CHANGE OF HEART: THE INFLUENCE OF THE EXTERNAL ENVIRONMENT ON ACADEMIC LIBRARY COLLECTIONS

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ABSTRACT

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The academic library, affectionately referred to as the heart of the campus due to its physical and metaphorical centrality to academic life, has undergone significant change since the 1990s. The advent of the internet and rapid advances in technology have wrought wide-ranging change in academic libraries. Although the library literature confirms the changing environment surrounding academic libraries and librarians, many library papers are individual accounts of processes and best practices with little connection to the literature on organizational change.

This dissertation study focuses on changes in academic library collections and collection development and acquisitions (CDA) practices. The collection is perceived by administrators, faculty, students, and librarians themselves as centrally important to the library and the institution. Although the library collection is essential to teaching, learning, and research, it has received little attention in the higher education literature. I interviewed 14 librarians at two regional, public, research institutions in Michigan. Using Resource Dependence Theory (RDT) to frame this study and analyze the results, I examined the role of the external environment and its influence on the strategies academic librarians used to perform CDA work. Participants identified funding, curriculum, faculty, students, administrators, and vendors and publishers as environmental influences, indicating that the library functioned as a separate organization within its institution. Librarians employed a variety of strategies to manage environmental constraints, maintain balance, and preserve library and academic culture, including information gathering, communication, budgetary management, and relying on collection use data.

This dissertation is dedicated to all library workers for their commitment to service, collaboration, and partnership. Your work is essential. Thank you for all you do.

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KEY TO ABBREVIATIONS

ACRL	Association of College and Research Libraries
ALA	American Library Association
CDA	Collection Development and Acquisitions
CDP	Collection Development Policy
COLD	Council of Library Deans and Directors
COUNTER	Counting Online Usage of Networked Electronic Resources
CRL	Center for Research Libraries
DDA	Demand Driven Acquisitions
ERMS	Electronic Resource Management System
ILL	Interlibrary Loan
MCLS	Midwest Collaborative for Library Services
MeLCat	Michigan Electronic Library Catalog
MI-SPI	Michigan Shared Print Initiative
OA	Open Access
OCLC	Online Computer Library Center (originally the Ohio College Library Center)
PDA	Patron Driven Acquisitions
PPV	Pay Per View
RIA	Regional Institution A
RIAL	Regional Institution A Library
RIB	Regional Institution B
RIBL	Regional Institution B Library
RDT	Resource Dependence Theory
SPARC	Scholarly Publication and Resources Coalition
SUSHI	Standardized Usage Statistics Harvesting Initiative

CHAPTER 1: INTRODUCTION

Every November, librarians, scholars, publishers, and vendors converge on Charleston, SC for The Charleston Conference—the premier conference for those involved in the book and serials trade. In 2014, conference attendees had the opportunity to participate in an exploratory session in which the presenter, a collection development and acquisitions librarian at a mid-sized, regional, comprehensive institution, discussed the disconnect they had observed between recent trends in collection development and the perceptions of their library colleagues. The presenter observed that many subject specialist librarians believed they had significant control over library materials selection and acquisition processes. In contrast, the presenter perceived that changes in collection development practices were minimizing the role of subject specialist librarians. Every seat in the room was filled. Although some in attendance were higher level library administrators, as well as a few subject specialist librarians, the majority of the attendees were collection development librarians who had overall responsibility for managing their library's collections and collections budget. The discussion confirmed the premise that subject specialist librarians had less control over the collection than they once had. Declining budgets and constrained purchasing models left little room for negotiation with faculty. Libraries were often unable to cancel one journal title in favor of another due to the original title's purchase as part of non-negotiable package. Subscription ebook packages offered a significant amount of material, but a book might disappear from the collection precisely when it was most needed. Although a librarian might be able to add it back quickly, public services library staff, not to mention, students and faculty, might not know this. The session raised many questions but offered few answers.

Collection development librarians have been the first to feel the impact of changing library collection development activities, largely determined by the library's external environment, made up of publishers, vendors, administrators, faculty, and students. Collection development librarians, those responsible for a substantial portion of the library's and university's budget and for ensuring the library's collection responsibilities are met, made decisions designed to mitigate the effects of this changing environment. The purchasing models driving the discussion at the session were not new—all had been discussed in Charleston and written about in peer-reviewed library literature since the mid-2000s—but those working in other areas of the library seemed to be just now feeling the effects of these changes. In many libraries, it seemed that library administrators and subject specialist librarians were still concerned with detailed collection policies and budget allocation formulas for determining how materials would be acquired and how much would be spent on specific subjects, tools suited to a static print environment that was no longer the norm in most libraries (Dempsey, Malpas, & Lavoie, 2014). The discussion among the librarians at this session indicated a disconnect between collection development librarians and subject specialist librarians that, in some cases, was interfering with staff relationships and the flow of work in the library. In one extreme case, a collection development librarian with faculty rank was concerned that her ability to be promoted was at risk.

Although library collections remain of primary importance to academic institutions (Wolff, Rod, & Schonfeld, 2016) most collections are rapidly becoming more diverse and electronic. These changes are often imposed by the library's external environment, necessitating new or adapted processes for collection development and acquisitions which create a ripple effect across the organization. When change occurs at too great a pace, it may cause confusion or service interruptions for students and faculty, and librarians and library staff may struggle with their daily work. This study is an attempt to begin to understand this problem.

Research Problem and Significance

Academic libraries are essential to higher education. Sitting at the nexus of research, learning, and teaching, and often referred to as "the heart of the campus," academic libraries have enjoyed a long period of relative stability and success. However, in the current higher education environment, with its rapidly advancing technology and increasingly constrained resources, academic librarians are examining their practices and procedures to ensure value and relevancy (Oakleaf, 2010). Although the library literature includes numerous papers on the need for change of all kinds in libraries—including changes in procedures, space, staff, and collections—and procedural accounts of planned change projects, little empirical research exists on change in academic libraries. This lack of research makes it difficult to grasp a uniform picture of how or whether the work of libraries has changed and the factors causing changes, how change may be understood and approached, and how academic library culture interacts with change efforts. This lack of understanding contributes to feelings of uncertainty about the future of the academic library as it is currently conceived and stands in the way of making informed changes to library practices.

In their study of librarians and change, Sare and Bales' (2014) findings suggested that librarians see themselves as good at adapting to change. In the late 20th century, change such as moving from card catalogs to online catalogs were chosen by librarians (Lewis, 2004) in accordance with established library practices. In the early 21st century, librarians began to discuss change differently. Rather than initiating a change to improve what they did, some librarians felt they must change to survive (Woodward, 2011). Calls for radical change—a complete transformation from what libraries and librarians have traditionally done (Lewis, 2004; Mathews, 2012; Stoffle, Renaud, & Veldof, 1996)—added to this urgency. Although librarians had always worked to meet the needs of their communities, they now had competition. Students expected to be able to find the information they needed quickly and easily, as they would with Google (Head & Wihbey, 2014).

Librarianship is a practical discipline with an evolving record of scholarship. The library literature offers relatively few empirical studies to help librarians understand how best to work with change imposed by the external environment. The effects of this external environment can be clearly felt in library collections, made up of materials that libraries themselves generally do not produce. The library is a unit embedded in a larger institution. The library's ability to build and maintain collections is dependent on support from students and faculty and financial support from administration. In an era of scarce resources and increased oversight, collections have come under scrutiny. As documented consistently in *The Chronicle of Higher Education* over the last three decades (Azevedo, 2012; Carlson, 2008; DeLoughry, 1993; & Zaretsky, 2018), administrators on many campuses have questioned the need for large physical collections and targeted the academic library as a potential solution to providing the space needed to increase student academic support and study areas. Advances in technology have wrought wide-ranging change in academic libraries, but only recently have technology applications reached a level that allows libraries to realize opportunities to responsibly downsize their physical collections through developments such as electronic journal publishing and archiving, collaborative collection agreements between libraries, rapid interlibrary loan services, and purchase-on-demand models that allow library users access to more information. These changes to library collection practice have allowed librarians to maintain relevant collections while mitigating space needs and exerting some control over collection cost and access. However, these changes to collection practices come with side effects. Electronic resources cannot be owned in the traditional sense. Rather than receiving a physical object, librarians manage a set of electronic resources through licenses that mandate ultimate ownership by the information provider, and that do not guarantee true perpetual access. The provider of a journal or ebook may change, requiring librarians to ensure they are receiving all the content they are paying for and have set up access properly. These collections come with an annual inflation rate that ranges from three to ten percent each year, in contrast with an institution's annual budget allocation for libraries that includes a lower increase, or no increase at all. To keep up with inflation, librarians spend time tracking item use to ensure that maintaining these high-cost collections are justified. Further, this change in the make-up of library collections results in changing job duties for librarians and library staff throughout the organization, duties that developed around centuries of selecting, preserving, and providing access to print materials (Dempsey et al., 2014). Last, but not least, although library users' response to electronic journals has been positive, library users' response to academic ebooks has been mixed (Zhang, 2017).

The need for a strong and relevant collection is rarely debated. Ithaka S+R, a non-profit organization that studies change in scholarly practices, conducts an influential *US Faculty Survey*. The 2015 survey (latest available data) indicates that traditional collection-focused roles of the academic library—those of buyer, gateway, and archive—are still of primary importance to faculty and administrators, regardless of institution type (Wolff, Rod, & Schonfeld, 2016). However, the manner in which these collections are created and maintained is being debated among librarians. "Is Selection Dead?" (Anderson, 2011, p. 40) read the headline of a heated forum at the American Library Association's 2011 Midwinter Conference in San Diego.

Perspectives from panelists highlighted changes in collection development due to technology—namely, the decline of title-by-title selection of materials by specialist librarians in favor of more collective and automated methods. Much of the current conversation from practitioners indicates the traditional processes of collection development and acquisitions (CDA) are continuing to evolve (ACRL, 2016), and changes in collections practices are not uniformly understood by all librarians.

Technology is certainly a primary driver of recent changes in academic library CDA practices. Academic capitalism, defined as "market and market-like behaviors on the part of universities and faculty" (Slaughter and Leslie, 1997, p.11), has also played a role, as vendors and publishers have sought to work more directly with students and faculty in addition to their interactions with library personnel. Changes in technology and markets, and their impact on the nature of the higher education landscape and student expectations, have been well-documented, if not explicitly defined in higher education terms, in the library literature (Lewis, 2004; Mathews, 2014; Neal 2011; Neal, 2015; Oakleaf, 2010; Oakleaf, 2015; Stoffle, Renaud, & Veldof, 1996). These articles on professional practice document the difficulty academic libraries face in addressing these challenges, particularly personnel concerns—siloed work structures and staff trained in individual tasks rather than in skillsets designed to adapt to changes in technology. In addition to conceptual works, the library literature abounds in papers written by staff at individual libraries detailing approaches used at their library and what they learned. Articles describing professional practice highlight that change writ large is happening, and that many libraries and librarians are attempting to respond to the changes they perceive in their environment, but as self-reports of activities, often with no ongoing assessment, they are limited in their scope.

Although a significant body of library and information science scholarship exists, little is empirical or guided by established theoretical frameworks. Likewise, although much is known about change in the big-picture sense in higher education, change happens differently within individual units of a complex organization and is best understood when it is studied in the context in which it occurs. In undertaking this study, I sought to expand our understanding of change in higher education with an examination of change in academic library collections, which sit at the nexus of research, learning, and teaching, but have received little attention in the higher education literature. In addition, I sought to offer insight to librarians, library administrators, and higher education administrators on the role of the environment in shaping practices in library CDA by 1) documenting the history and evolution of academic library collections and CDA practices, 2) determining librarians' awareness of the external environment and the library's dependence on this environment, and 3) identifying the strategies librarians use to enact their CDA role.

Purpose of Study and Research Questions

With this study, I sought to understand the extent and depth of interdependencies and constraints between the library's collection activities, the parent institution, publishers and vendors, and other libraries and library consortia. I also sought to understand the CDA practices of librarians who have a role in the library's CDA activities and their understanding of the current environment. I used Pfeffer and Salancik's (1978, 2003) Resource Dependence Theory (RDT), an organizational theory that indicates that leaders may make decisions to balance the influence of the external environment with an organization's interest (Scott & Davis, 2007), as the framework for this study. Although much has been written on the symbolic role of the overall leader and their ability to use their vision to influence and motivate others (Bennis, 1986 – as one example), Pfeffer and Salancik (2003, p. 20) argue that although this symbolic role is important, it is an ability to scan the horizon and choose the best options to pursue as dictated by external constraints that makes an effective leader. Further, RDT maintains that power may be held by anyone with a stake in a situation, not just those with officially sanctioned power. As such, various library actors have power in CDA. While the library Dean may have final authority in financial decisions, they will be influenced by the knowledge and activities of the librarian with overall responsibilities for collection development—the collection development librarian, who is most likely to interact directly with publishers and vendors. In turn, the collection development librarian will be influenced by the individual librarians responsible for subject-level selection, those who interact most directly with students and faculty; and the librarians and staff responsible for actually acquiring materials, who work with other actors in the publisher and vendor supply chain. All of these actors and interactions influence how materials are made available to students and faculty. Although faculty and librarians have a hand in setting these parameters, publishers and vendors also play a role. I sought to explore these interactions.

