P6). The theme of integration is encompassed by the overarching element of people.

Implementation. The participants' experiences reveal that the real rate of RDA implementation is difficult to gauge, and some see it as moving too slowly. "That's always the piece that feels kind of clunky about the whole process is that it seems to take an awful long time to move these things, a short way." (P2). The overall group felt that so far RDA had lived up to expectations (P7) and that had a genuinely pro-RDA bias, but they acknowledge that like the underlying conceptual frameworks and models, RDA is not "quite there" yet (P3). Many use RDA as much as possible, even going as far as creating templates (P1) and work arounds (P8). They also acknowledge that proactively preparing together predisposed them to accepting the new standard and increased their confidence in their ability to implement it to the extent that their library or institution was ready to do so. They see RDA as moving in the right direction, but only as a first step to integrating the library catalog and the wider web world. The theme of implementation is encompassed by the overarching element of process.

Instructions. The cost of the RDA Toolkit, the instructions for applying RDA, is a barrier to the use of RDA for smaller libraries. Frustration that the RDA Toolkit is not working well for communicating the rules was also a common theme in their experiences. Some found it a "slog," that ought to "be much more accessible and much handier to use" (P2). Limitations of the RDA Toolkit include being "long and unwieldy" and retaining "somewhat arcane language" (P1). These aspects lead to the perception that "Google is easier, as is looking at examples and using functionality such as OCLC's help" (P2). In addition, the fact that the instructions are created to be accessed online does include links and searchability. However, the need to have access to hardcopy rules and the ability to locate guidance for specific situations such as educational and third world scenarios,

remains. The instructions ought to be able to accommodate all RDA users but is perhaps trying to please everyone and actually pleasing no one. It has both analog (human) and digital (computers) users. "So, we do need structure, but not a crutch--a stepping stone for the future and a series of guidelines, a way forward, a tool or a bridge; the next step" (P14). The theme of instructions is encompassed by the overarching elements of processes and tools.

Infrastructure. Imagining the future, based on combining RDA with other recent innovations and ripe with possibilities, was evident in most of the interviews. Many viewed the current incremental change as "disappointing that it is not drastically different yet with RDA" (P5). This is understandable as the other two legs of the tripod, the necessary infrastructure, that will result in a stable system: the encoding standard and improved library systems, are not "there yet" (Tillett, 2011). Impatience over the perception of how long it is taking to reach the tipping point of transformation into better solutions and improved systems led them to feel frustration "over not being able to do what we want" (P8).

For example, the participants feel it is time for library systems to have new drop-down driven menus to facilitate encoding and description (P11) along with better interfaces to display and aggregate bibliographic records and works to make searching more serendipitous and hospitable and "move in a direction that will make it possible to describe some of these things in greater levels" designed to contribute to the common good (P1). The theme of infrastructure is encompassed by the overarching element of tools.

Composite Description of the Meanings and Essences of Experience

The 7 themes as listed in Table 5 and just described reveal the composite description of the meanings and essences. In this section I seek to synthesize the composite meaning of the lived experience of the participants "to provide a comprehensive description of it. From the individual descriptions general or universal meanings are derived, in other words the essences or structures of the experience" (Moustakas, 1994, p. 13). Husserl believed that a phenomenon and its essence can be objectively studied to discover the meanings and perspectives of the research participants. This meaning is referred to as essence, as the lived experiences converge into the essence or meaning of the shared experience.

The meanings that these catalogers and metadata specialists bring to their experience with RDA are represented in the themes that emerged from their stories. The ongoing transformation of RDA and the conceptual models that underlie it has shaped their understanding of its implementation throughout the interval that began in 2013 with LC's adoption and use of RDA. It is obvious that the participants enjoyed being a part of the RDA practice group and becoming interconnected through collaboration in learning about RDA. A somewhat common personality trait shared by these participants was their attention to detail. Equally evident is that they all feel strongly about serving the common good and giving all users access to the material that they are looking for in order to meet the needs of the patrons. They are interpreters who seek to understand and translate the language in a simple format to facilitate finding and understanding. These catalogers and metadata specialists clearly sought to connect people and ideas through the use of the library catalog both online and in person so the user can search for trustworthy

information and integrate that with the need to contribute shared bibliographic records for reuse by carefully following the guidelines. Although they envision a bright future and feel RDA is moving in the right direction, they understand that implementation is only a first step to integrating the library catalog into the fabric of the Internet; it is still evolving and in transition.

It was clear that the participants believed that the ongoing discourse on the implementation of RDA and the future cataloging requires the voices of all types of libraries and not just those in the large institutions that have money and the best tools for their people. Public, special, school, rural and small libraries must be considered to prevent negative outcomes and perpetuate scarcity to access the necessary technology and tools. Inclusion is the solution to bring together those isolated from the larger infrastructure.

The reason that some participants understood the philosophical underpinnings of the standards is because they knew the foundational evolution and had experience using prior cataloging codes and also knew their users and collections. The participants expressed the understanding that the partial way in which this evolution is occurring is not unified and is not adequately fulfilling expectations. Participants conveyed that perhaps one of the reasons many catalogers and metadata specialists today and many librarians today do not believe in the efficacy of RDA is because they are not familiar with the processes involved in organizing and describing resources for access, especially historically, and they cannot envision the fulfillment that RDA is pointing to. It takes the human cataloger and metadata specialist to reason and analyze the implications and effects of the decisions made while describing resources. This is cataloger judgment,

discerning the best way to capture the essence of the resource in a pragmatic fashion. The meaning and worth of their work cannot be automated due to the need to contextualize the data.

In addition, standards are necessary, and data must be structured, as the user of the catalog may be the information seeker or librarian or even the computer as the digital agent working on behalf of the end user or seeker (Coyle, 2010). Instead of panicking, these participants wisely sought to connect to others to learn and discern together and not bear the burden alone. This resulted in the synergy of working together and becoming greater than the sum, with each contributing something. In preparing together, diversity brought new insights on possible applications of ways of doing things and finding solutions.

Chapter 5: Conclusions

Catalogers' and metadata specialists' first hand experience of implementing RDA in their libraries is important because of the foundational role they play in the library of connecting people and ideas. This research examined the experiential evidence of everyday encounters with implementation of RDA among catalogers and metadata specialists to garner their unique and personal perspectives. My final chapter begins with an "abstract of an entire investigation and in a brief span of material enables other researchers to determine its relevance to their own research pursuits and whether or not to review the entire research report (Moustakas, 1994, p. 156). This is followed by a description of the relationship between results of this study and the results of similar studies in the literature; a summary of the theoretical frame for the study; my conclusions, which are organized around the components of the current landscape of RDA implementation and cataloging; and finally descriptions of limitations of this study, work that might logically follow on from it, and my own outcomes, meanings, and future directions.

I began by introducing how the implementation of RDA continues to affect cataloging librarians and metadata specialists who provide the foundational work of organizing and describing resources in library collections. I took the position that it is critical to share their stories, anxieties, and struggles with the implementation of RDA in order to fill the gap in the literature by creating new knowledge and understanding of catalogers' and metadata specialists' experiences of RDA implementation. My intention is to contribute to the common good by making RDA implementation easier through better understanding of the implementation experience, and provide a knowledge base for

improving best practices, and serve to inform and improve library users' access to trustworthy information. I have observed that catalogers and metadata specialists are striving to achieve the best practices for implementing RDA in a way that reflects the overall values of librarianship including equity of access to information. There are many technical aspects to the ongoing evolutionary process initiated by RDA implementation. I have learned though research and experience that the granularity of description is significant because it helps the seeker to differentiate between similar resources in order to find the specific one that will meet their information need. I discovered that the major issues and controversies surrounding RDA implementation include differences of opinion regarding ideological, technical, practical, and theoretical implications of what the standard achieves in practice. Controversies relate to differing opinions about the directions in which cataloging would best move and, ultimately, to uncertainty about the future. The introduction to this study portrays an opportunity to capture the perspectives and lived experiences of catalogers and metadata specialists concerning the effects of RDA standards leading to my research question for this study: ***What are the meanings, structures, and essence of the lived experience of catalogers and metadata specialists implementing Resource Description and Access (RDA)?***

Summary of the Investigation

In the literature review, I began with a retrospective overview on cataloging influences in order contextualize the evolution of the library catalog, situate RDA as a cataloging code, and depict the effects that RDA is having as a transformative change in how the bibliographic universe is described. I differentiated my approach to studying RDA implementation from the prevalent quantitative and collective level, and then I

sorted investigations of RDA implementation into administrative and personal perspectives. I discussed the use of the social construction of technology (SCOT) as a theoretical lens for data analysis in this study. Finally, I explicated the idea that the common good of equal public access to trustworthy information is produced through the work of catalogers and metadata specialists and, therefore, represents social justice.