I sought to contribute not only to literature on academic librarianship and organizational change in higher education, but also to the literature on library leadership and academic capitalism (Slaughter & Leslie, 1997). No studies have been done in the higher education literature on organizational change in libraries or with regard to academic librarians. No studies have been done exploring whether libraries are involved in academic capitalism. Library CDA processes, which determine why and how materials are included in and acquired for library collections, are subject to the same market forces that affect all aspects of higher education. Although the power of for-profit publishers, sustained as it is by the promotion and tenure system of the modern research university (Miller & Harris, 2004), is formidable, and has shaped

CDA processes in academic libraries of all types, individual librarians continue to do what they can, whether they realize it consciously or not, to counteract or exploit these publishers as they make choices they believe to be in the best interest of their campus communities.

In this exploratory study, I used documents and in-person interviews to collect data. Using a qualitative, multi-site case study approach informed by RDT (Pfeffer and Salancik, 2003), this study was guided by the following primary research question and two sub-questions:

- How do environmental conditions and academic librarians' strategies interact in shaping collection development and acquisitions practices?
    1. What are the environmental influences librarians perceive in the course of carrying out their collection development and acquisitions duties?
    2. What strategies do individual librarians develop to carry out their collection development and acquisitions responsibilities in light of environmental constraints?

Theoretical Framework

Using Pfeffer and Salancik's (1978, 2003) Resource Dependence Theory (RDT) as a theoretical framework, I sought to understand CDA practices historically and in the present and explain their relationship to the library's external environment. This theory takes into account the complexity of the academic library as an organization and provides a useful framework for examining the environmental changes that precipitate library change and adaptation. RDT is often applied in corporate contexts but has received some use in higher education contexts (Kezar, 2001; Slaughter and Leslie, 1997). RDT is an environmental change theory, rooted in the assumption that organizations are open systems, influenced by their environment, and reliant on relationships between the internal and external environments (Morgan, 2006). These relationships serve to constrain an organization's courses of action (Pfeffer & Salancik, 2003). Unlike earlier environmental theories, RDT assumes that people have a role in the change process and will seek to adapt in ways that maintain a balance between the organization and its environment (Kezar, 2001).

In choosing RDT as a theoretical framework, I sought to understand interdependencies between academic libraries and their external environment, and how collection development librarians make changes to collection procedures in order to maintain balance between the library and the environment. RDT tells us that environmental changes usually will not be influenced by leaders, but that leaders can recognize and respond to trends to adapt to the environment in a manner that maintains balance and is congruent with academic library history and culture.

This theory is applicable to my research questions due to the relationships between academic libraries and their environments, relationships that are particularly relevant in CDA, and the agency that librarians have to make decisions. 1) Library collections are made up of print and online resources that are created, produced, and distributed by external actors, including authors, publishers, and vendors. 2) As collections become increasingly digital, libraries have even less control over their collections, particularly when they choose to use demand-driven, pay-per-use, and subscription-based access rather than purchasing materials outright. Even when librarians choose to purchase digital collections with perpetual access, these materials come with licenses that may include a clause indicating the suppliers' limited ability to guarantee access in all situations. 3) Librarians seek to exert control over their collections by pressuring publishers and vendors to develop new pricing models, connecting purchase decisions to actual use, and requiring reports of collection use. 4) Collection development relies on support and funding from the larger organization. 5) Libraries have a long history of working together to share collections, leverage technical expertise, and physically or digitally preserve collections. More recently, libraries have formed consortia or cooperatives in an attempt to control pricing, expand access, and digitally or physically preserve materials.

These examples are in line with one of the primary tenets of Pfeffer and Salancik's theory (Hillman, Withers, & Collins, 2009), which indicates that organizations will seek to reduce interdependency. Pfeffer and Salancik add that organizations may seek to partially reduce interdependence and adapt to a changing environment by forming consortia or entering into buyer-supplier agreements. This is particularly applicable to academic libraries. In seeking to limit interdependencies that constrain an organization's ability to function, librarians may create new interdependencies. Application of RDT to academic library CDA offers an opportunity to explore interdependencies that constrain the academic library, how libraries contend with these constraints, and the realities that result from these actions. As I write in the literature review, the role of the environment has received little treatment in library research. In this study, I explored interdependencies between the academic library and the environment, and how individual librarians sought to control these interdependencies.

Summary

Academic libraries have undergone significant change since the advent of the internet. Academic librarians continue to adapt to changing technology. Although much has been written in the library literature that confirms the changing environment that academic libraries and librarians have experienced, many library studies are not led by theory and rarely connect library change to organizational change at the institutional, regional, or global level. The library collection, still perceived by administrators, faculty, students, and librarians themselves as centrally important to the library's existence, offered a starting place for using theory to examine change in academic libraries. In using RDT, this study focused specifically on the role of the external environment on the academic library's CDA practices and the role librarians played in managing this environment as they engaged in CDA work.

In the subsequent chapters of this dissertation, to provide context for accepted academic library CDA practice and to contextualize the history of the development of academic library CDA, I review relevant literature on the history of higher education and academic libraries. I review relevant literature on change in higher education and academic libraries, and academic libraries' response to environmental changes affecting CDA. I review the literature on RDT in general, and in educational and library research, to provide context for the application of RDT to this study. I describe my methodology for conducting this study—including the context, methodological approach, participants, and how I collected and analyzed data—and how I made a case for validity. I describe the findings of the study, using evidence from the interviews and documents. Finally, I offer implications for practice and further research, both in academic libraries and in higher education.

CHAPTER 2: LITERATURE REVIEW

In her 2006 guest editorial in *Reference & User Services Quarterly*, Westney acknowledged that academic librarians often seemed to be absent in institutional efforts. The title of her article, Conspicuous by Their Absence, might well be applied to the academic library in the higher education literature, and to a treatment of organizational theory in the library literature. In an attempt to add to our understanding of changing practices in academic libraries, and to contribute to the literature on change in higher education, I briefly reviewed the nature of change in higher education, academic libraries, and CDA practices.

The Nature of Change in Higher Education

Researchers have studied change in higher education using sociological and organizational perspectives (Boyce, 2008). Weick and Clark (1976 and 1983, as cited in Boyce, 2008) both found higher education institutions to be "loosely coupled systems with diffused decision making, as well as goal ambiguity" (p. 120). Cameron and Tschihart (1992) wrote that although higher education institutions are faced with a decrease in resources, more demands are being made on them than ever before. Overall, though institutions have considerable resources at their disposal, the nature of the environment and size of their operations make wide-ranging change difficult.

However, Kezar (2001) wrote that many of the existing studies on change in higher education are difficult to draw conclusions from because they are too big, ignoring the fact that change happens in different ways throughout the institution. How and whether change happens is influenced by culture, leadership, and the environment. In her foundational work on change in higher education, Kezar (2001) provides a critical synthesis of institutional change literature, and discusses six theories of change: 1) Evolutionary—also known as environmental—theories, in which organizations are shaped by their environment over time; 2) teleological theories, which assume reactions to change are rational and precipitated in planned fashion by leaders; 3) life cycle theories, in which change is seen as a natural part of the life of an organization, similar to human growth stages; 4) dialectical—also known as political—theories, which assume that change occurs due to differences in ideology and is carried out by those in power; 5) social cognition theories, in which those affected by change see the need for change and use mental processes designed to help them understand what is happening; and 6) cultural theories, in which a change in the environment—which is ever-changing, albeit slowly—influences a change in behavior of those affected by the change. Kezar (2001) wrote that each of these theories provided a useful lens through which to view change in higher education and suggested that researchers and practitioners might wish to combine two or more of these theories to fully understand the nature of change in a particular area of higher education. Most importantly, she encouraged practitioners to develop a deep understanding of how and why change happens to enable them to lead it effectively.

Kezar (2014) continued her research on change using a typology of six change theories, updating the list of theories to scientific management, evolutionary, social cognition, cultural, political, and institutional. She draws on research on change actors, people responsible for making change in institutions. Change actors are more confident and better able to lead and communicate about change when they have a multi-faceted understanding of change that allows them to match their strategy to the situation at hand. Change is not one-size-fits-all in any organization. Kezar (2014) wrote to help those involved in change in higher education develop their knowledge to include a broad understanding of the theories of change, as opposed to a prescriptive approach to managing change. Kezar’s (2014) change actors reported the latter was less helpful to them.

As Kezar (2001, 2014) observed, change in higher education is not simply precipitated by the institution itself. Many of the calls for change in higher education come from the larger society, particularly through calls for higher education to be managed like a business (Gumport, 2000). Institutions change when they replace traditional methods of work with newer methods (Loomis & Rodriguez, 2009). Loomis and Rodriguez (2009) observed that work changes in higher education were precipitated by administrators’ need to control costs and increase efficiency. When work changes ran counter to the traditional mission of higher education, institutions and those who relied on them were required to change the way they perceived the good institutions do in society. The writers theorized that this caused some to prize quantity over quality and place greater value on what society considered practical rather than the person-focused approach educators traditionally espoused. Such changes put higher education institutions at risk of losing sight of their unique place in our society (Gumport, 2000). However, an understanding of societal good is enacted differently throughout higher education, and the way in which individual institutions determine their mission, ways of working, and approach to change depends on their understanding of societal good. To understand change in higher education, it must be studied within the context in which it is occurring (Baker & Baldwin, 2015; Kezar & Eckel, 2002). This concern is as true for the library as it is as for its parent institution.

Two recent studies on organizational change in higher education highlight the importance of the external environment in studying change in higher education—Baker and Baldwin (2015) and Croucher and Woelert (2015). Although each study was limited by its context, each illustrated the role of the environment in organizational change. Baker and Baldwin (2015) found that changes in the external environment of liberal arts colleges caused these institutions to change in ways consistent with evolutionary change theory, in which institutions evolve in response to changes in their external environment. Croucher and Woelert (2015) came to a similar conclusion using a theoretical framework of convergence, in which organizations become more isomorphic—more like similar institutions—finding that Australian institutions became more like one another in response to a series of governmental reforms in the late 20th century. Both studies strengthen the case for the importance of the external environment in considering change and highlight an organization's tendency to find equilibrium in periods of uncertainty. However, neither study's theoretical framework includes the perspective of actors.

Baker and Baldwin (2015) acknowledged the importance of the external environment in their study of three purposefully selected liberal arts colleges in the United States. Using a qualitative case study design, with data collected from interviews with key personnel at each institution, the researchers used a theoretical framework of evolutionary change. In choosing this model, the researchers acknowledged that change is precipitated by the external environment and that institutions will work to manage rather than plan change. The researchers found that change was evolutionary rather than revolutionary, incremental, and resulted from external pressure (Baker & Baldwin, 2015).

Croucher and Woelert (2015) studied isomorphism in Australian higher education institutions. Drawing on the work of DiMaggio and Powell (1983, as cited in Croucher & Woelert, 2015), which found that institutions sought to emulate one another and become more alike in response to external pressures, the researchers examined change in Australian higher education institutions following major national policy reform. Although the authors report that the data available were limited, their findings indicated that despite the reform's call for greater diversity in the delivery of higher education, the reforms had the opposite effect, causing institutions to adopt practices that made them more uniform. The researchers called for additional research, and suggested RDT as a potential theoretical framework (Croucher & Woelert, 2015).

Academic Library History

According to Thelin (2011), the academic library as we currently understand it came into being in the early 1900s. Libraries in early higher education institutions were highly valued but little-used due to the scarcity of materials (Rice-Lively & Drew Racine, 1997). This changed as higher education leaders increased their focus on research and scholars realized that scholarship was reliant on access to information (Thelin, 2011). As curricular practices evolved due to increasing undergraduate populations and a growth in graduate programs, services specific to education level became necessary (Rice-Lively & Drew Racine, 1997). University presidents sought to build institutions with strong facilities and administration, and the library was included in these plans. Rather than an assortment of materials, libraries began building collections in a systematic fashion and ensuring methods to allow access and use of the collections (Atkins, 1991). Universities gained prestige based on the size of their collections, and collection size was added as a factor in standardization (Atkins, 1991). Although libraries continue to benchmark their collections based on size, this statistic no longer receives the significance it once did.

The Nature of Change in Academic Libraries

Articles and books on change in libraries range from individual library accounts of teleological and cultural approaches to managing change to conceptual papers hypothesizing how and whether libraries might change, or be able to change (Wood, Miller, & Knapp, 2007). Many of these latter works address changes due to technology. Campbell (2006) asserted that libraries might be able to retain their primacy as information providers by adapting their traditional practices to fit a digital environment. Lewis (2004) advocated for a more radical change, modeling his argument on Clayton Christensen's (1997, as cited in Lewis, 2004) model of disruptive change, which posited that some changes cannot be planned, and that institutions must change in ways that run counter to their traditional practices. Unlike previous changes, Lewis (2004) wrote, the changes libraries face today cannot be approached as they have traditionally considered them—surveying the environment, listening to faculty, and extensive planning and implementation procedures. Rather, libraries should consider lessons learned from industry, in which technology caused disruptive changes that rendered an institution obsolete before it had grasped the change. Mathews (2012, 2014) and Neal (2011) echoed the call for radical transformation, adding changes in economics and student demands to the mix of drivers. The library change actors described above touch briefly on what they see as a primary reason libraries have difficulty in making these changes—inflexible librarians and library staff. Neither discuss the library's external environment and the influence it has exerted and continues to exert on the organizational structure within which these library personnel work.

Despite the wealth of writing on change, or the need for change, in libraries, McGuigan (2012) accurately pointed out that surprisingly little attention had been given to organizational theory in the library literature. Following a review of the classical, human resources, environmental, and cultural theories of organizations, McGuigan (2012) cautioned librarians to consider why change occurs. "Often it is not a conscious decision on the part of a senior leader or committee of leaders, but rather a reaction to an altered internal or external force" (McGuigan, 2012, pp. 6-7). Despite this reality, McGuigan (2012) wrote, much of the current thinking on change in libraries centered on transformational leaders who sought to change their libraries through organizational development, a process involving a mix of human resources trends and focusing on changing library culture. McGuigan (2012) highlighted the literature detailing organizational development initiatives in libraries (pp. 8-9). Although many libraries sought to change their processes, library leaders continued to build on a traditional organizational structure, the same structure that was developed a century ago, with little examination of the external forces that are reshaping library work.

Changes in CDA in Academic Libraries

Books on collection development are numerous, offering a multi-faceted understanding of the philosophy and practices of CDA. Many are written as textbooks for graduate-level courses on library collection development (see Johnson, 2014). Others are targeted to a specific facet of collection development practice—developing collection policies (see Hoffman & Wood, 2005), creating a formula for allocating funds (see Tuten, Jones, & ACRL, 1995), working with electronic materials (see Polanka, 2011, 2012), deaccessioning materials (see Ward, 2015), working with cooperative collections (see Fischer & Chadwell, 2014), and managing liaison programs (see Mack & White, 2014). Others address development of specific collections, such as literature for children and teens (see Schwedt & DeLong, 2008), reference (see Perez, 2004), or archives (see Boles, 2005). These volumes are valuable for a general orientation to CDA principles and practices. They include an overview of foundational documents such as collection development policies, allocation formulas and budgets, resources for finding and acquiring materials, and an overview of the work involved in the daily operation of collection development. Although the literature on collection development in book format continues to evolve, as in many other disciplines, the journal literature and conference presentations are better able to keep up with the most recent trends and practices.

Dempsey, Malpas, and Lavoie (2014) discuss the influence of the network on CDA—specifically, the possibilities inherent in an environment in which technology makes nearly everything available. Though the authors indicated their article was not intended to cover everything, and it was not empirical, the lead author was well-respected for his thinking on the future of libraries. The article illustrated many of the challenges and possibilities facing collection development librarians today. Interestingly, the authors discussed the effect of transaction costs early on, noting "Although we do not usually think about them in this way, changing transaction costs are actually a major driver of library development" (Dempsey et al., 2014, p. 394). This statement, to the extent it is true, and the understanding that it may be new for some readers, may be an indication that many librarians are unaware of the extent to which external forces determine their practice. Dempsey et al. (2014) placed this statement in the context of economic theory, specifically that of Coase, who argued "that an organization's boundaries are determined by transaction costs" (pp. 394-395). In reviewing what has currently been written on the future of library collections, and focusing on the possibilities created by the network, the authors illustrated a world in which collections were increasingly global, held and accessed in the cloud, and managed through partnerships and consortia. In a world where libraries are less involved in building large local collections of easily obtainable materials, the authors expected libraries would be able to turn their attention to local practices such as special collections and curating institutional content.

The Charleston Conference. Much information about the latest CDA practices may be gleaned from conference proceedings. Due to the service-focused nature of library work, which may make it difficult for librarians to engage in sustained research, conference presentations are essential to advancing new ideas in librarianship. The Charleston Conference is widely considered to be “the” conference for collection development professionals. It began as an informal gathering in 1980 and has grown into a major annual conference with thousands of participants (Charleston Library Conference, 2018). The conference is unique among library conferences in that it is not sponsored by a library association and welcomes perspectives from everyone involved in the collections business. This statement from the conference’s website sums up the thoughts on the minds of those involved in collection development:

> Can librarians and vendors create a mutually satisfying environment where libraries can afford to buy the materials they need and vendors can still maintain a healthy profit? Can publishers keep prices down while costs escalate? How is the market being impacted by the internet and electronic publishing? What are the rights and responsibilities of each of the parties involved? Who is maintaining the electronic archive? (Charleston Library Conference, 2018).

The conference’s focus on including vendors and publishers as participants rather than sponsors may be an indication of the extent to which the organizers recognize the interdependency between libraries and those who make materials available. A review of the proceedings of the last several annual conferences (Charleston Library Conference, n. d.) shows that patron-driven acquisition, materials deaccession (weeding), cooperative and consortial collections, and content packages remain high on the list of concerns of librarians, publishers, and vendors. Plenary sessions feature high-profile speakers from scholarly societies and higher education institutions. Speakers highlight trends in CDA such as collecting scholarly output in institutional repositories, digitizing special collections, and curating faculty research data. High interest topics include patron-driven acquisition (PDA), large-scale subscription packages of journal content known as “The Big Deal,” and providing access to single articles via a pay-per-view (PPV) model. PDA, The Big Deal, and PPV deserve specific consideration, as they illustrate the interdependency between libraries, publishers, and vendors. Although recent research suggests that these models continue to be assessed and fine-tuned, they are not likely to go away soon (ACRL, 2016).

PDA. PDA has become a high-profile collections tactic in many libraries. Based on observations of the way library patrons used interlibrary loan and other resource sharing programs (Nixon, Freeman, & Ward, 2010), libraries used PDA as a way to better predict what materials library users actually needed in an attempt to control costs and avoid making purchases that would not be used. As the name suggests, in a PDA model, libraries purchase materials based on patron requests rather than librarian selection. However, PDA may be customized in numerous ways, ensuring that librarians continue to exert control over the selection process. Although this method may still seem relatively new to some librarians, it has been discussed for some time and is well-documented in the literature (see Dahl, 2012; and Nixon et al., 2010, 2011). According to Dahl (2012), many studies of institutional applications of PDA exist. She pointed out that although the existing literature helped those already well-versed in the concept to understand the many ways it might be customized, it neglected to discuss the issues important to those who felt the concept was flawed. Though Dahl (2012) seemed sympathetic to this latter group, in discussing the need to think about the collection and librarians' role in developing it, she used many of the same statistics and rationale used by those who are already supporters of PDA. However, in acknowledging both external forces and library culture, she highlighted the disconnect between librarians who work in different areas of librarianship.

The Big Deal. The Big Deal allows a journal publisher to provide all—or an agreed upon subset—of its journal holdings to libraries in a package, for a set price with an annual incremental raise in cost, and under a set of contractual permissions and limitations that serve to maximize access for the library while allowing publishers to retain more control over how their content is used (Frazier, 2001; Strieb & Blixrud, 2014). Big Deal packages may allow libraries to purchase perpetual access to content or allow access to specific content only as long as the purchase agreement remains in effect. In their review of the literature and study of survey responses of large research libraries on the Big Deal, Strieb and Blixrud (2014) found that although concerns about the Big Deal remain, these "large publisher journal packages dominate libraries' licensed collections," and "consortia have emerged as the predominant mechanism for managing this key acquisition" (p. 603). The authors believed that pricing models were still immature but expressed concern that market forces had yet to place pressure on journal publishers to decrease costs and abandon print publication. This statement suggested the authors' understanding that libraries were not the only market influencing these journal publishers. Support from faculty for the titles in these packages made them difficult to cancel. Canceling these large packages in favor of purchasing individual subscriptions often proved to be much more costly than retaining the package (Lemley & Li, 2015).

PPV. PPV, considered an alternative or adjunct to the Big Deal, has received less coverage in the library literature (Carr & Collins, 2009). Although earlier studies indicated that the administrative burden and unpredictability of costs and expenditures made PPV a less viable option than regular or bulk subscriptions (Rightscom, 1995, as cited in Carr & Collins, 2009), Carr and Collins' (2009) research did not bear out these findings. However, they wrote that the future of PPV depends on librarians' willingness to accept an access rather than an ownership model of CDA. Further, PPV contributed to disaggregation, in which a reader accesses an individual article as a single entity rather than in the context of an edited volume, similar to the way in which one might choose to download a single song rather than an entire album. This ran counter to scholarly practice, and the methods used by publishers, who have yet to show the same support for this practice at the institutional level as they do with individuals. Publishers will need to evolve in concert with libraries (Carr & Collins, 2009).

Scholarly Communication and Academic Capitalism

Academic capitalism, defined by Slaughter and Leslie (1997, p.11) as "market and market-like behaviors on the part of universities and faculty," has not been explicitly named or studied in a library context. Library CDA processes, which determine why and how materials are included in and acquired for library collections, are subject to the same market forces that affect all aspects of higher education. In particular, the rise of for-profit publishers, outside organizations that serve to bring the market into the academy (Slaughter & Rhoades, 2010), have caused the academic library to serve as a network between for-profit publishers and students and faculty. Although librarians rely on publications to do their work in connecting students and faculty to resources and scholars, in the current environment, librarians have relatively few methods for doing this other than through for-profit publishers.

The open access (OA) movement has emerged, in part, as a response to the problem of price inflation and content control by for-profit publishers. However, the OA movement is also a logical response to the possibilities the internet offers to scholarly communication. Scholars have more options than ever before for disseminating their work and assessing its impact. The OA movement has been documented by numerous scholars, as evidenced by the timeline maintained by the Open Access Directory (2018). Scholar Stevan Harnad is credited with precipitating the OA movement with his 1994 Subversive Proposal (Okerson & O'Donnell, 1995), in which he calls for all authors to disseminate their work freely, anonymously, and publicly online. In so doing, they would both return scholarship to the public and break the hold paper format publishers had on scholarly content.

Although the OA movement is outside of the scope of this research, it intersects with this research in studies that are useful in furthering an understanding of the scholarly publishing environment, its influence on library CDA practices, and the way these differ from academic capitalism that stems from action on the part of higher education institutions. Universities can no longer benefit from selling scholarly communication on the open market—they ceded this right to publishers long ago. However, as institutional budgets tighten, the scholarly communication market continues to enter the academy through the academic library, and in vendors' and publishers' direct interactions with faculty.

Despite the allure of OA to librarians, the majority of scholars have been slow to adopt OA practices not affiliated with an established publisher. Acord and Harley (2013) and Harley (2013) found that adoption of new scholarly communication practices is dependent on numerous factors, including a scholars' discipline, their time in their profession, and their individual personality. Scholars engage in communication for many reasons. Although the public good may be one of these reasons for some, scholars must often focus on concerns closer to home. New scholars in particular must conform to the norms of their discipline and institution if they are to advance in their careers. Higher education administrators have little evidence to use in guiding changing incentive patterns that might increase support for OA publishing. Despite the fervency of those committed to OA, Acord and Harley's (2013) work suggests that a large-scale movement to OA will take time.

In their 2004 article on the role of scholars, publishers, and institutions in scholarly communication, Miller, a professor and department chair, and Harris, a recent library school graduate, described the rationale and actions of scholars, editors, publishers, and institutions in making scholarship available. In doing so, the authors highlighted the conflicts in motivation of each actor and determined that the scholarly publishing model was unsustainable. The authors called on publishers to recognize the actions publishers might take in changing the method of distribution in an emerging online environment, urging publishers to pass savings on to institutions and recognize the limits faced by institutions. However, as highlighted above, many universities ceded scholarly publication to businesses long ago. Scholars are limited in their ability to challenge this model due to their need to secure tenure and advance in their careers. The for-profit nature of publishing companies suggests that publishers will resist any change that diminishes profits.

Evidence for academic capitalism is present in scholarly communication practices due to vendors and publishers and creating a network for their products within the university. The academic library serves as the gateway for this network. Although OA offers promise for closing this gateway, or slowing traffic, the literature suggests this change will be slow in coming. Other theories will be needed to examine the intersection between the scholarly publishing environment and academic libraries. RDT is one theory that may be useful in this effort. RDT identifies cooptation, in which an external player has an influence within an organization, as a tool an organization may use to mitigate the external organization's power (Pfeffer & Salancik, 2003, Scott & Davis, 2007). In the next section, I examine the literature on RDT, my chosen theoretical framework for this study.