In the methodology, I described in detail Moustakas's (1994) foundational philosophy of phenomenology and its use in qualitative research. I used Moustakas' approach because it is systematic and provides guidelines for assembling textural and structural descriptions of participants' experience of a phenomenon. The goal of phenomenology is to learn the meaning of a phenomenon as it is known by experience. Moustakas (1994) highlights the lived experience aspect of a phenomenological research approach as "what an experience means for the persons who have had the experience…to provide a comprehensive description of it" (p. 13).

The phenomenon I chose to study was the implementation and use of RDA by catalogers and metadata specialists in libraries in a midwestern state in the U.S. Following Moustakas' (1994) guidelines, I began by bracketing my biases and presuppositions in the way that Husserl (1931) describes. In semi-structured interviews, I then allowed each participant to share their unique story, using questioning to prompt the revelation of additional aspects of their experience of the phenomenon. My data analysis required identifying meaningful statements and themes in the interview transcripts and my notes and organizing my findings about the essence of the experience.

By examining my findings through the lens of Bijker's (1995) SCOT theory, I was able to utilize SCOT concepts to identify relevant characteristics of the phenomenon, the

experience of implementing RDA, and capacities for scrutinizing technological innovations. I used Bijker's concepts of relevant social groups, interpretive flexibility, technological frames, and stabilization and closure to interpret the lived experiences of participants' work to implement and use RDA. Throughout my analysis of the data, I was open to following insights that emerged from the participants' own descriptions of their lived experience.

Descriptive phenomenological research proved to be a useful methodological approach to investigating the lived experience of the participants through interviews. During data analysis, I met with my chair weekly to discuss progress and engage in discourse about the interviews as a means of inter-rater reliability. This also provided me with support and encouragement to conduct and clearly communicate the deep work of applying the phenomenological process to the data. This attention also helped me to focus on and prioritize the necessity of being available to let the themes emerge and the writing to unfold.

In the next chapter of this dissertation, I present the findings that emerged from my analysis of the data. During the analysis, I set aside my own experience in order to be open to and conscious of the experience of the participants. In doing so, I sought to capture the emergent themes of their experience and to create descriptions of each participant's experience. Each of the descriptions of individual participants' experience contains descriptions of both noema and noesis. Textural descriptions of each participant's experience contain the noema, the "what" of the experience (see Figure 3) identified during my analysis of the data, and quotes from the participants as illustrations. Structural descriptions of each participant's experience contain the feeling, "the how,"

the structure, of the experience. Structural descriptions are dynamic results based on the textural descriptions and the imaginative variation, which encompasses possible or fanciful perspectives.

While analyzing individual participant's descriptions of the experience, there emerged three overarching, overlapping categories of themes (people, processes, and tools) and seven individual themes (interpretation, isolation, interconnection, integration, implementation, instructions, and infrastructure) that best represented the participants' lived experience. Figure 4 illustrates the 3 categories' and 7 themes' relationships to one another and to the common good.

Relationships between Findings of the Current Study and Prior Research

Most of the peer-reviewed, research-based literature on this topic includes investigations of RDA implementation from an administrative perspective rather than a personal perspective. The administrative perspective of RDA implementation takes a top down approach by examining questions related to administrative aspects like developing training, workflows, and budget considerations. The personal perspective, on the other hand, involves revealing the individual's struggle to develop a new knowledge base on which to make cataloger judgements. Some research taking a personal perspective on the topic has been conducted outside the U.S., but research taking a personal approach to studying catalogers and metadata specialists in the U.S. was lacking. This study aims to fill that gap by taking the personal perspective. It explains the people, places, tools, and experiences that are at the heart of everyday encounters with implementation of RDA among catalogers and metadata specialists with their own unique voices and contributions.

The literature on the topic of RDA implementation also makes clear the core values shared by catalogers and metadata specialists that guide their decisions and judgment in cataloging library resources to serve the common good. Given the lack of research in the literature reporting the experience of catalogers' and metadata specialists implementing RDA, e.g. the personal perspective, the results of my study become a starting point towards new solutions and understanding and enhancing the provision of the common good by libraries. One of the lived experiences of the participants captured in this investigation (see figure 3) is that RDA is a good first step, but there is more we can and need to accomplish. Convergence between library catalogs and the Internet, that is, becoming integrated with each other, can be "messy and something really great" (P15). As P15 stated, the field is eagerly awaiting the time in the near future when librarians will take the leap and "develop a common language (vocabulary) between orderly librarians and the Internet standards approach," which he characterized as currently resembling the "Odd Couple." Perhaps as we recognize the need to change and seek to make our catalogs more convenient to users, as we seek to enhance the common good of organizing library resources for easy retrieval, catalog librarians and metadata specialists can "drag along the Internet up to our standards" (P15). This is a kind of redemption of the core values and meaning of librarianship. It involves making information sortable, filterable, and searchable in order to make explicit the implicit, which is particularly challenging and worthwhile.

Social Construction of Technology

The three overarching elements of people, processes, and tools used for characterizing the seven themes that emerged from the interview data adapt easily to

Bijker's (1995) SCOT theory. There are also 3 research steps involved in viewing the social construction of technology (SCOT) theory: "(i) sociological deconstruction of an artifact to demonstrate its interpretive flexibility; (ii) description of the artifact's social construction; and (iii) explanation of this construction process in terms of the technological frames of relevant social groups" (Bijker 1995, p. 69).

Interpretive flexibility. Interpretive flexibility is exhibited when the system is no longer deemed acceptable by one or more relevant social groups. When this occurs, the interpretive flexibility of the artifact is again examined, or "deconstructed," and socially negotiated from each relevant social group's viewpoint. Deconstructed means the artifact is essentially broken apart in order to examine in detail the various aspects or parts. SCOT theory terms are summarized and displayed in Table 3 and Figure 2.

Relevant social groups. The relevant social groups (RSG) are the people who are the stakeholders involved with influencing and interpreting the "socio-technical artifact" and how it is useful and used. In this study, the library catalog as it evolves through RDA implementation is the socio-technical artifact. Interpretive flexibility is both a process and a tool used by the RSGs to give meaning to the artifact, which is also a tool. Interpretive flexibility refers to the notion that differences exist among the meanings given to an artifact by different RSGs. It also refers to the process by which the RSGs' meanings for an artifact begin to converge, that is, when there begins to be consensus among the RSGs as to the meaning of the artifact. As the process of interpretive flexibility happens, and the differences between meaning lessens, stabilization and closure can occur.

Technological frames. Technological frames support "the interactions among the members of a relevant social group and shapes their thinking and acting. It is similar to Kuhn's concept 'paradigm'," while differing in that it can apply to all kinds of people not only those in scientific communities (Bijker 1995, p. 69). Technological frames are tools to provide structure for how the artifact is explained and constructed. In this study, the technological frame of catalogers and metadata specialists implementing RDA shapes their interaction with the artifact. The artifact is the end object of attention, in this study the library catalog as a technical system.

The way the various relevant social groups see the artifact bring the reality of interpretive flexibility. Each relevant social group may have different meanings and views of the artifact. The RDA Steering Committee (RSC) is seeking quality metadata globally for use in the catalog and beyond. The library catalog user wants the best resource available to meet their information need. The cataloger and metadata specialist is in the middle of these two RSGs providing what both want, and more. Catalogers and metadata specialists act as the metadata mediator by using the expertise and skill they have to purposely describe resources. The intention and purpose of this activity is to increase access to the collection of resources they are organizing and maintaining to ensure they remain stable and usable.

The catalog as a technical system. Participants in this study said that the current rate of change seems both too fast and too slow, meaning that some aspects of RDA implementation, the phenomenon, were advancing faster than were others. For example, several noticed that the changes to the librarian view of bibliographic records (literally the form and structure of records in the library catalog that describe items available to

patrons) resulting from the implementation and use of RDA were occurring, but those changes were not actually improving access to information because the functionality and/or features of the systems within which they are supposed to work (the library catalog) do not yet exist. This rate differential of the experience of flux is due to the incongruence of having different levels of maturity present concurrently in the different parts of the system simultaneously and evolving and being replaced and eliminated without a coherent design or the bibliographic control that was being sought (On the Record, 2008).