Theoretical Framework

The literature on academic library CDA indicates the importance of the external environment on library practice. RDT provides a useful framework for addressing the research questions and beginning to understand current academic library CDA practices. RDT, on its own and as an environmental theory, is not without its limitations. Kezar (2001) noted that despite a strong empirical tradition, environmental theories do not take the social dimension of change into account. Hillman et al., (2009) wrote that RDT itself could not fully account for interdependencies on its own. However, in this study I sought to learn how librarians involved in CDA navigated their external environments and determined their practices in creating and maintaining relevant collections. The role of the manager in adapting to the environment is an essential component of RDT. Librarians involved in CDA are managers of CDA processes, making RDT an appropriate framework for this study.

RDT in Previous Research

RDT, an open systems theory, draws heavily on concepts of power. However, RDT sees power as relative, and dependent on relationships, needs, and resources (Scott & Davis, 2007). Although an organization may have very little individual power in the way power is conventionally considered, an organization can have great power in the context of a particular transaction. When power is held by multiple players in a given transaction, interdependence is created—and an organization will only be able to do its work in conjunction with other players involved in the transaction. RDT maintains that organizations have strategies at their disposal to minimize the organizational constraint that accompanies these interdependencies (Scott & Davis, 2007). Organizations might seek to grow larger, as large organizations have more power to leverage. They might seek to keep their alternatives open by cultivating different partners or avoiding others—although this may be difficult depending on the nature of the organization or resource. Bridging mechanisms organizations might use include cooptation, in which external players hold power within the organization; alliances, in which organizations agree to work together; or mergers and acquisitions. Organizations might also take collective action, such as forming associations that allow organizations to work together or seeking guidance from the state in order to use the power of the government to change the nature of interdependence (Pfeffer & Salancik, 2003, Scott & Davis, 2007).

RDT owes a debt to Transaction Cost Economics (TCE), a rational system theory that also deals with interdependence between organizations. TCE, inspired by the work of economist Ronald Coase and developed by Oliver Williamson, explores the boundaries between the market and organizations, proposing that the most cost-effective option, whether the market or an organization, will dictate how transactions occur (Scott & Davis, 2007). Although RDT has been used extensively in studying mergers, acquisitions, and joint ventures from an industry perspective, TCE has been much more extensively used than RDT (Hillman et al, 2009). However, RDT acknowledges that systems are not rational, and that other factors have a role to play. In acknowledging different forms of power and deemphasizing the role of the market, RDT includes a role for behavior, making it more applicable to any type of organization (Scott & Davis, 2007). Davis and Cobb (2010) observed that RDT seems to be enjoying a renaissance and called for research that adapts and extends the theory to the realities of today's organizations. In particular, they noted that the strategies that are tied to the propositions of the theory reflected the time in which the theory was originally written. They noted that RDT's focus on diagnosing underlying power structures and using this information to determine a course of action "still yields great insight into organizational behavior" (Davis & Cobb, 2010, p. 38).

RDT in management. Despite RDT's applicability to all types of organizations, the majority of the studies using RDT have been written in the discipline of management. Hillman et al. (2009) engaged in a comprehensive review of studies using RDT. Inspired by Salancik's concern that RDT was not as rigorously tested as it should be, Hillman et al. (2009) undertook a review of the literature to determine the truth of this statement. Although they found evidence of rigor in the literature, they proposed areas for further research, particularly calling for more theoretical development and greater application of RDT.

The authors separated their review by studies designed to test specific tenets of RDT—as a factor in mergers and acquisitions (M&A), joint ventures (JVs), board composition, political action, and executive succession. In each arm of research, the authors find that RDT remained a useful lens for examining each of these actions and for testing the theory itself. However, they called for expansion and testing of the theory in multiple ways. First, although the tactics described by the theory are some of the most well-documented ways that organizations use to attempt to reduce constraints, the authors acknowledged that other methods might exist. Further, M&A studies dominated this literature, prompting the authors to call for greater use of RDT in studying JVs, in particular. Second, these tactics also tended to be studied at the macro level, as studies of events between organizations. At the micro level, RDT allows that interdependence among colleagues constrained members of an organization, affecting the extent to which individuals may carry out their work and determining strategies individuals may use to minimize constraints. Third, RDT itself is not always able to account for interdependencies and tactics for reducing constraint, leaving many opportunities to combine RDT with other theories. The authors suggested TCE, agency, real options, industry, institutional, and stakeholder theories as those already in use, and where opportunities for illumination seemed to be most likely to advance the theory.

RDT in higher education. In their study using RDT to examine the effect of rankings on internal and external higher education stakeholders, Bastedo and Bowman (2011) write that beyond Pfeffer and Salancik (1978, 2003), little testing of RDT has been done in universities, as it “requires data and analysis *within* universities and cannot simply be a demonstration of field-level changes” (p. 5). Tolbert (1985) is an early exception. Combining RDT with institutional theory, Tolbert (1985) found a relationship between the environment and administrative structure, and with the addition of institutional theory, found that the extent to which an environmental influence was accepted within the institution predicted the extent of growth in administrative structures. More recently, Taylor, Cantwell, and Slaughter (2013) and Cantwell and Taylor (2015) use RDT to gain an understanding of the state of support for the humanities, and the use of postdocs and the manner in which funding sources, universities, and individual researchers interact in the university environment, respectively. In each study, the researchers found that an increase in universities’ funding from federal grants had an effect on the dependent variable being studied, which in turn had an effect on university operations. In each study, the findings indicated that a university will make changes in response to external influence. These quantitative studies, while structured differently from the qualitative study I propose, confirm that higher education organizations are tied to their external environment, and that studies using RDT to study institutional priorities, particularly those that are tied to funding priorities, are warranted.

RDT in libraries. RDT has been used in only one study involving libraries, a study of outsourcing of information communications technology in Kenyan academic libraries (Mwai, Kiplang’at, & Gichoya, 2014). Using qualitative, multi-case research design, the authors found that librarians and vendors worked interdependently, each seeking to control the other to reduce constraints. The study is notable in that there are very few library studies using classic organizational theory. The authors combined RDT with TCT (transaction cost theory, referred to previously as TCE) as a theoretical framework, although the latter is used primarily in analysis rather than in the structuring of the research objectives. The authors wrote that the two theories could help librarians in making decisions on whether or not to outsource, and in understanding various parts of the process. This claim seems to make sense from a library perspective—the theory is used to inform our practice. However, it was not used in the overall study design. In using direct quotes from their data collection, the authors show that RDT and TCT concepts are in play. This study is the only study documenting the use of RDT in a library context.

Summary

In laying the groundwork for this study I drew on literature on organizational change in both higher education and academic libraries and the history of academic libraries. This background information was necessary to contextualize the changes in higher education and academic libraries since the advent of the internet. Academic libraries are embedded within their institutions and the history of academic libraries is closely tied to the history of higher education. Academic libraries are not solely influenced by their institutions, however. Academic libraries develop interdependencies with vendors, publishers, and other libraries on behalf of their institutions. These interdependencies place constraints on academic libraries and influence the choices made by library decision makers in ways that set them apart from other units within the institution. Studies on change in higher education indicate that change is best understood when it is studied within the context in which it occurs. Although the academic library literature is practical in nature, accounts of change efforts in academic library journals and conference proceedings give us a snapshot of the environment in which academic librarians do their work. However, this literature is large and varied, reflecting the loosely coupled nature of the various units and roles within an academic library. Just as change will not happen in a uniform manner across an academic institution, change will not be uniform across academic library units. To avoid a study undertaken at a level too large to be useful, I chose to focus my study on academic library collections, noting the clear influence of the environment suggested by the library literature. RDT provided a framework for examining the environmental influences and constraints libraries are working under, the interdependencies between libraries and their external environment, and librarians' responses to these constraints and interdependencies. Although the library literature documents the environmental influences surrounding academic library CDA and, to some extent, collection development librarians' responses to these influences, it does not help us understand how all librarians involved in CDA are affected. It does not help us understand the interplay between the academic library and the institution it is embedded in. This study fills a gap in the literature. By documenting the environment surrounding academic library CDA, I use this literature review to create a place for this study to explore the role of all academic librarians involved in CDA, their understanding of the environment they are working in, and the specific strategies they use for navigating this environment.

CHAPTER 3: METHODOLOGY

In the previous chapters, I provided the context of academic library CDA, the significance of this issue as a subject worthy of study, the study's purpose and theoretical framework, and a review of relevant literature on organizational change in higher education, academic library history, and academic library collection development practices. In this chapter I outline the methodology I used to explore my research questions.

- How do environmental conditions and academic librarians' strategies interact in shaping collection development and acquisitions practices?
    1. What are the environmental influences librarians perceive in the course of carrying out their collection development and acquisitions duties?
    2. What strategies do individual librarians develop to carry out their collection development and acquisitions responsibilities in light of environmental constraints?

Research Paradigm

In formulating the research questions for this study, I employed a constructivist framework. This allowed the knowledge and experience of the participants to be considered in the research findings, with questions designed to uncover the way participants made meaning of their work (Merriam & Tisdell, 2016). This approach allowed for an in-depth study of academic librarians involved in CDA, actors that have received little empirical research treatment in the library or higher education literature. Further, it allowed me to determine how and whether RDT was useful for understanding the nature of change in library collection development practices—in particular, the extent to which individual librarians create balance between the external environment and the library. As Scott and Davis (2007) wrote, "…the people who manage organizations are not stuck with the hand they are dealt—they have a large bag of tricks to manage their organization set…" (pg. 221). This light-hearted treatment of RDT highlighted the importance of individual actors with regard to the theory, and a constructivist approach was necessary to learn more about the way librarians made sense of their environment and how they functioned within it. Putting the librarian participants at the center of this study required a view of the environment from the librarians' perspective, establishing the library as the organization under study. This perspective was constructed from their understanding of the external forces at work. I chose interview questions to help me understand the librarians' environment—the actors and elements that provided resources and constrained librarians' choices. The librarians' perceptions of this environment led them to modify and develop a series of strategies to manage environmental constraints, maximize the resources allotted to them, and determine ways of working that fit within the collaborative environment of the library.

Research Design—Case Study

I engaged in qualitative, exploratory case study research of academic librarians whose responsibilities included CDA. Although case study research has been criticized because it is not generalizable (Tellis, 1997), Yin (2014) wrote that this is a misunderstanding of case study research. The case itself does not serve as a sample. Rather the case serves as the tool for use in determining the relative merit of a theoretical framework. This is particularly applicable to this study, in which I sought to determine the extent to which RDT provides a useful framework for understanding the nature of change in academic library CDA practices.

The qualitative case study is particularly suited to my strengths as a researcher. Both Yin (2014) and Merriam and Tisdell (2016) indicate that qualitative and case study research requires good listening skills, comfort with ambiguity, and the ability to write well. These are qualities and skills I possess, and I chose my research questions deliberately with these qualities in mind.

Rationale. Case study research requires a series of propositions or a rationale to frame the study. Yin (2014) wrote that only through making a series of propositions—statements about what the researcher expects to find in the course of the study—will a researcher "move in the right direction" (p. 30). Although the propositions may turn out to be incorrect, Yin (2014) nevertheless indicated that only by setting out some initial statements about what the research may yield will a researcher begin to test their questions. In the case of exploratory research, Yin (2014) wrote, although the researcher should not develop specific propositions, they should develop a rationale for carrying out the study. The lack of empirical research based on theory in library science served as the rationale for this study. I used RDT, an established theoretical framework, to attempt to understand the influence of the environment on changing practices in academic libraries, and to place libraries in the context of higher education. For the purposes of this study, I considered the library as a subunit of a higher education institution, making it appropriate to use a theoretical framework that has been applied in higher education contexts. RDT indicates that those in a position of leadership can observe the influence of the external environment and attempt to balance environmental influences with the organization's existing status. Balancing occurs at multiple levels. A Dean may push back on administration by negotiating for a larger materials budget. A collection development librarian may yield to the external environment in a way that is more palatable to others in the library by choosing a newer format through the use of established CDA processes. Lastly, a subject specialist librarian may push back on a collection development librarian's advocacy for a particular vendor by establishing relationships with different vendors. In sum, the rationale for this study was threefold. 1) To apply an established theory to a practical activity, 2) to identify the library as a unit of a higher education organization and recognize its ability to illuminate the effects of the environment on changing practices in higher education in general, and 3) to test the applicability of RDT to change in libraries, in particular, academic libraries' CDA practices.

Unit of analysis. Case study hinges on the unit of analysis. Yin (2014) wrote that case studies are appropriate for "how" questions in which a particular phenomenon is intrinsically linked to its context. I studied CDA practices in context at two sites, limiting data collection to the recent past time period—approximately 2010-2017. This time period coincided with recent developments in collection development practice, as described in the literature review. The librarians served as the unit of analysis, including their perceptions of their environment, the strategies they used to carry out their CDA work, and their ability to function within the collaborative environment of the library. Using a series of questions designed to explore librarians' perception of their environment, I gained an understanding of the actors, resources, and factors that surrounded the librarians in this study.

Site selection. The state of Michigan lacks a truly centralized academic library service, due in part to the decentralized nature of public higher education in the state. Michigan has the federally- and state-supported statewide resource sharing system MeLCat, which allows all participating libraries in Michigan to share resources. A coalition of librarians from Michigan's public institutions (Council of Library Deans and Directors, or COLD) regularly works together through the Midwest Collaborative for Library Services (MCLS) to share expertise and join group purchase programs in an attempt to decrease costs. Other membership organizations and regional consortia exist, but although these organizations may have an impact on some libraries, they have little impact on library collections statewide. This decentralization prevents easy sharing of financial resources and materials storage. Michigan's higher education and library profile make it a unique location for studying academic library CDA.

Michigan academic institutions run the gamut, from three large research-intensive institutions to small, private institutions scattered throughout the state. The level of attention given to CDA at these institutions depends in large part on the institution's budget, as evidenced by the size of their collection budget and the size of the library staff.

In choosing the sites for this study, I took into account the nature of the problem I wished to study. The lack of a uniform understanding of organizational change in libraries is due in part to differences in academic libraries based on their parent institutions. The Chronicle Research Services report *College of 2020: Students* (Van Der Werf & Sabatier, 2009) indicates those institutions in the middle—"regional public universities, small liberal arts colleges, and private universities without national followings" (pg. 6)—will find themselves under pressure and shifting priorities as they compete to attract those students who do not or cannot choose elite or flagship institutions, but seek more than they perceive may be provided at a community or for-profit institution. In her 2015 presentation at the American Library Association Annual Conference, Malpas suggested that libraries at these middle institutions will be most likely to face pressure from higher education administrators seeking to get full value from their expenditures. Malpas (2015) predicted that librarians at these middle institutions will be more likely than their counterparts to be charged with organizational change and developing new solutions to help meet student demands. Conversely, they are likely to face the pressure of isomorphism, or adopting practices more appropriate for large research institutions in an attempt to gain legitimacy (Malpas, 2015).

With this dissertation I sought to understand how environmental conditions and academic librarians' strategies interacted in shaping CDA practices. I sought to answer this question through exploratory qualitative research at two Michigan regional public institutions, both of which serve a significant population of students and act as centers of educational, social, and economic development for their communities. Both institutions hold the Carnegie classification of doctoral institution with higher level research activity, indicating that each institution engages in research at a level warranting a significant focus on library collections. I conducted semi-structured interviews with librarians involved in CDA at various levels, combined with analysis of collection development policies and budgets at each institution. I interviewed fourteen librarians at both sites, seven at each institution, including two senior level administrators, two collection development leaders, and ten subject specialist librarians.

In summary, I chose the sites for this study based on the factors of location, size, and institution type. Michigan's decentralized environment ensures that each library acts as an individual in its CDA decisions and activities. The research sites were large institutions, with a focus on research, but still considered regional rather than research institutions, primarily focused on undergraduate teaching, and less able to be competitive in research grant funding. These institutions were large and research-intensive enough to engage in an observable level of CDA activity while facing a level of financial constraint much higher than the high-level research institutions they are expected to emulate.

Institutional profiles. The two sites selected for this research were remarkably similar in many important ways. These institutions grew into their current research institution status from humble beginnings as normal schools, growing from small institutions focusing on training teachers to comprehensive institutions offering a variety of programs and degrees in both traditional liberal arts and the professions. Both had recently added a medical school to their profiles. Both institutions served a majority residential undergraduate population of primarily White students, with approximately 20% classified as minority students. The total student body at each institution ranged in the mid-20,000s. Approximately an equal number of women and men made up each institution's student body. Although both institutions focused on carrying out their missions on their main campus, both had significant course offerings at distance sites and online. Like many state-supported institutions in Michigan, both institutions have seen decreases in their overall student populations over the past several years ("Enrollment down," 2017).

Although these institutions had much in common, they differed in important ways. Each reflected, and was a reflection of, the community in which it resided.

Institutional profile: Regional Institution A. The main campus of Regional Institution A (RIA) was in a largely rural area in the middle of the state. The nearest city of any population was an hour away. However, the institution was in close proximity to a global chemical corporation, and this neighbor had an influence on the programs and initiatives offered by the institution. Table 3.1 includes demographic details about RIA.

Institutional profile: Regional Institution B. The main campus of Regional Institution B (RIB) was in the southwestern area of the state. Although the surrounding area was also rural, RIB was in close proximity to other cities in the state, and not very far from cities in Indiana and Illinois. RIB's location was home at one time to a major pharmaceutical company, which played a major role in the development of the university. Table 3.1 includes demographic details about RIB.

Table 3.1. Institutional Demographics (NCES, 2018).

	RIA	RIB
Carnegie classification	Doctoral Universities: Higher Research Activity	Doctoral Universities: Higher Research Activity
Total FTE	20,994	19,384
Undergraduate	17,013	16,311
Graduate	3,981	3,073
Enrolled students – men	11,060	11,302
Undergraduate	8,616	9,243
Graduate	2,444	2,059
Enrolled students – women	14,926	11,925
Undergraduate	11,261	9,070
Graduate	3,665	2,855
Percent White students	72%	69%
Percent Black or African American students	11%	11%
Percent Hispanic students	4%	5%
Percent Asian student	1%	2%
Percent other, two-or more ethnicities, or unknown	12%	13%
Overall graduation rate	58%	53%
Typical resident under-graduate tuition and fees	$12,093	$11,943
Typical resident graduate tuition and fees	$12,870	$15,233
Total instructional staff with faculty status	852	867
Tenured	457	617
On tenure track	156	163
Not on tenure track	239	87

Library profiles. Like their parent institutions, the two libraries in this study were both similar and dissimilar in important ways. Table 3.2 provides a comparison of the types of materials held in both library's collections and their spending on different types of items.

Both libraries were headed by relatively new Deans, with librarians classified as tenure-track faculty. Both Deans reported to the Provost and Vice President for Academic Affairs and were considered colleagues of other academic Deans on campus. Although hiring freezes were a reality on both campuses, both Deans had taken advantage of recent library retirements to reorganize staff, create new job descriptions, or both.

Both libraries had faced budget challenges in recent years, ranging from flat budgets to increases in one area at the expense of another. Each library had been affected by the rapid escalation of journal costs due to annual inflation rates imposed by publishers. As a result, upper level and library administrators at both institutions had given attention to this area of each library's budget. Despite the unsustainability of this inflation over the long term, the nature of the research enterprise at each institution also made this area of the budget difficult to cut. This focus on sustaining journal subscriptions had affected each library's ability to make changes in staffing, support existing priorities beyond the collection, and engage in new and innovative endeavors.

Both libraries had used a change in their collections to make changes to library space. As is typical in many libraries, the shift in collection format from print to digital allowed for a change in space. As digital holdings with reasonably secure contracts including perpetual access to journal backfiles and current content became more prevalent, the libraries had been able to downsize their print collections and renovate vacated shelving space to incorporate new technology and accommodate changing student preferences. These changes also offered new partnerships as universities sought to find space for new or expanded units, including tutoring or writing centers.

In both libraries, library administration and librarians worked together to make changes to their provision of reference and research assistance. Specifically, neither institution required librarians to hold regular shifts at a centrally located reference desk. This change in job responsibility had freed librarians to focus on instruction, outreach, and collection development.

Although the majority of the librarians I spoke with supported this change, many also expressed some regret. In particular, they missed interacting directly with students and the opportunity this gave them to find out, from the students' perspective, what was being taught and what was happening on campus.

Library profile: Regional Institution A. RIA's library (RIAL) resided in the center of campus, across the street from the student center. The current library building was over ten years old, making it simultaneously new, relatively speaking, and old enough to warrant consideration of significant changes to incorporate new technology and changing student preferences. As mentioned above, downsizing print collections had been ongoing on this campus for several years, allowing the library to engage in a number of small renovation projects to add new study and work spaces for students. The library was built with compact shelving—shelving units that allow for books to be stored at a high-density in movable shelving units—intended to ensure that the library would not need offsite storage for its collection.

RIAL received funding for collections from two sources. Much of the funding for specific collection areas came from the colleges and programs. RIA considered each college and program as a revenue unit and required it to pay for the resources needed. The institution coordinated the work at the University-level and supplemented this funding in some cases. This funding connection between the library and the colleges and programs added another layer of complexity to the budgeting process at RIAL. However, it also offered the opportunity to work directly with those faculty who most benefitted from the library's collections.

In dealing with journal inflation, RIAL decided to leave the majority of its "big deal" journal subscription packages in favor of individual subscriptions. Although RIAL decided to remain in some packages, particularly those that were beneficial across disciplines, the majority of its individual journal decisions had been returned to the selectors for that area.

Library profile: Regional Institution B. RIB's library (RIBL) resided near the center of campus, fronted by a large courtyard. The building was older and had not been recently renovated. RIBL had also been engaged in a print downsizing project, which included print in both the main library and the library's offsite storage facility. The offsite storage facility was at capacity.

At the time of this research, the library had freed a large area of space in anticipation of collaborating with the University on a project to build a student center that would connect with the library space. Areas of discussion included what to do with the books—the rise of the internet and the availability of online materials had caused administrators to question the utility of large print collections.

RIBL's funding was primarily determined by the Provost, in collaboration with library administration. In recent years, the Provost had chosen to expand funding for journals to account for inflation while holding the line or decreasing funds for other areas of the library. Unlike RIAL, RIBL had continued with large journal packages for the majority of their journal subscriptions, noting that the ability to work with their regional consortium and collect data was more important than flexibility.

Table 3.2. Collections Data (NCES, 2018).

	RIAL	RIBL
Databases	284	738
Electronic serials	81,826	81,945
Print serials	11,174	82,898
Electronic media	121,386	213,291
Physical media	24,175	121,313
Electronic books	393,796	668,661
Print books	707,951	1,304,468
Percentage of budget spent on one-time materials purchases	8%	7%
Percentage of budget spent on subscriptions and other ongoing materials purchases	37%	36%

Participant selection. I conducted in-depth interviews with an upper level administrator and the collection development librarian at each institution, with additional interviews with randomly selected subject specialist librarians (see Table 3.3). To generate the sample of subject specialist librarians, I worked with the upper level administrator to send a request for participation by email to all of the subject specialist librarians at each institution. The 14 participants in this study represented a range of job duties, educational backgrounds, subject expertise, and philosophies on CDA. The majority of the participants presented as White, born in the United States, and female. All held at least a Master of Library Science (MLS) degree or its equivalent, while many held additional master's level degrees. One held a PhD, with two others planning to begin a PhD in an upcoming semester.

The participants classified as subject specialist librarians for the purposes of this study were responsible for a range of subject areas, including the arts, history, English, literature, children's literature, health sciences, science and engineering, education, and anthropology. Many were responsible for more than one subject area—sometimes these multiple areas made sense on a surface level, while others would likely seem disparate to the average observer. In an ideal world, subject selectors are matched with subjects according to their educational background, and in many cases, the participants were—all held at least a bachelor's degree in one of their areas of responsibility, and many held at least one additional advanced degree in one of their areas of responsibility. However, changes in staffing, the addition of new programs, and librarian interest all influence how subjects are allocated to librarians for collection development responsibility. In addition to their collection development work, subject specialists engaged in work traditionally termed reference, and more recently termed research and instruction. These duties included direct interactions with students at service desks or in private consultations, and teaching information literacy and library instruction as individual subjects or within the structure of another course. Some librarians held specific responsibilities for coordinating library-wide instruction or outreach efforts in addition to their CDA and reference duties. As tenured or tenure-track faculty, all engaged in service and research and publication efforts. Service is at the heart of librarianship—even without contractually mandated service requirements, it is common for librarians of all types to engage in service to their communities or to their profession, whether at the local, state, or national level. However, publishing requirements for librarians are exclusive to academic institutions, and vary by institution. All of the subject specialist librarians in this study except one were contractually required to engage in research and publication. Some librarians indicated they found this a hardship. Others found that this work allowed them to work more closely with faculty in their disciplinary areas, remain active in their area of study, and develop a network outside of their library.

With only a few exceptions, librarianship was not the first career choice for the participants in this study. In many cases, the participants indicated they were not aware of librarianship as a career choice when they started their higher education, although many spoke of librarians who had helped them or otherwise positively influenced them as children or college students. Some of the participants discovered library work as college students, while others discovered library work as they actively sought a career alternative. The reasons for seeking an alternative career were almost exclusively for two reasons: 1) the perception, whether after completing undergraduate studies or an experience in the workplace, that the careers available in their chosen field of study were not a fit for them, or 2) an inability to find work in their chosen career that was personally, professionally, or financially fulfilling.

Table 3.3. Librarian Participants.