Wilson (1978, 1985) foresaw the difficulties that are currently being experienced with library catalogs as technical systems for bibliographic control. Wilson was visionary in his identification of the descriptive and exploitative types of bibliographic control, the relevance of authority, and the catalog as an access mechanism. RDA, as a content standard, can serve as a bridge between the legacy catalog (F. Miksa, 2012), which contains metadata records created with content standards that preceded RDA, and the bibliographic control and access mechanisms of the future. Wilson (1985) predicted that the self-organizing bibliographic universe will enable the continued progress of maturation of the catalog "to become an excitingly flexible and comfortable piece of the bibliographical apparatus" (p. 267).

The catalog as a technical system is the artifact affected by the phenomenon of RDA implementation, which serves as the technological frame. Especially when considered historically in the evolution of library catalogs from clay tablets, to scrolls, to lists, ledgers, books, cards, and now online, the objectives of the catalog have remained remarkably stable from a practitioner’s viewpoint. There is a possible future even for

bibliographic records that act as a surrogate for the item being described. The metadata in a bibliographic record has meaning and purpose beyond its use as a finding aid for a specific resource. In this manner the catalog is sort of a fossil, like a dinosaur. As future researchers pick through the bone pile of bibliographic records in the archeology of knowledge (Foucault, 1970, 1972), these artifacts will be important for connecting to historical aspects of the social transcript and the scholarly record of society (Osburn, 2009). As the catalog evolves and matures, e.g. as the metadata contained in it becomes increasingly open and interoperable, there are created new possibilities for increasing access to trustworthy information.

Closure and stability. Closure and stability are related concepts in SCOT that, arguably, will not be able to be applied in this context until the new encoding standard is diffused and integrated library systems, online catalogs, and discovery platforms are modified to handle the updates. The stability stage is often a temporary plateau reached by setting boundaries in order to stabilize in a sort of off limits "black-box" system (Prell, 2009, p. 1). When the system is no longer deemed acceptable by one or more relevant social groups, the interpretive flexibility of the artifact is again examined and negotiated from each perspective viewpoint. Perhaps we are experiencing this in the lull before the RDA Toolkit is unfrozen and the results of the 3R project are finalized. As P3 noted, even though the RDA Toolkit language has become stabilized, there is still a need for clear examples, terminology, and language to continue the transition and to overcome the limitations of library systems and catalogs.

Through the lens of SCOT, the insights gleaned from the experience of RDA implementation deepens the understanding about reactions of the frontline catalogers and

metadata specialists and affirms that RDA is a good first step. However, more progress is necessary for RDA's potential to be realized, for closure to be achieved. The successes and barriers to progress will be related in the next section describing the current landscape from the perspective of the interview participants.

Current Landscape

Library catalogers and metadata specialists perform the foundational service to connect people and ideas, which is the function of the library (CannCasciato, 2010; Osborn, 2008). Just as the interview questions I used with the participants (Appendix A) served as a framework for data analysis to provide structure for the summary, they are included here to connect back to and look forward at the people, the places where RDA is encountered, the barriers, the successes, the meanings, and what they see in the future.

People. The most important element is always the people. With the participants coming from the RDA practice group, it was surprising that there were none of my preconceived notions about group formation; instead, they just came together out of necessity in the face of change. They were truly cooperative in preparing to learn together how to be their best at creating quality metadata for representing trustworthy information resources.

Given recent cataloging listserv activity on AUTOCAT and RDA-L regarding the need for an update to the skills and qualifications of catalogers and metadata specialists (ALCTS Cataloging Competencies Task Force, 2017), as well as in-progress surveys about cataloging ethics (e.g. Snow in 2017 advocating that "a code of ethics or best practices guide would provide guidance in our day-to-day work as well as reinforce the importance of the work we do to make information available"), the statements regarding

information ethics made by Bair (2005) entreating for a formal code of cataloging ethics have provided both the relevant structure and underlying meaning for this research. The participants' experiences convey their dedication to connecting people and ideas and providing access to trustworthy information. In performing this foundational role, and humbly accepting responsibility in alignment with the core values of librarianship, the participants in this study demonstrated devotion to duty: "to society, the institutions we serve; our global, national, and local clientele; other librarians and information specialists in our home institutions and around the world; the profession of cataloging; and individuals as human beings having and deserving rights" (Bair, 2005, p. 15).

Places RDA is encountered. The majority of the participants encounter RDA when performing occasional original cataloging and daily copy cataloging. Many participants mentioned they still noticed hybrid records from shared databases such as bibliographic records from OCLC. Several also mentioned their ongoing efforts as they strive to make existing records fuller through increasing the level of description or by adding more RDA elements and relators.

As reflective practitioners, catalogers and metadata specialists seek to fully cooperate with enhancements and positive changes. Paradigmatic change in cataloging practices flowing from transformative changes that began in 1997 and resulted in the creation of RDA, continue today in the Kuhnian sense due to the volatile and transformative nature of change being experienced (Greer, Grover, & Fowler, 2007, p. 34). In alignment with their foundational purpose, while maintaining and expanding the expression of the principles and values that have become more firmly grounded and embodied in the profession, catalogers and metadata specialists seek to shift focus in

order to share the behind the scenes expertise they have developed. SCOT theory helps to reveal how expectations and requirements for the maintenance of the social transcript influence the necessity for universal bibliographic control to evolve. This is the challenging position where RDA implementation is encountered.

Barriers. Technological factors for librarians involved in RDA implementation are numerous and include all three overarching elements of tools, processes, and people. Encompassing both tools and processes, a couple of participants (P7, P15) mentioned the current situation is a "chicken and egg type thing" since most libraries still use MARC encoding and are in need of a new encoding standard at the same time that library systems are not fully utilizing RDA enhancements and possibilities. Application profiles and suitable examples are needed to move RDA forward in the short term. In the interim, stabilizing the RDA Toolkit, improving functionality, and clarifying guidance is required. In the long run, encoding standards and integrated library systems designed with user experience foremost are needed (Tillett, 2011).

In addition, the catalogers and metadata specialists in this study struggle with feelings of isolation, invisibility, and frustration because the importance of the role they play in curating bibliographic data is not understood. Many people in society, especially outside of the information professions, misunderstand the ability of computers to automate library data. Indexing at the level of word counts and other types of quantifiable data is what computers are good at. However, it takes the intervention of a human being to provide the context and the meaning of the information. That human intervention by catalogers and metadata specialists is what is truly valuable, the ability to

empathize and understand what the information seeker will require to find the resource they require, and to translate that into the bibliographic records they create.

Successes. Libraries excel in organization of information and librarians are credited as being trustworthy information experts in society. By agreeing to use a shared set of rules for creating bibliographic records, catalogers and metadata specialists increase consistency and improve the quality of the data contained in bibliographic records, data that, through the use of RDA, are beginning to be shared with the Internet. This makes catalogers' and metadata specialists' contributions to subject access particularly important. Controlled vocabularies contribute to facilitating search and making trustworthy information resources more accessible. They make it possible to categorize and describe resources. But aboutness and subject heading assignment takes discernment and judgement that machines are not yet capable of, despite advances in machine learning. Language evolves and is full of idiosyncrasies, which keeps the work of assigning subjects to resources interesting and even playful but does not lend itself to easy automation of that work. Appropriate description supports all types of information behaviors and knowledge creation, and standardization and authoritative data rules make possible collaborative cataloging, that is, sharing of bibliographic records between libraries, enabling libraries to share the time and effort of describing resources.

Catalogers and metadata specialists understand the importance of contributing to shared bibliographic databases as well as successfully customizing descriptions for their local communities. Success for the participants in this study means understanding the changing rules and applying them in order to improve access by accurately describing the

resources. The participants also see success as exhibited by networking professionally and leading the change.

Meaning. Catalogers and metadata specialists are professionals who develop special skills that set them apart from other librarians. Their work places the human person at the center, giving catalogers and metadata specialists the power to help or harm on an increasingly global scale (Bair, 2005). They have a unique ethical responsibility to contribute to the common good and to build a just society through their work to create metadata that will connect people and ideas (ALA, 2006). But the principles and rules they abide by and share, the rules for Resource Description and Access, are transforming rapidly, making it difficult for them to follow rules and fully execute their foundational purpose (Cerbo, 2011).