Role	Disciplinary Responsibility	Background
Associate Dean	Administration	MLS and second master's degree, PhD in progress
Dean	Administration	MLS
Collection Development Librarian	Administration	MLS and additional master's degrees
Collection Development Librarian	Administration	MLS and PhD
Librarian/Faculty	Health Sciences	MLS and second master's degree
Librarian/Faculty	Social Sciences	MLS and second master's degree
Librarian/Faculty	Humanities	MLS and additional master's degrees
Librarian/Faculty	Science and Engineering	MLS and second master's degree
Librarian	Administration and Education	MLS
Librarian/Faculty	Humanities	MLS
Librarian/Faculty	Humanities	MLS and second master's degree, PhD in progress
Librarian/Faculty	Fine and Performing Arts	MLS and second master's degree
Librarian/Faculty	Health Sciences	MLS and second master's degree
Librarian/Faculty	Social Sciences	MLS

Document selection. I analyzed two types of documents for this study—collection development policies and collections budgets. These additional sources enriched the data gathered from the interviews and offered multiple perspectives to strengthen the case study. Using multiple sources of data served to triangulate each resource by verifying it against other resources (Yin, 2014). The collection development policies served as an example of communication and outlined best-case scenarios of collection development. These policies offered the libraries an opportunity to be thoughtful and proactive about their collection priorities, despite the many demands and constraints being placed on them. The library budget served to verify interview data that indicated where budgets had increased and decreased.

Data Collection and Analysis

To collect data for this study, I conducted a series of in-depth, semi-structured interviews with librarians involved in CDA at each site. The questions were based on the tenets of RDT (see Appendix). The first set of questions was designed to help me understand the librarians' environment—those actors, resources, and factors that both provided resources and constrained their choices. The second set of questions was designed to help me understand the strategies librarians used to function within this environment—including traditional strategies they had modified to contend with the current environment, as well as new strategies they had developed more recently—and how these strategies shaped the library as a whole and its ability to adapt to its environment.

I met with each of the librarian participants individually, with each interview lasting approximately 40-60 minutes. I took extensive notes during the interviews, remaining mindful of maintaining a balance between actively listening and note-taking. I took time following each interview, in the evenings and at the conclusion of the interviews at each institution, to create memos of my impressions immediately following interview sessions.

I audiorecorded, transcribed, and analyzed each interview for content. This process took several months, involving two to three listening sessions for each interview. I transcribed half of the interviews by hand and engaged a professional service to help me complete the other half. I read each transcript several times. I engaged in cross-case analysis, considering the responses from both sites as a whole. My primary analytical strategy relied on the propositions of RDT, using pattern matching as a specific technique—looking for examples in the data that corresponded to the tenets of RDT, grouping the responses into environmental elements and librarian strategies. I found it necessary to return to the data at multiple points in time to ensure that I had not confused a strategy with an environmental element. Identifying the librarian participants as the unit of analysis allowed me to determine the environment specific to the librarians. This differed at times from the environment of the library itself.

Using the rationale I outlined above for using RDT as a framework for studying CDA, I continued to analyze the participants' responses to the questions regarding strategies to determine themes within each broad category, using a spreadsheet to keep track of these themes. Starting at a granular level resulting in a large number of themes, I continued to analyze and reduce these themes into a smaller number of categories. I used this data to write my findings and discussion.

As part of the analysis, I considered rival explanations for understanding the data. I found it necessary to review the strategies related by the librarian participants to ensure they were indeed strategies developed or adapted to contend with the current environment, and not simply something librarians did as part of their job description, or elements that were part of their backgrounds and not an actual strategy. As I worked through multiple drafts, I revisited the data and worked to condense the strategies to only those that were relevant in the context of the environment the librarians' identified in their answers to the interview questions.

Ethical Considerations

In the course of securing approval for this study, I followed proper organizational processes and received the appropriate permissions. I secured Human Subject Institutional Review Board approval. I documented and completed these steps prior to beginning research activity.

Validity

I took several measures to ensure validity. The four measures I discuss below are common in social science research, and appropriate for case study research, as well (Yin, 2014). I applied each measure at multiple points in this study as was appropriate.

Construct validity. Construct validity may be challenging in case study research due to the subjective nature of data collection (Yin, 2014). I used accepted tactics in an attempt to ensure construct validity. These included the use of multiple sources of information and establishing a chain of evidence during the data collection process. The first strategy offered the opportunity to examine evidence in various formats in an effort to determine whether my interview findings were supported. In particular, the use of collection development policies and budgets, each of which had been developed according to established procedures and remained relatively static once approved, served to add stability to the data gathered through interviews.

In establishing a chain of evidence, I increased the chances that another researcher could examine, understand, and replicate my results. I established this chain by linking findings to specific pieces of evidence. Many of the findings linked to specific interviews. In some cases, the findings linked to the supporting documents. I kept a journal of the process to strengthen the chain of evidence.

The third tactic involved review, both by peers and experts in both libraries and in research, as well as those who participated in the study. The peer review included librarians familiar with CDA in academic libraries. Their reading of the drafts of this manuscript was essential in uncovering assumptions, errors in judgement or analysis, and omissions. The review by participants helped to ensure that I accurately represented those involved in the study. I prepared a summary of the findings, including an explanation of the theory, a summary of the research questions, the major themes uncovered in their interviews, and the conclusions I drew. I shared this summary with those participants who expressed interest in discussing it with me.

Internal validity. As with construct validity, Yin (2014) wrote that internal validity was particularly difficult in case study research due to its subjective nature. It may be too easy for a researcher to make inferences that are not supported by the data. The researcher must address internal validity in the data analysis stage of research, with the use of specific techniques to analyze the data. In choosing explanation building as my analysis strategy, in which I define the rationale for research, gather data, and develop an explanation, I chose a method that allowed me to work toward internal validity. In addition, I used the participants' words as much as possible, employing extensive use of quotes to ensure that my words were qualified by those I interviewed. These quotes also played a central role in establishing context.

External validity. External validity concerns the extent to which a study's finding may be generalized (Yin, 2014). The use of RDT, an established theory that informed the rationale I laid out in the design, was one strategy that helped me determine the extent of the exploration covered in this study. Further, using two sites allowed me to take advantage of "replication logic" (Yin, 2014, p. 45), in which the two sites, which I chose due to their similarities, served to strengthen the findings through an enlarged participant selection.

Reliability. Reliability is the extent to which another researcher may replicate the results of a study. I addressed this concern chiefly through the use of a research protocol, or series of questions to be used in librarian interviews (see Appendix). Further, I developed and followed a procedure for analyzing the documents and created a database of information gained both in the document and collection analysis and in the interviews.

Threats to Validity

Despite using multiple strategies, none of these measures, whether singly or on their own, could ensure validity. It was essential that I consider threats to validity. In qualitative research, as Maxwell (2013) wrote, it is neither possible nor desirable to eliminate the presence of the researcher from the research. To this end, a researcher must indicate what steps they will take to minimize threats to their conclusions. Maxwell (2013) defined the threats of research bias and reactivity as two of the most common.

In the paragraphs below, I include a statement of positionality, defining myself in relation to my study. I follow this with a brief description of the steps I took to ensure integrity in dealing with researcher bias and reactivity.

Positionality. To ensure credibility, I share my own background and beliefs on this topic. I am a librarian—my experience includes over 20 years working in libraries of all types, over 17 years in academic libraries, and over 15 years as a professional librarian. I spent seven of these years as the Head of Collection Development at Saginaw Valley State University, a regional, public, Master's comprehensive institution, where I gained the knowledge and beliefs that informed this study.

In my current position as Dean of Libraries I am responsible for all aspects of library operation and management. In particular, the library's people are of primary concern to me. This study has the potential to help me and others in working with librarians to consider their role in CDA, how it is changing, and what it may look like in the future. Although I am aware of these goals and believe they are altruistic, I engaged in reflexivity throughout this project to ensure that I was aware of how my position and insider status might influence the course of my research and the relationships I built with participants.

Researcher bias. Considering my past experience as a collection development librarian was a particular place in which I took pains to be thoughtful. Librarians, similar to other professions and disciplines, are not one-size-fits all. Libraries are complex organizations made up of people with a variety of predilections and skills, and different areas of work responsibility both attract and shape those who function in these areas of the library.

Collection development librarians function in a world that requires both a strong academic background, an understanding of the entirety of a library's community of users, an ability to analyze data, and an ability to consider economic issues. In my experience, the decisions collection development librarians make are sometimes at odds with librarians who work primarily in research and instruction, work that requires extensive interaction with those who use the library's services in person. For example, a collection development librarian's choice to purchase an ebook rather than a print book may make sense in terms of price, accessibility, space savings, and vendor platform, but may not be preferred by the history professor who regularly visits the library. As a result, the librarian responsible for history may be more likely to advocate for the print book, putting them at odds with the collection development librarian. These types of interactions were common in my work as a collection development librarian. I deliberately examined my biases to ensure that I gave equal consideration to the words and actions of library administrators, collection development librarians, and subject specialist librarians. By committing these scenarios to writing, I hope to show that I am aware of these areas of potential bias and the extent to which I considered both my own background and the background of other librarians in the collection development process. I spent time in thought to discover and examine these opportunities for bias to enter and influence my study before and during data collection, and particularly during analysis.

Reactivity. Reactivity, the effect the researcher has on the participants (Maxwell, 2013) was of particular concern in the interview portion of the study. In the course of developing my interview questions, I sought feedback to ensure I avoided leading questions, or questions that showed bias on my part. However, reactivity continued to be a factor in the course of the interview process, particularly when I deemed an unscripted follow-up question to be necessary. I minimized this opportunity for reactivity by testing the questions and determining the types of follow-up questions that were likely to occur, adding them to the script when appropriate.

Further, the participant librarians in this study were colleagues, friends, and fellow members of the Michigan academic library community. This offered additional opportunities for my own background and position in the community to influence the dialogue around the interview, even if I did not intend to do so. The process of recording and listening to the data offered the opportunity to discover these instances and ensure I handled them appropriately in data analysis.

Limitations

In the section above, I outlined the threats to validity that served to limit this study. In addition, this study was limited in other ways. Qualitative research, and case study research in particular, is necessarily limited in scope and generalizability. By choosing a Michigan-based sample, as well as a similar group of participants, the results may not be useful to libraries in other states and countries and to libraries of different sizes and types. However, as noted by Yin (2014), the point of case study research is to illuminate what is happening in a particular situation, and to examine processes that may be at play in other similar groups. This was certainly the point of my research, as well.

The use of an environmental theory as a conceptual framework necessarily limited this study in terms of understanding human and cultural influences on change (Kezar, 2001). RDT itself is known to be limited in describing the full extent of interdependencies (Hillman et al., 2009). However, as I noted above, to date, the library literature reflects little in the way of empirical studies framed by organizational theory. The existing literature focuses heavily on practical opinions on how to change individual library actors and the library culture overall. It is my belief that underlying structures based on the external environment have played a tremendous role in determining the organization of libraries, and these structures are in place still, constraining librarians' ability to change at a fundamental level. In particular, as libraries are forced to contend with environmental pressures that have long been known as well as those that are new and still forming, uncertainty may make it even harder for individuals to change.

In choosing to focus on CDA practices, I neglected forces and drivers precipitated in other areas of the academic library. However, as noted earlier, this research attempted to avoid study at a level too large to be useful. Further, in choosing RDT, a theory with a strong background in economics and management, it is logical to apply it to CDA, an activity that relies as heavily on markets, vendors, and budgets as it does on scholarship.

Conclusion

As organizations embedded within higher education institutions and reliant on external agencies for their collections, academic libraries are constrained by their environment. However, like other institutions, they have a range of options open to them to manage these constraints. Libraries have changed significantly over the past several decades and will likely continue to change. The use of established organizational theory offers an opportunity for librarians to understand how change happens in organizations and to reconsider notions on how—or whether—to change based on environmental factors.

CHAPTER 4: FINDINGS

In this chapter, I report the findings from the interviews conducted with the librarian participants in this study. The evidence for these findings is a result of the cross-case analysis of interviews from both sites, with the librarians in the study serving as the unit of analysis. I define the environment, the constraints this environment poses, and enumerate, clarify, and analyze the strategies described in participant interviews. I have separated the findings into broad categories as indicated by the data and informed by RDT, the theoretical framework for this research. Broadly, these categories are environmental influences and librarian strategies, further arranged by the function I observed.

This study was designed to explore the following research question and sub-questions:

- How do environmental conditions and academic librarians' strategies interact in shaping collection development and acquisitions practices?

    1. What are the environmental influences librarians perceive in the course of carrying out their collection development and acquisitions duties?
    2. What strategies do individual librarians develop to carry out their collection development and acquisitions responsibilities in light of environmental constraints?