The participants faced the challenges of uncertainty and change as a collaborative community. They learned together to understand and apply RDA in their libraries. This collaborative process is a model of developing best practices for connecting stakeholders and subject matter experts to work together to design solutions. Cooperation and experimentation can unlock potential solutions using design thinking processes to bring the different skill sets involved in information technology to provide a sustainable information architecture for the bibliographic universe.

RDA implementation is only the first step. The reality is that for the most part things do not look different yet from the patron side. The participants in this study recognized that. They recognized that patrons do not even know what we are doing, because the same interface is there for them. To the participants of this study, this means RDA is not quite there yet, where it wants to take us, which is disappointing. Perhaps,

the stabilization of the RDA Toolkit will allow the numerous concerns from the cataloging community regarding application profiles and citation numbering to be quickly resolved as well as pave the way for expediting the implementation of a replacement encoding standard and improved library systems.

The overall lived experience of the participants is that RDA is a good first step. However, more progress is needed. SCOT theory points to how societal expectations and technological advances interact with the real shift in how the end user is searching for information. SCOT provides a lens that examines how society drives technology adoption by providing a model to examine the intertwined factors surrounding technological innovation and points to how to facilitate the realization of RDA's potential in the current landscape. In the case of the catalogers and metadata specialists who participated in this study, what we see through that lens is a shift from silos to transparency, not only in terms of library metadata itself, but also in terms of the catalogers and metadata specialists. They themselves have become strongly vulnerable enough to share their struggles and uncertainty, to be open and authentic about their work and progress toward opening up access to quality information resources for all.

Future Studies

Phenomenological studies uncover deep meanings and the results of such exploration often results in a thick, rich description of additional topics to be explored (Creswell & Miller, 2000). A fruitful line of inquiry emerging from this study would be to garner input from information seekers, the patrons, to understand whether and how they have experienced benefits from the implementation and utilization of RDA. A common theme throughout all the interviews was access to trustworthy information for

the patrons. The future is hard to predict especially due to rapid technological advances. None of us has a crystal ball to predict the future. At this present moment, the library community is in transition. The last 100 years seemed slow and methodical in capturing information in the card catalog. Since the introduction of technology and computers the cycle of change has accelerated. Current investigations of RDA implementation overlook an important aspect, that of the user experience with RDA catalogs, which is anomalous considering the stated principles of RDA (McCutcheon, 2012, p. 126). Just as a phenomenological approach to studying RDA implementation enabled me to discover and learn from the experience of cataloger and metadata specialists, interviewing library patrons about their lived experience of accessing information using RDA records in and outside of the catalog (when that becomes possible) would produce a treasure trove of data to support the next evolution in providing trustworthy information for the common good.

The participants of this study expressed optimism and hope to meet the needs of the users, their patrons. All the participants shared their struggles and successes. During the interview process I felt as if I was walking in their shoes. I learned how they started their journey, what their learning process was like, mistakes they made along the way, and ideas about how they could do better. Mistakes do not limit us, our fears do. In times of change and uncertainty it is helpful to take a deep breath to turn anxiety into exhilaration to bridge the path between stability and possibility. I view this group as becoming aware of their experience, using experience to shrink blind spots and learn and lead, not wanting to be stuck in the rigid rules but rather shape the emerging future of information organization using flexible guidelines that evolve to support the description

of new types of resources in a way that makes them findable. Standards and stability are being integrated to be interoperable with flexibility. This is the other side of possibility and where RDA will or is taking us. However, since most people are uncomfortable living with uncertainty, reframing the phenomenon in terms of opportunity and possibility opens up paths to pursue. Design thinking allows mistakes to be lessons for learning and data of experimentation to be reflected on and built upon in a new way.

I am affirmed in my own beliefs that many of the participants in this study agree that RDA implementation provides the first steps to understanding data elements and cataloging rules in the new world of the web. As P15 stated so passionately, "give them access to better information instead of trash for the betterment of all mankind." Like every step forward we must learn from the last step. The library community must examine processes, models, and rules to determine the next step. A number of key insights emerged from the participants' experiences: keep learning, be open and flexible. There is fear in the unknown, but as P8 stated, "change is hard, but worth it." The library community must be comfortable with challenges. There was much discussion on what the next steps must look like, with many calling for finding common ways to communicate and collaborate. Additional research using qualitative methodologies and focus groups, perhaps scheduled to coincide with conferences, could bring together individuals to share ideas to face the challenging design issues.

Based on the results of this study, the best way forward may be to bring the different skill sets involved in information technology together to provide an information architecture for library catalogs that is sustainable and meets the requirements of all stakeholders, in other words the relevant social groups and the interpretive flexibility

with which they view the artifact or the library catalog. Consensus that the current OPAC is not an adequate solution was a widespread opinion among the participants of this study and echoes the consensus on this topic in the literature (Borgman, 2003; Calhoun, 2006; Connaway et al., 1997; Hillmann, 2014; S. D. Miksa, 2009; Parry, 2014; Weinberger, 2012; Yee, 2011). However, the way forward and the requirements for something to replace the online catalog are not yet clear. Metadata description and standards continue to evolve along with the bibliographic universe, and this is necessary since "despite the complexity, frustration, and general chaos involved in transitioning to a newer technology like linked data, it should be recognized that there really may be no choice in the matter" (Schilling, 2012, conclusion section, para 3) However, it is wise for smaller libraries to wait for larger institutions to forge the way forward, especially with linked library data, instead of wasting already scarce resources reinventing the wheel.

Communication theory as it relates to information is visible at the lower levels of information transfer, that is, the data level. This likely contributes to the perceived divide between the disciplines of information technology and library science, which may be coming back closer together with the pendulum swing toward user experience (UX) gaining traction. A somewhat recent and hopefully ongoing endeavor to facilitate discourse between librarians and computer programmers is the #MASHCAT "a loose group of library cataloguers, developers and anyone else with an interest in how library catalogue data can be created, manipulated, used and re-used by computers and software" (http://www.mashcat.info/) proceedings seeking to understand how to increase understanding and cooperation (Myntti, Neatrour, & Woolcott, 2017). Gathering subject matter experts together to facilitate solutions seems the best way forward. My future

research interests include interoperability of library catalog information in digital environments and the corresponding launch into the infosphere. I am interested to see how Library and Information Studies can bolster the information revolution by assisting with standardization and classification of information (RDA, FRBR, etc.) and creating a bridge from legacy systems to new technology advancements.

The participants in this study understand the need for standards and that data needs structure in a certain way due to the use of computers. Computers are machines that can relay, display, and convey the content described to facilitate access of bibliographic data and have been for fifty years. However, a person is required to create meaningful descriptions. Meaning is important so that relevant resources are retrieved to meet the patrons' needs. RDA will continue to improve, or potentially another system will evolve to take its place. There will be a need to keep the vision from the item through the process and systems to the patron, so that the patrons are considered along the way. Precision is important, but it can be confining. It is important to share best practices. To be honest about and talk about what did not work and what did work. Failure is part of the human experience, the lived experience. We must learn to be aware of any personal bias to avoid failure that could compromise finding the best solutions. Consensus building is very intensive work. RDA has provided a tremendous first step to providing access to trustworthy information. Additional investigation of access to information from the patron's lived experience would reveal potential insights and understandings of the phenomenon.

Professional outcomes. While this program has influenced my education and personal life, it has also inspired professional growth. I currently work part time as a

reference librarian at a public library. I have always loved libraries, particularly public libraries. I have served my library in a number of different positions throughout my time in this doctoral program. Knowing that I am about to complete this program, I am considering returning to full time employment or future research and service. I have also utilized my knowledge of organization of information in personal and professional pursuits and service.

Social meanings and relevance. According to CannCasciato (2010) and Osburn (2009), library catalogers and metadata specialists perform the foundational service of organizing information to connect people and ideas, which is the function of the library. I feel tremendous pride and pleasure in developing the expertise to help other have access to trustworthy information so they can excel in their lives. Many of the participants felt the same way P10 does, to strive in her personal mission to try to explain technical terms and jargon to the average person. She feels strongly that the importance of making information accessible to all types of learners from all types of libraries is her calling, "to bridge the gap between haves and have nots." She pragmatically seeks to demystify and streamline jargon and "highfalutin language" for the betterment of all, which reveals her strong connection to her identity as an educator and librarian seeking to provide access to trustworthy information. Now more than ever and into the future access to information will be critical to survive in our daily lives. The findings in my research and potential future studies with the patrons will yield much fruit in shaping the future of the library.

Researcher's future direction and goals. My goal is to serve. I am at home in the public library. I feel as if I have been here my whole life. We are all travelers on a journey, and I am happy to be here in this moment. One of my guiding principles is to

treat people the same way I would like to be treated. At the public library I get to do that every day. My experience executing this research has formed in me that my purpose is to serve. I am incredibly grateful for having had this opportunity to find out what catalogers and metadata specialists are experiencing through these "conversations with catalogers" (Sanchez, 2011). "Knowledge is embodied in people gathered in communities and networks. The road to knowledge is via people, conversations, connections and relationships. Knowledge surfaces through dialog, all knowledge is socially mediated and access to knowledge is by connecting to people" (Ruzic, 2011, p. 272). I feel the focus ought not just be on data and information since of much more importance is the people and meaning from this comes knowledge, understanding, and wisdom. Information must not only be transmitted. For communication to happen, the message is important and must be understood. Meaning leads to understanding and knowledge when it is embodied and brings wisdom. This can assist in solving the difficult problems facing people on a global scale and this is the common good necessary to overcome them through sharing trustworthy information.

Possibilities seem numerous with hints of images and symbols for what the future holds, even beyond linked library data being integrated into the Semantic Web. Often the research literature offered a collective insight into a whole library's narrative without giving voice to the individual and unique perspectives. The more granular approach of interviewing individuals in my study was an effort to take time to capture and reveal many strands individually. This level of scrutiny occurred to find significant insights that may have been overlooked. I wanted to capture that, that voice, that firsthand experience and everyone's interview as a co-participant, and as a composite of all the themes that

came out of the interviews. This level of scrutiny may also unlock potential new solutions for discerning new pathways through uncertain territory and encourage reflective practice or alternative and innovative collaborative and peaceful progress. I believe each person is on a journey and my purpose is to serve to inform and improve library users' access to trustworthy information.

Limitations

There were some limitations created by methodological choices in this investigation. The first limitation is common to qualitative research as a whole: the results and conclusions are not generalizable. The second limitation of this study was the selectivity bias inherent in obtaining participants from an existing group, since the group was small and geographically homogeneous. This study is a relatively small data pool in contrast to the total number of catalogers and metadata specialists involved in RDA implementation. While the practice RDA practice group does not continue to meet as a group as they originated, study participants welcomed this opportunity to share their stories. The third limitation was the fact that RDA is an evolving standard and is still being updated.

Personal Outcomes

On a personal level, I have been a lifelong learner. Since my early days as a student in high school I have been involved in reading and librarianship as a participant and leader. While reviewing old files, I came across my military education record. My "future academic goal" was a PhD. I cannot grasp I have made it this far to be able to conduct my own research. This research study since the beginning has had a profound influence on my life. If I can express my feelings in one word it is perseverance. I am so

grateful to my teachers who inspired me to never give up. While I have gained insights to the implementation of RDA, the most profound affect has been the people. Getting to know the fifteen participants in the interview process was uplifting, knowing so many catalogers and metadata specialists care for the patron.

This analysis process, undertaken according to Moustakas (1994), was my endeavor to uncover and identify the underlying structures of the participants' own experience of RDA implementation and the essential aspects or underpinnings of their consciousness of the ongoing process. This process taught me many important lessons about research, education, change, and openness and has helped me to understand myself and align with my own purpose for future service and investigation. RDA implementation is a moving target. Future research on RDA will be required as it an evolving standard and is still being updated. User centeredness is at the heart of library professional service.

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Appendix A

Interview Questions

1. Tell me about yourself as a cataloger/metadata specialist in your library.
2. Tell me about the place where in your work you encounter RDA.
3. What barriers are you facing that are preventing you from being successful in your work with RDA? From your experience with RDA, what does success look like?
4. What meaning will RDA's emphasis on relationships among resources and their characteristics have for information seekers?
5. Where do you think RDA will take us?
6. Is there anything else you want to say?

Appendix B

Informed Consent Document

The School of Library and Information Management at Emporia State University supports the practice of protection for human subjects participating in research and related activities. The following information is provided so that you can decide whether you wish to participate in the present study. There is no penalty of any kind if you choose not to participate. You should be aware that if you agree to participate, you are free to stop participating at any time. If you stop participating in the study, there will be no penalty of any kind.

The purpose of this research is to help understand your experience of preparing for resource description and access (RDA) implementation. The information you share may ultimately help to improve understanding of and create better user services for accessing and cataloging bibliographic information.

This study consists of my conducting semi-structured interviews with adults who participated in the RDA practice group to prepare for implementation. Interviews may take approximately 45 minutes to an hour to complete, depending on how much information you choose to share.

Your confidentiality is important, and your identity will not be revealed. You may choose your own pseudonym for the study. There are no anticipated risks associated with participation in this study beyond those the ordinary risks of daily life, including the recognized risks inherent in a chosen occupation or field of service. Your interview responses will be anonymized and shared in reports of the results of this research using a pseudonym to minimize the risk of attribution. This form will be collected and stored separately from your identifying numbers, and password protected if digitized or stored in a locked cabinet in paper form, so that it cannot be connected to your answers.

The results may provide essential information to the cataloging field as it develops recommended practices related to resource description and access. Therefore, the purpose of this proposed study is to understand the lived experience of catalogers' implementation of RDA in the hopes that learning more about their struggles and successes will ultimately serve as a first step to providing information seekers with access to trustworthy information.

Any questions about this research can be directed to the researcher, Kristine Woods, at kwoods3@g.emporia.edu or the chair of my dissertation committee, Dr. Sarah Sutton (ssutton3@emporia.edu). If you have any questions presently, they can be addressed now or at any time during the study.

“I have read the above statement and have been fully advised of the procedures to be used in this project. I have been given enough opportunity to ask any questions I had concerning the procedures and any possible risks involved. I understand the potential risks involved and I assume them voluntarily. I likewise understand that I can withdraw from the study at any time without penalty.”

_____ _____

Name Date

Appendix C

Copyright Permission

Re: Request permission

Welsh, Anne a.welsh@ucl.ac.uk via liveuclac.onmicrosoft.com May 2019

to me, info@timetoast.com

Dear Kristine

Thanks for asking - this is the by me; happy to grant permission, and glad the timeline is useful to you. I'll be interested to read your dissertation once it is public - do send on the link when it's ready.

Kindest best wishes

Anne

May 2019, Kristine Woods <kwoods3@g.emporia.edu> wrote:

Dear Daniel Todd and Anne Welsh,

Hi. Respecting intellectual property and the Copyright © 2007-2019 Timetoast timelines, All rights reserved, I would like to request permission to use a screen shot as an image for a figure in my dissertation that will be digitized and included in the Emporia State University institutional repository (https://esirc.emporia.edu/).

Blessings,

Kristine sends....

Kristine M. Woods

Emporia State University Doctoral Candidate

Tables

Table 1.

Definition of Terms

Acronym	Term	Meaning/Function/Role
AACR2	Anglo-American Cataloguing Rules, 2nd edition	Replaced standard for the cataloguing of all types of materials collected by general libraries
ALA	American Library Association	The leading professional association of public and academic libraries and librarians in the United States
AP	Application profile	Guidance for how to interact with data similar to policy statements to ensure metadata is validly formatted. According to Joudrey and Taylor (2018), an AP is a "Document that describes a community's recommended best practices for metadata creation (p. 620).
AUTOCAT	Library authorities and cataloging discussion group Listserv AUTOCAT@LISTSERV.SYR.EDU	electronic forum for the discussion of all questions relating to cataloguing and authority control in libraries
BC	Bibliographic control	Also known as information organization or bibliographic organization
BIBFRAME	Bibliographic Framework	A successor to the MARC 21 format
BIB Data	Bibliographic universe	The realm related to the collections of libraries, archives, museums, and other information communities.
CJ	Cataloger judgment	Decisions catalogers and metadata specialists make while creating bibliographic records to interpret rules in conjunction with knowledge of their community's needs
CoP	Committee of Principles	Provides the administrative oversight for the development of cataloging rules
DCMI	Dublin Core Metadata Initiative	Interoperable online metadata standards that support a broad range of purposes and business models
DDC	Dewey Decimal Classification	Most widely used library classification system
DL	Digital Library	A library in which a significant proportion of the resources are available in machine-readable format (as opposed to print or microform), accessible by means of computers. The digital content may be locally held or accessed remotely via computer networks.
FRAD	Functional Requirements for Authority Data	Conceptual model of attributes and relationships of authority records
FRBR	Functional Requirements of Bibliographic Records	Conceptual model of attributes and relationships of bibliographic records
FRBR-LRM	Functional Requirements of Bibliographic Records Library Reference Model	Interim version of the model used as basis for RDA