Defining the Environment

One of RDT's primary tenets is the environment's role in influencing and constraining the courses of action an actor within an institution may take. The environment provides resources that enable an organization to carry out its work, and thereby grants power to that organization by enabling it to meet the needs of those who rely on that organization. In this study, the library, as the central organization under study, relied on the work of people, librarians and other library workers, to fill the needs of its constituency. In defining the environment for this study, I analyzed the librarians' responses to interview questions, noting the elements they indicated as external to themselves and having influence or control over their CDA work. I labeled these as making up the environment. These elements included actors—university administration, students and faculty, vendors and publishers; and resources—funding, time, and the library's physical environment. Each of these elements served to constrain the choices available to librarians, either by causing them to modify an existing strategy or develop a new strategy for CDA.

In this study, the environment consists of and includes elements that are external to the unit of analysis—in this case, the librarians engaged in CDA, whose work represents the library as a whole. This environment, made up of people and resources external to the library, constrained the course of action these librarians took in carrying out their CDA activities, leading them to modify and contextualize typical librarian strategies and develop new strategies.

I asked the librarian participants a series of questions designed to determine how they perceived the influences in their external environment (see Appendix). Asking librarians to focus on actors and resources that influenced their CDA practices, I observed the constraints and influences described below. Overall, I noted that librarians do perceive constraints, and spoke of them readily, often as "just the way things are." Statements like "we don't choose how much money we're going to get, the Provost does," "Deans actually have a lot of control over whether or not we get funding," and "it's not about what I want, it's what the needs are for the program," indicate librarians' acknowledgement of environmental constraints. These environmental elements—actors, resources, and factors that are external to the librarians in the study—constrain librarians' ability to meet the needs of the students and faculty they serve.

Environmental Constraints and Influences: Actors

Administration. Administration was an essential component of the librarians' environment. The university's administration determined and approved the library's budget. Without a budget, librarians would have been unable to make collection purchases. According to Pfeffer and Leong (1977, as cited in Pfeffer & Salancik, 2003), "the ability to obtain resources" (pg. 233) plays a role in determining an actor's power within an organization. Further, Salancik and Pfeffer (1974, as cited in Pfeffer & Salancik, 2003) "found that departmental power was best predicted by the proportion of outside…money the department brought into the university." Given that libraries generally do not wield power on campus in terms of their ability to generate external resources, their ability to serve their campus community—and persuade those in power to grant them the resources to do so—enhances their reputation on campus.

Administration, particularly the Provost, acted as an environmental constraint due to the library's reliance on administration for funding. Library administrators indicated they must ensure they were speaking the language of the university's priorities and demonstrating that the needs of the students came first. Simply positioning requests as a library need were unlikely to be successful due to the library's lack of power as a unit in terms of its ability to bring in resources. In the absence of demonstrating profit in a concrete way, library administrators indicated a need to be creative in shaping their discussion of current library work and initiatives, and to be vigilant for opportunities to position the library in larger university efforts. As one administrator remarked:

> I enjoy thinking "What's the university want to achieve, what's our role in achieving that, and what are we going to do this year to move that forward?" Now, I'm really thinking about how do we employ…how do we effectively use our people resources, how do we

> effectively use our financial resources to accomplish the University's end goal, not my end goal or a department's end goal…think about a whole library system, not individual departments, or a whole University system, not individual divisions, right? Perspective-building…because most people spend their days just in their particular area of expertise, which makes sense…they don't necessarily have to see the whole big picture. I feel that's a lot of my job.

At a micro-level, the librarians in this study sometimes served to constrain and influence other librarians in the study. In developing all areas of the library budget, setting policy, and determining funding priorities, Deans and collection development librarians had a profound influence on subject specialist librarians. Subject specialist librarians were able to influence budget decisions based on their knowledge of their subject areas and the faculty with whom they worked closely.

Faculty and students. Nearly on par with funding, all of the participant librarians cited the faculty's curricular and teaching needs, with faculty research needs close behind, as primary influences on their collection development work. As one participant commented, "The biggest factor is the subject matter of the materials I'm going to be buying…they need to relate very clearly to the faculty's teaching and research." This support took shape in influences from both faculty and students. Many librarians were quick to say that everything they did was for the students, but their answers indicated that faculty received the most direct attention. Librarians responded to this influence in multiple ways, including communication with faculty, studying the curriculum and course catalogs for information, and in requests from students. The students often acted as an indicator of faculty needs.

> I buy what I think is useful for the faculty as the main focus, the students sort of in a trickle-down way, because they take the classes that are being taught by the faculty and they end up working…with their faculty members doing similar research.

One subject specialist mentioned a direct influence students had on their collection development.

> I do think about social trends, things going on in our society right now… …students want to connect their academics to the things that they see going on around them that interest them in some way. So, if I saw, for example, things going on about the election, or things going on with…Black Lives Matter was something that I was looking at not that long ago... Or, fake news is the thing right now.

Another subject specialist indicated that students' needs came second, along with support for research, but understood the changing landscape as the institution became more involved in grants and research.

> …that's what it's all about. Providing what faculty need—faculty first and foremost, and students are second to that. But, you know, we're a…research…institution now. There is a push more and more to do research, secure external funding... And you need library resources to support the research. And that's what drives everything, almost everything, now.

The librarians in this study understood and valued the influence of their work on students and were able to rely on this knowledge to help resolve questions about a best course of action. In the words of one administrator: "A lot of conflicts can be overcome…when you ask 'Well, what's best for the student?'" However, they were less likely to mention students as a direct influence. As noted above, they recognized that faculty communicate their needs because of the work they do with students. However, this focus on faculty rather than students is also a matter of scale, and the level of the student. Graduate students were more likely to be doing work that necessitated an addition to the collection. As one subject specialist related,

> I don't want to make it seem like the students are like an afterthought…it is true that we consider the faculty first. I did have some situations earlier this year where a graduate student working on his thesis wanted to have several books. He tried to request them through our interlibrary loan and they weren't available and I ended up buying those for him. I mean, if 7,000 students all came to me and said "I want you to buy this book," I couldn't do that. But on a case by case basis I try to support their research as well. We do have a lot of great graduate students doing a lot of great research.

In some cases, changes in library reference practice and difficulty in meeting with faculty and academic administrators made it difficult for librarians to glean information directly from those they served, as I explain in my discussion of strategies. However, the librarians in this study understood the importance of faculty and students in carrying out their CDA work. They also understood that their ability to tie their requests and collection choices directly to faculty, student, and curricular needs had an impact on their ability to retain funding and negotiate for additional resources.

Vendors and publishers. The libraries in this study and the vendors and publishers they worked with had a complex relationship. In some ways, vendors and publishers were closer to the faculty than the librarians were—publishers were players in the scholarly world inhabited by faculty, whereas librarians spent more time reacting to that world than participating in it. These actors created the materials that libraries bought and maintained. In this way, vendors and publishers were perhaps the most fundamental part of the librarians’ environment. Libraries and librarians had always been constrained by these players in their environment—without the content they created and distributed, libraries would have little to collect, maintain, or circulate. Librarians' ability to work with vendors and publishers to ensure the materials their users need were available and usable quickly gave them influence with their constituency. These actors influenced collection development in multiple ways—not least of which was creating and making scholarly materials available for purchase. Vendors and publishers put considerable resources into ensuring their products are front and center, employing sales and training personnel to make sure that both librarians and faculty know that resources are available and that they have the tools they need to use them. These actors determined both format and delivery, both of which influence CDA decisions, as I outline below. However, as I illustrate elsewhere, for the subject specialist librarians in this study, their relationship with vendors was more likely to be cited as a strategy than a constraint.

Vendors and publishers and libraries have a long history of working together. These actors have helped libraries do their work by creating tools that speed up the selection and acquisition process and ensure that materials are available to library users as quickly as possible. Vendors and publishers often created tools in concert with librarians, learning from one another as library work changed. Tools such as vendor-created electronic resource management systems (ERMS) were inspired by the file drawers and spreadsheets librarians developed to keep track of a growing collection of electronic resources, all with different renewal periods, contract terms, and access methods. As a result, some vendors were present in all aspects of library collections, from publishing or aggregating content to distributing the automated systems libraries used to catalog and make materials accessible. Librarians saw them as an important partner in the process. The collection development librarians worked most closely with these partners, and their comments highlighted this relationship.

> …the vendors, and publishers, have the incentive—they want their stuff to get into researchers' hands, so they're going to do what they can to stay abreast of all these changes. So, it helps us to be in communication with the vendors and make sure they understand what our users are looking for. The publishers I'm sure would be just as happy to sell right to the users, they don't necessarily want us in that mix, but at this point they don't have that access, they don't have the pricing models to deal with it, so there is a degree of collaboration there. And, I think that's one of the things we don't often recognize, that innovation that comes from the vendor space is good for us. Publishers, you know – they really just want to get things into their users' hands.

However, despite this sense of collaboration, collection development librarians were wary, as well. Despite their shared need to serve their users, vendors and publishers were businesses, first and foremost. As one collection development librarian observed:

> I have seen my responsibilities as being the main conduit between myself and vendors. That can eat up a lot of your time…and I'm not sure it's always the best use of my time at this point. I mean, all they want to do is sell you stuff, and I have to kind of tell them every now and again, "I'm sorry, this is not the most important issue that I'm dealing with right now, you know, maximizing your profits."

Further, collection development librarians understood that this need for profit was detrimental to the library and the university but saw that the current situation offered little hope of relief. Referring to the many vocal critics in the library world who had tried to shame publishers into changing their pricing models, one librarian remarked:

> I think one of the fundamental conflicts now between publishers and libraries is thinking that libraries have…we've been saying for twenty years we can't afford what you're

> selling but we just keep paying, and so I think that the publishers, being businesses, have just said "Do you see any change in how they're spending their money?" and, "I don't see any change. I hear a lot of noise. I don't care how offended they are by this. They can be as offended and as offensive as they want, calling me a fascist, but, on the final analysis, they're still paying, and I'm just going to keep…we've done our market segmentation, we know what the market will bear…and the market will bear what we are doing to it. And so, if they want our stuff, they're just going to have to stump up the cash, and they are. And, if that means spending less money on books, that's not my problem."

The quotes above highlight the shared constraint of libraries and vendors. Without one another, each would be unable to do their work. However, these quotes also illustrate the power vendors and publishers have in the academy, and the manner in which the library functions as a network for introducing vendors and publishers as a player in the academy, an example of both academic capitalism and RDT's cooptation. Vendors and publishers have power due to their control of scholarly communication, a commodity created by scholars, but outsourced to journal publishers. The scholars who create scholarly communication are subject to the tenure and promotion systems at their institutions. A primary feature of tenure and promotion at research institutions is a scholar's publication record, particularly in top tier journals. Scholars then rely on these journals in their continuing research and teaching, necessitating their availability at their employing institution. As noted earlier, institutional units that are most able to bring in resources from the external environment are likely to have the most power. Additionally, institutional units that are best able to provide the materials and services their users need also tend to be more powerful. Taken together, these findings document a source of concern for academic libraries. Libraries have power within the university to the extent they can provide the resources their students and faculty need. However, those departments within the University that are likely to have the power are those which can bring in external funding. Libraries are a cost center—with some exceptions, they do not bring money into the university—meaning they require resources while offering none in return, in financial terms. The librarians in this study highlighted this imbalance as they detailed their challenges with funding on all sides—obtaining sufficient funding from administration, negotiating financial terms with vendors and publishers, and ensuring that the funding allotted could meet as many of the needs of their students and faculty as possible.

Environmental Constraints and Influences: Resources

Funding. Almost without exception, funding was one of the first constraints mentioned by librarians, regardless of their level of responsibility. As one collection development librarian said bluntly "You are constrained by the budget." In particular, they are stuck between what upper level administrators are able and willing to allocate for collections, and what vendors and publishers charge for those collections. As one collection development librarian commented, "I'm trying to project the 4%—if I'm feeling optimistic—inflation across what we paid for serials last year, or for databases or continuing resources, and then what's left over." Although participants highlighted the importance of the curriculum, academic rigor, and their background in and philosophy of collections as the driving force behind their work as librarians, ultimately, librarians were constrained by the amount of money they had to spend on any given subject area, as highlighted by this collection development librarian's observation:

> From a purist point of view…we're trying to make sure we're supporting the research and the teaching needs of the University… But, you know, I do have a budget, quite a generous budget in some ways, but…making decisions that fit within that budget is

actually increasingly a challenge.... Money is definitely going to be a factor, come what may—it is a limiting factor.

Subject specialist librarians had a specific budget amount allocated to them for books, and perhaps for periodicals. However, much of the libraries' overall collections funding was dedicated to journals and large journal packages. Even at RIA, where the library made the decision to leave many of their large journal packages in favor of individual subscriptions, librarians found that some journal packages were so difficult to leave in terms of costs and access that it was not worth the gain in flexibility. These journal packages received priority due to their ability to serve multiple disciplinary areas. The net result was that librarians found that their book budgets decreased from year to year, and that book budgets were more likely to be cut than the budget for other materials. As one subject specialist librarian noted "…We have had to cut into monographic acquisitions in order to pay for the electronic side of the house because…electronic journals, serials, databases…I think that's 80 percent or more of our budget." For some areas, this was not a problem—particularly when the discipline or its faculty were not reliant on books for their research or curriculum. However, this reality hit some book-reliant disciplines very hard, particularly in the humanities, putting some subject specialist librarians in a difficult position. One subject specialist librarian described a conversation in a meeting that was uncomfortable for them.