FRBRoo	FRBR-object oriented	An ontology to represent the semantics of bibliographic information
FRSAD	Functional Requirements for Subject Authority Data	An addition to the FRBR family of conceptual models addressing subject authority data issues. It provides a framework for a commonly shared understanding of what the subject authority data provides information about.
GLAM	Galleries, Libraries, Archives and Museums	Sector involved in describing resources for access for cultural heritage institutions
HTML	HyperText Markup Language	A markup language that controls the display of web pages
ICP	International cataloguing principles	Provides general principles for cataloguing
IFLA	International Federation of Library Associations and Institutions	Independent international nongovernmental association of library associations, libraries and related institutions, sponsors, and individuals
IFLA-LRM	IFLA Library Reference Model	Newest version of the model used as basis for RDA standard
ILS	Integrated library system	Synonym with Library Management System (LMS) In automated systems, an integrated set of applications designed to perform the business and technical functions of a library, including acquisitions, cataloging, circulation, and the provision of public access.
IME ICC	IFLA Meetings of Experts on an International Cataloguing	Produced a resolution that proposed creation of standards to regularize the form and content of bibliographic descriptions.
ISBD	International Standard Bibliographic Description	Requirements for description and identification of information resources
ISBN	International Standard Book Number	A unique ten-digit standard number assigned to identify a specific edition of a book or other monographic publication issued by a given publisher, under a system recommended for international use
ISO	International Organization for Standardization	ISO is a nongovernmental federation of national standardization organizations in 130 countries, dedicated to establishing international standards to facilitate commerce and cooperation in scientific, technical, and economic endeavors
JSC	Joint Steering Committee	Original developers of RDA - together with CoP
LC	Library of Congress	National Library
LCC	Library of Congress Classification	A system of classifying books and other library materials developed and maintained over the last 200 years by the Library of Congress in Washington, DC
LOC	Library of Congress	Established by Congress in 1800 to function as a research library for the legislative branch of the federal government, the Library of Congress eventually became the unofficial national library of the United States.

LCP	Local cataloging practice	Customized workflows to provide consistency and continuity in the local collection
MARC	Machine Readable Cataloging	Standard for the representation and exchange data in machine-readable form
MASHCAT	Mashed Catalogue Data / Cataloguers and Developers http://www.mashcat.info/	A loose group of library cataloguers, developers, and anyone else with an interest in how library catalogue data can be created, manipulated, used and re-used by computers and software
NACO	Name Authority Cooperative Program	Name authority component of the Program for Cooperative Cataloging
OCLC	Online Computer Library Center	Worldwide, member-owned library cooperative and bibliographic record provider
OPAC	Online Public Access Catalog	Replacement for the Library Card Catalog
PCC	Program for Cooperative Cataloging	The Library of Congress operates as a permanent member of this program and serves as the PCC Secretariat to coordinate, support, and provide service to members in the various component programs of the PCC: Name Authority Cooperative Program (NACO), Bibliographic Record Cooperative Program (BIBCO), CONSER (Cooperative Online Serials) Program, and Subject Authority Cooperative Program (SACO)
RDA	Resource Description and Access	Replacement for AACR2; package of data elements, guidelines, and instructions for creating library and cultural heritage resource metadata
RDA-L	RDA lists listserv rda-l@lists.ala.org	Open discussion of RDA and related topics
RDF	Resource Description Framework	Standard model for data interchange on the Web
RSC	RDA Steering Committee	Authors of RDA, formally known as the JSC
UBC	Universal bibliographic control	Sharing the effort of resource description, eliminating redundancy by encouraging sharing and re-use of bibliographic data
URI	Uniform Resource Identifier	Series of characters formulated to uniquely identify a resource, most commonly on the Web
URL	Uniform Resource Locator	Identify and locate a Web resource via inclusion of a protocol syntax, domain name and the name of the file
UX	User experience	In the ISO 9241 standard covering the ergonomics of human-system interaction, user experience is defined as the perceptions and response of a person, resulting from use of a product, system, or service.
W3C	World Wide Web Consortium	international community that develops open standards to ensure the long-term growth of the Web
WWW	World Wide Web	Overseen by W3C
XML	eXtensible Markup Language	Industry standard - widely used across many different communities and enables more functionality

Note. Definitions adapted from Joudrey, D. N. & Taylor, A. G., (2018). *The organization of information*. Westport, Conn.: Libraries Unlimited: Reitz, J. M. (2010). Online dictionary for library and information science. *Westport, CT: Libraries Unlimited*. Retrieved from https://www.abc-clio.com/ODLIS/odlis_about.aspx and Žumer, M. (2009). *Guidelines for national bibliographies in the electronic age*. Retrieved from https://www.ifla.org/book/export/html/7858 & https://www.ifla.org/book/export/html/8911

Table 2.

Historical Cataloging/Classification Systems

Founder		System		Year
Antonio Panizzi	(1797–1879)	Rules for the Compilation of the Catalogue	91 rules	1841
Charles C. Jewett	(1816–1868)	Jewett's Rules (based on/extended Panizzi)	39 rules	1852
Charles Ammi Cutter	(1837–1903)	Rules for a Printed Dictionary Catalogue		1876
		Expansive Classification	EC	1891
Melvil Dewey	(1851–1931)	Dewey Decimal Classification	DDC	1876
James Duff Brown	(1862–1914)	Subject Classification	SC	1908
Paul Otlet Henri La Fontaine	(1868–1944) (1854–1943)	Universal Decimal Classification	UDC	1899
Charles Martel	(1869–1945)	Library of Congress Classification	LCC	1898
Henry Evelyn Bliss	(1870–1955)	Bibliographic Classification	BC	1940
Shiyali Ramamrita Ranganathan	(1892–1972)	Colon Classification	CC	1933

Note. Adapted from Beghtol, C. (2009.). Classification Theory. In *Encyclopedia of Library and Information Sciences, Third Edition* (pp. 1045–1060). Taylor & Francis. Retrieved from http://www.tandfonline.com/doi/abs/10.1081/E-ELIS3-120043230 and Denton, W. (2007). FRBR and the history of cataloging. In A. Taylor (Ed.), *Understanding FRBR: What it is and how it will affect our retrieval tools* (pp. 35-57). Westport, CN: Libraries Unlimited.

Table 3.

Social Construction of Technology (SCOT) Theory Concept Summarized.

Concept	Acronym	Description
Relevant Social Groups	RSG	People form homogenous groups based on viewpoint similar to a community of practice, members share consensus regarding the artifact.
Artifact (or alternatively artefact)	A	The object of attention, in this study the library catalog as a technical system viewed as somewhat closed but becoming more open and maturing.
Interpretive Flexibility	IF	When the system is no longer deemed acceptable by one or more relevant social groups, the interpretive flexibility of the artifact is again examined or "deconstructed" and negotiated from each perspective viewpoint.
Stabilization	S	When the meaning has somewhat reached a consensus among the various viewpoints of the artifact this leads to the process of acceptance or stabilization.
Closure	CL	The solidification of meaning and decrease in interpretive flexibility is what leads to closure.
Technological frame	TF	How the artifact is explained and constructed, framing providing the boundaries or the structure.
Micro political power strategies	MPPS	Interactions, factions, and strategic positioning used to garner support for the technology as a structured (i.e. TF or SS) solution.
Semiotic power	SP	Process of how the meaning of signs and symbols become less abstract and more real.
Semiotic structures	SS	The somewhat unyielding limits to how meanings can be interpreted in regards to artifact construction.

Note. Adapted from Prell, C. (2009) p. 2. Rethinking the Social Construction of Technology through 'Following the Actors': A Reappraisal of Technological Frames. *Sociological Research Online*, *14*(2), 1-12. Retrieved from http://www.socresonline.org.uk/14/2/4.html

Table 4.

Modification of the van Kaam Method of Phenomenological Data

Step	Term	Descriptor	Action/Result	Definition/Description
	Essence	composite description	Synthesize	The textual and structural descriptions of the experiences are then synthesized into a composite description of the phenomenon through the research process as "intuitive integration." This description becomes the essential, invariant structure of ultimate "essence" which captures the meaning ascribed to the experience.
	Horizonalization	Listing	Listing and Preliminary Groupings	Treat all the data equally, no quote or excerpt is more important than any other. This is when you begin the process of preliminary coding and grouping by listing every quote relevant to the experience/phenomenon under investigation.
	Imaginative Variation			encompasses possible or fanciful perspectives
	Invariant Constituents	Horizons	Determine	Themes of the experience and Thematic Labels
	Invariant structure			
	Noema	"What"	textural description	Which is what was felt, basically "the what" of the experience
	Noesis	"How"		The feeling or structure of the experience --dynamic result
	Phenomenon		Capture	Fact or situation under investigation
	Transcendental phenomenology	Descriptive		Rich understanding of participants' lived experiences of the phenomenon to deeply explore the participants' lived experiences in order to understand the essence of the phenomenon through the voices of those who lived it.
1	Epoche	Bracketing	Preparation/Reflection	Setting Aside
2	Transcript			Using the complete transcription of each participant
3	Listing and Preliminary Groupings.	Horizonalization		List every expression relevant to the experience.

4	Reduction and Elimination	To determine the Invariant Constituents	Testing each expression for two requirements: a. Does it contain a moment of the experience that is a necessary and sufficient constituent for understanding it? b. Is it possible to abstract and label it? If so, it is a horizon of experience. Expressions not meeting the above requirements are eliminated. Overlapping, repetitive, and vague expressions are also eliminated or presented in more exact descriptive terms. The horizons that remain are the invariant constituents of the experience.
5	Clustering and Thematizing the Invariant Constituents		Cluster the related invariant constituents of experience into a thematic label. The clustered and labeled constituents are the cores themes of the experience.
6	Final Identification of the Invariant Constituents and Themes by Application	Validation	Check the invariant constituents and their accompanying theme against the complete record of the research participant. (1) Are they expressed explicitly in the complete transcript? (2) Are they Compatible if not explicitly expressed? (3) If they are not explicit or compatible, they are not relevant to the co-researcher's experience and should be deleted.
7	Using the relevant, validated invariant constituents and themes		Construct for each co-researcher an Individual Textural Description of the experience. Include verbatim examples from the transcribed interview.
8	Construct for each co-researcher		Individual Structural Description of the experience [the how, or structure of the experience] based on the Individual Textural Description and Imaginative Variation [possible/fanciful perspectives].
9	Construct for each research participant		Textural-Structural Description of the meanings and essences of the experience, incorporating the invariant constituents and themes.
10	From the Individual Textural-Structural Descriptions		Develop a Composite Description of the meanings and essences of the experience, representing the group as a whole.

Note. Adapted from Moustakas, C. (1994), pp. 120-121. *Phenomenological research methods*. Thousand Oaks, CA: Sage Publications.

Table 5.

Textural-structural Descriptions from Study Participants by Number

Themes	P1	P2	P3	P4	P5	P6	P7	P8	P9	P10	P11	P12	P13	P14	P15
Interpretation	X	X	X	X	X	X		X	X	X	X	X			X
Isolation			X		X			X	X		X	X	X	X	X
Interconnection	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Integration	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Implementation	X	X		X		X	X			X	X	X			X
Instructions	X	X	X	X	X		X	X		X	X		X	X	X
Infrastructure	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X

Note. The 7 themes reveal the composite description of the meaning and essences.

Table 6.

Textual-structural Description by Themes

Themes	Brief Description
Interpretation	Metadata mediators describing resources to improve access to trustworthy information
Isolation	Contribution to feeling of invisibility, underappreciated and obscure despite the importance of connecting people and ideas
Interconnection	Community of practice learning together, a network formed for ongoing professional development and projects
Integration	Conscientiously applying principles for describing resources correctly, user focused, contributing to the common good
Implementation	Accepting the new standards and increased confidence in their ability to the extent their library or institution is ready
Instructions	Communicating the rules and guidelines, able to accommodate all users
Infrastructure	Imagining the future based on innovations and impatience over the perception of how long it is taking to reach transformation

Note. Brief description of the 7 themes as a high level term of reference and definition.

Table 7.

Illustrative Quotes for Textural-structural Description by Themes

Themes	Illustrative Quotes
Interpretation	Intentional about interpreting language in order to "crack the code" of jargon and explain it in easy to understand words (P8)
Isolation	Outside of cataloging, “most people don't understand what these things are and why they matter.” (P12)
Interconnection	Prior to implementation, the RDA practice group made it easier and fun to learn things with other catalogers and metadata specialists rather than having to “learn on my own.” (P3)
Integration	“so that our patrons can find the materials that they're looking for and I think part of the goals with the changing of MARC, is to try to get our catalogs on to something more like Google.” (P6)
Implementation	“That's always the piece that feels kind of clunky about the whole process is that it seems to take an awful long time to move these things, a short way.” (P2)
Instructions	“So, we do need structure, but not a crutch--a stepping stone for the future and a series of guidelines, a way forward, a tool or a bridge; the next step” (P14)
Infrastructure	“move in a direction that will make it possible to describe some of these things in greater levels.” designed to contribute to the common good (P1)

Note. Brief quote to represent the lived experience shared by the participants.

Figures

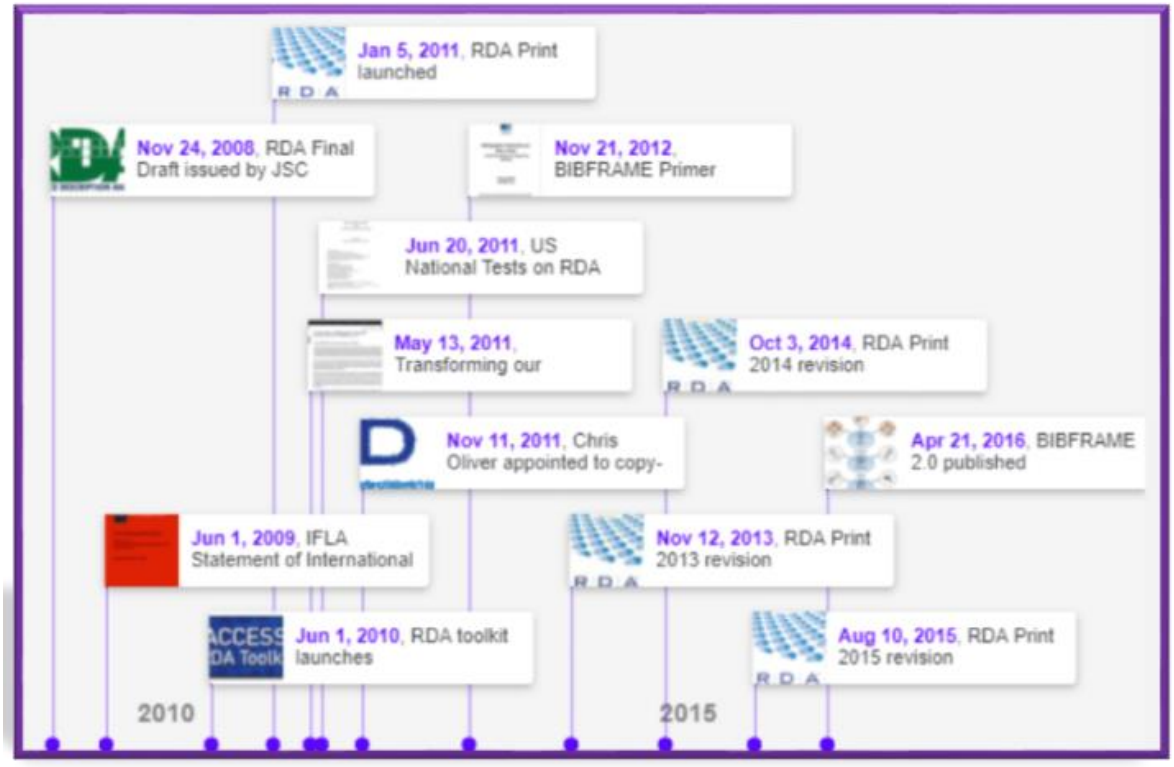

Figure 1. Adapted from Beilharz, R. (2017). *Crossing the bridge from cataloguing to programming–is it essential for metadata specialists?* Retrieved from https://www.alia.org.au/sites/default/files/events/LibTech17/Crossing%20the%20bridge%20from%20cataloguing%20to%20programming%20-%20Renate%20Beilharz.pdf, p. 3. Screenshot of Welsh's (2018) interactive visual timeline of cataloguing codes. Retrieved from http://www.timetoast.com/timelines/9284. Copyright 2007-2019 by Timetoast timelines. Reprinted with permission from Anne Welsh. Release in Appendix C.

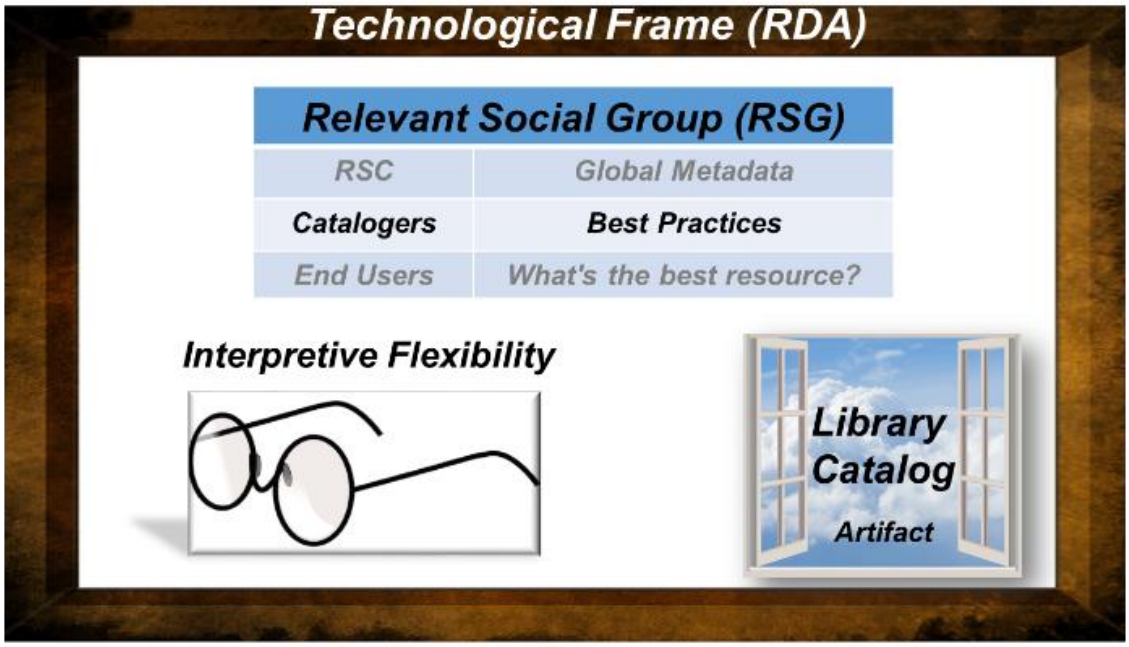

Figure 2. Social Construction of Technology (SCOT) Theory. This figure illustrates how SCOT is used as a lens for viewing findings in this study. Adapted terms from Bijker, W. E. (1995). *Of bicycles, bakelites, and bulbs: toward a theory of sociotechnical change*. Cambridge, MA: MIT Press.

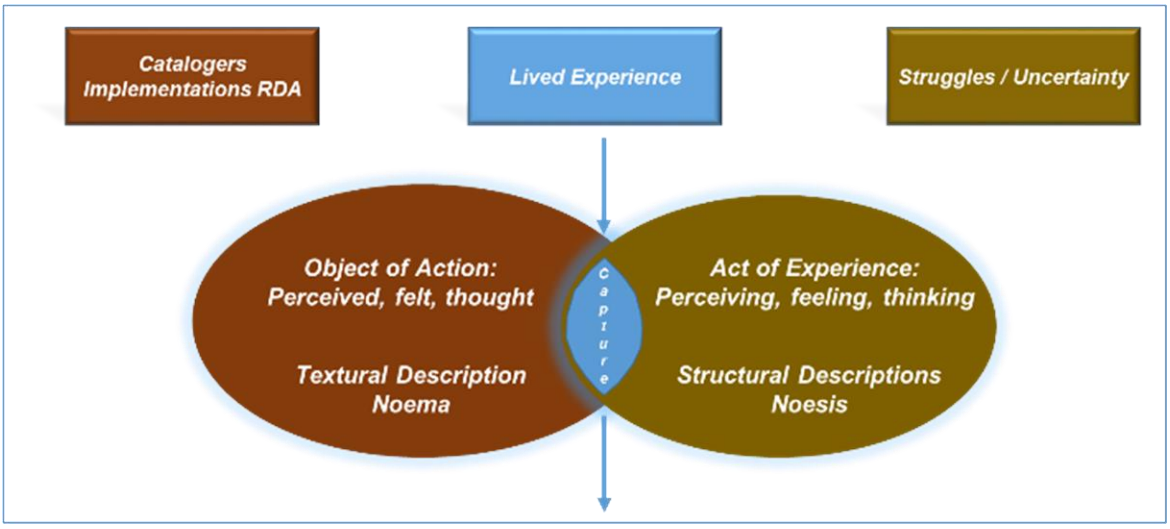

Figure 3. Descriptive transcendental phenomenological approach. Adapted from Moustakas, C. (1994), *Phenomenological research methods*. Thousand Oaks, CA: Sage Publications, p. 69. This figure illustrates and provides visualization of relevant research question components and methodology. Diagram adapted from Cilesiz, S. (2011), A phenomenological approach to experiences with technology: Current state, promise, and future directions for research. *Educational Technology Research and Development, 59*(4), 487-510. doi:10.1007/s11423-010-9173-2, p. 497 as adapted on p. 4 in Yüksel, P., & Yildirim, S. (2015). Theoretical frameworks, methods, and procedures for conducting phenomenological studies in educational settings. *Turkish Online Journal of Qualitative Inquiry, 6*(1), 1-20.

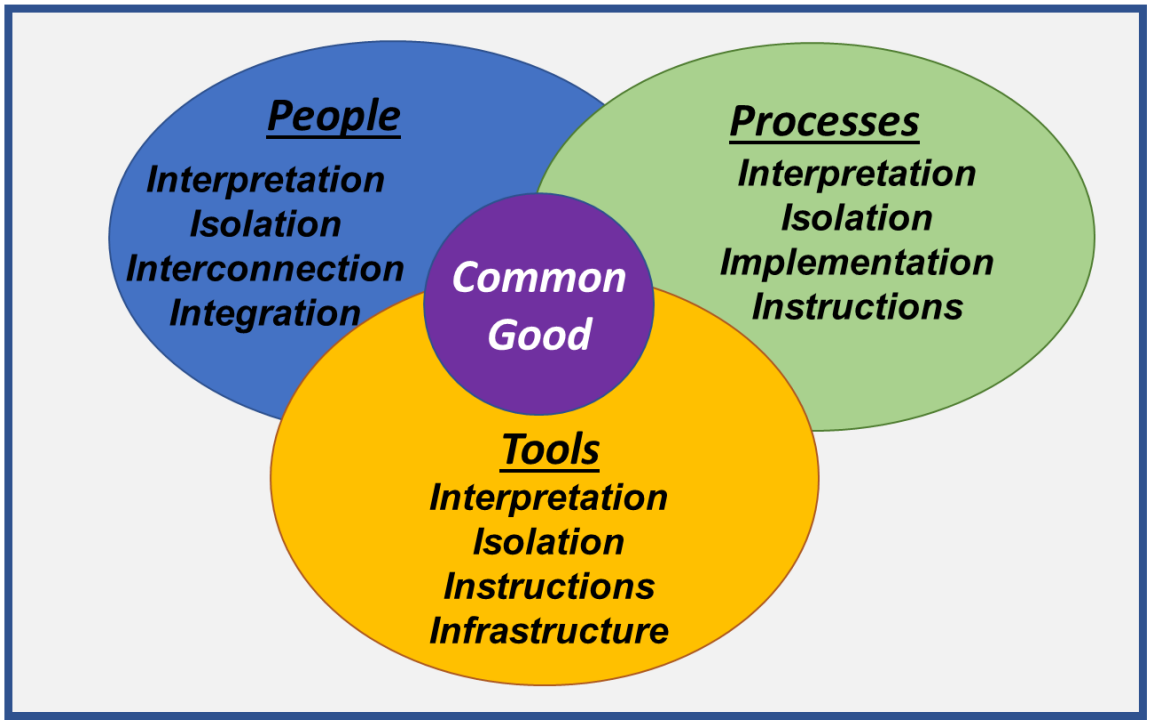

Figure 4. Elements correlated to themes. This Venn diagram figure situates the 7 discovered themes in the broader elements supporting the common good.

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