> Like, "Oh, next year we will be cutting the monographic budget, but not so much serials." Then I have to remind people, "Okay that doesn't really help me. It's going to be a huge problem for my area…it's very monographic oriented."

Subject specialist librarians might also use their monographic budgets as a slush fund, particularly if fewer monographs were published in a particular discipline that year or were less valued by their faculty. Deep cuts to monograph budgets had decreased this flexibility for subject specialist librarians.

> …In recent years I've been able to say, "Hey, could we move a little money from monographs to serials in my departments?" and we've been able to do that, but as I said, monograph budgets are now…almost nothing.

Although the library's collection development policy was considered a core document and a foundation of collection development practice, only one subject specialist librarian indicated this policy was a factor in their CDA decisions. "We have a collection development policy in place here, and that's my master course syllabus…I go along with that." The librarian went on to describe their methods, describing a database they had created to make a plan for growing and balancing the collection in accordance with the policy. However, as the librarian described their work using this tool, it became clear that it was indeed the declining budget that was driving their decisions.

> …the budget got so low that I could not use it any longer. So now, my guiding determining principles are what are they teaching? Number one. And what are their research projects? But now the budget is so low, I think my only guideline will be course offerings, teaching. I'll be collecting books for teaching, or to support their teaching. Not so much research, but just teaching.

As the quotes from participants above indicated, the amount of funding a library received was set by administration, and the amount individual librarians had to work with and the manner in which it was allocated was set by library administration. This inability to control the amount of funding, whether at the macro- or micro-level, and ensure it is in line with the needs determined by librarians, was the chief environmental constraint at the participant libraries.

Time. Many librarians, at all levels, mentioned time as a factor that influenced and constrained their collection development decisions and work. For the most part, time was a scarce resource, and the lack of it made it difficult for librarians to spend as much time on collection development activities as they would like. One librarian indicated "what really eats up the time is the project work," referring to specific projects they were working on with faculty, whether for a department or for an individual course. Librarians also acknowledged the time necessary to ensure they met their contractual requirements for service and publication.

> …because I am faculty I do have to publish. And so we have to carve out time for service, scholarly communications, that kind of thing. Yeah, it's great to say "OK. I'm chair of four different committees." It looks really nice…but then you realize how much work that is to make sure everybody's doing what they're supposed to be doing.

Time also seemed to serve as a stand-in for librarians' feelings that they were overwhelmed with work—the number of demands on their time simply could not be managed in the hours allotted, so they compromised as best as they could. The subject specialist librarians in this study were responsible for a variety of library-related duties, including library instruction, individual research consultations, outreach to faculty and students, program planning, assessment, internal and external committee work, and their own research. The majority of the librarians in this study indicated that collection development was an area of work that they automated—through the use of vendor tools including approval plans and PDA—in ways that gained them time to focus on other duties.

Although librarians exerted some control over the available time they had to work on their CDA duties, their answers indicated they were constrained by the decisions of others that directly impacted the time they had to carry out all of their job duties. Administrator decisions on shared collections and subject specialist librarians' duties and vendor and publisher tools to support CDA all influenced the way the librarians in this study spent their time.

Space. About half of the librarians specifically referred to space constraints as an influence on their collection development decisions, for better or worse. Both libraries had recently completed or were working on projects that required a change in how library space was used. Library administrators thought expansively about space with regard to their need to consider the library as a whole—considering not just collections space, but space for various kinds of study, space for instruction, and collaboration space. "…you know, I think about space, I think about real estate and what we want to do with that real estate…" This expansive thinking was indicative of the tremendous pressure on libraries in the current higher education environment to prove their value in terms of student outcomes. As noted earlier, libraries throughout the United States are under pressure to pare down and move collections to create space for study and other centers and personnel who provide student academic support.

Subject specialist librarians were more likely to consider space in terms of their CDA work. Before the widespread availability of electronic resources, librarians had only hard copy formats to consider—primarily books and audiovisual materials like CDs and DVDs. In the current environment, librarians often had a choice in format. The constraint of space might influence a librarian to purchase an item in electronic format, even as they weighed the merits of user preference for print and different pricing levels.

Format and delivery. While electronic formats offered benefits for some users in terms of access, they offered considerable benefit to libraries whose financial resources and physical space were not infinite. This knowledge played a role in the strategies of publishers and vendors. In some cases, vendors offered reduced pricing on aggregated collections of access-only ebook collections—collections that allowed a library to access all of the titles for an annual subscription fee, but without any promise of ownership if the library discontinued the subscription. Some vendors had worked to increase their sales by offering to analyze a library's existing print holdings with the intent of quoting a price for replacing print with an ebook or database version of a resource. This allowed the vendor to bring in new revenue from the sales of previously purchased materials, and added an ongoing, inflatable cost to the library's budget. Vendors offered these services when libraries were faced with space constraints, whether because they were out of room, or had been tasked by administration with downsizing their collection to accommodate student study space, or to move another unit—a writing or tutoring center, for example—into the library space.

The librarians in this study indicated that student and faculty reviews of ebooks were mixed and varied by discipline. Despite the existence of a significant body of work on ebook usage, the small sample sizes and lack of standardization employed by the librarians who wrote these studies have made drawing any conclusion on perception and use of ebooks difficult (Yuan, Van Ballegooie, & Robertson, 2017). Librarians indicated they must balance the benefits that ebook format offered—a variety of purchasing models, large amounts of content for a small price, the ability to display content without purchasing it, and the ability to add an item to the collection quickly at the point at which it was needed—with preferences for print. "…Another consideration is also format. Some departments prefer print materials—others prefer e materials, whether that's books or journals." Print also offered utility for some disciplines that electronic did not, particularly for disciplines that relied on images or looking at multiple works at the same time. One subject specialist reported advocating for their faculty's need for print materials.

> When I'm researching writing, I might have six books laid out in front of me…and sure, it's very hard to do online. It's very hard to do. You got 50 tabs open. Unless you had six screens, then that might not be so bad. …it is great if it's midnight and I need to check a citation and I see that the book is online, I can do that, but almost to a person, they want the print.

Electronic materials offered new delivery mechanisms. Before the advent of electronic resources, libraries purchased or subscribed to materials in hard copy, received these items through the mail or other delivery system, and processed and made them available on the shelves. Although this process took time, items remained available on the shelves, unless they were stolen or chosen for deaccession by a librarian. Electronic resources may be made available immediately, and since they are housed on a server external to the library, a vendor or publisher can offer access to materials while limiting permanent access. One such purchasing model is the aforementioned PDA, a method that allows a library to include a set of materials in the library's catalog so that they are accessible to users but does not require a library to purchase materials unless they are used. Although this method provided access to a lot of content, materials might disappear at any time. This added to some librarians' mistrust of ebooks. Although pricing and the level of access might make sense at an administrative level, switching to PDA would tip the balance of selecting to ebooks over print books, a change that would not be acceptable to all subject specialists, nor all disciplinary faculty. In addition to a preference for print over electronic, some in the academy particularly missed the element of serendipity, the ability to browse the shelves and see everything on a topic. One administrator pointed out that this is more likely based on nostalgia than actual utility.

> The broader academic community…we have a lot of people who still have this concept of browsing the shelf… …browsing the shelf doesn't necessarily give them the broad sense of what our collection is anymore because it's such a small fragment of what we have.

Although it was possible to use the online library catalog to simulate this browsing experience, for those who valued serendipity, it was not a satisfying experience.

> The thing with ebooks, and it's unfortunate, back in the day, you used to be able to...you'd find a couple books and if you find a common call number, then you can go and look... Those days are done. You can't do that anymore. So, when I teach classes, I always have to talk about this because you could serendipitously pick up other books, but now you can't because they're online.

Beyond serendipity, the jury was out on academic ebooks. Although ebooks for popular reading enjoy a level of popularity, academic books have a smaller audience, and as a result, a limited profit for academic ebook publishers and vendors. These limited profits result in clunkier tools for academic ebook reading and annotating. Study participants cited comments from students and faculty, including the opportunities for distraction that ebook reading tools offered and the absence of a tactile sensation of reading a physical book, as concerns they considered in choosing one format over another. Some subject specialists indicated that these issues were especially important to their faculty, and a universal move to ebooks would render moot their knowledge of their faculty. One subject specialist indicated a concern that they would be pressured to switch from hand selecting to PDA, and as a result, force ebooks on disciplinary faculty who did not want them and damaging their influence in working with these faculty. "Well, I am feeling pressure. …I know these people and I know that they don't like ebooks."

Although PDA can be efficient, often allowing libraries to purchase ebooks in large packages at reduced prices, all the librarians in this study agreed that there was a place for individual selections. In general, the savings in time and costs do not extend to individual ebook purchases, which generally cost the same as or more than their print counterparts. Further, librarians' ability to choose an ebook depended on whether the publisher had an electronic version available. It is generally not cost-effective for publishers and vendors to make all materials available in electronic format—the work involved in digitizing older materials with little likelihood of additional sales is not worth it. Although they have faced setbacks, Google, in coordination with large research libraries, and the research library-led organization HathiTrust, have done much of the work of digitizing older materials already. Although these digitized collections offer another delivery mechanism for books libraries currently hold in print, despite the potential savings in space, ultimately, the cost to libraries and universities of the wholesale downsizing of print collections is considerable in terms of operations, time, and public relations. As one administrator said, "You don't just throw away millions of books." The deaccession process took time and required considerable communication with faculty. It might be a better choice to rely on print versions rather than duplicate spending on the same titles in an ebook format.

The format in which materials were offered determined how content could be delivered. As mentioned above, ebooks may be turned on instantly, rather than waiting days or weeks for a print item to be delivered from a publisher or vendor. Delivery has a tremendous influence on audio and video format, as institutions increasingly rely on streaming audio and video over hard copy video. This seeming ease of access of electronic formats is hampered by the reality of the market. Libraries are sometimes unable to provide content that faculty request when the distributor does not provide a purchasing or licensing model that a library can easily accommodate. For example, the distributor of a health resource intended for a hospital environment may not allow for a library purchase due to concerns that the library cannot easily control who has access to the resource. An independent composer who makes a musical recording available in mp3 format for individual download only may not have the resources to provide a copy for institutional use. When these types of materials were requested by faculty to support their research and teaching and the library was not able to accommodate them, the librarian’s ability to adequately serve their students and faculty was compromised.

Although they represented a minority of the materials acquired by libraries, in addition to books and journals, the libraries in this study purchased sheet music, plays, video, and audio. As they did with books and journals, librarians tended to rely on vendors to help them manage their collection development work, both through approval plans and through vendor- or publisher-created aggregated and streaming collections. These aggregated collections were particularly useful for audio and video materials, allowing subject specialists to provide basic support for the curriculum with just one subscription.

One subject specialist librarian was able to take advantage of freely available resources. Although they generally preferred a recognized source that was likely to be more stable, for some areas, materials simply were not available.

> …there are some free ones out there too that we like…some YouTubes thrown in there… I work with a…professor…and she will include YouTube links as well. That's the only place you can get what you need, then that works.

The environmental constraints posed by format and delivery were wide-ranging. They were important to the librarians in this study because, for many, the environment in recent years was vastly different from the environment they worked in for the majority of their careers. In conjunction with administrative constraints and resources constraints, particularly administrative decrees, funding, and space, some librarians felt forced to make CDA decisions in a certain way. They made electronic purchases when they believed print might better serve their users, or relied on a delivery mechanism, like PDA, that reduced their ability to be specific in developing their collection areas and serving their faculty. When they were unable to provide material, or provide it in a format that was most useful to their faculty and students, it lessened their ability to serve their constituency, and thereby lessened their power.

Summary of Environmental Constraints

Librarians at all levels were able to identify influences and constraints in their environment. Although they did not identify them as such, they were likely to acknowledge them as “just the way things are,” indicating an understanding of their inability to exert much control over some elements of their work. Influence was primarily perceived as pressure from people. Administrators function as part of librarians’ external environment and serve to provide and constrain the resources librarians at all levels had to carry out their CDA work.

Despite the pervasive influence of people, factors like funding, format, space, and time also played a large role, with funding as the primary driver. Each of these factors served to constrain the libraries and librarians in this study by constraining the resources available and the manner in which librarians were able to use these resources. Ultimately, the librarians in this study were required to work with the budgetary hand they were dealt, developing new strategies and adapting traditional strategies to ensure they were able to serve their constituency.

Defining Strategies

Although the environment provides resources and constrains an organization's courses of action, another primary tenet of RDT is that actors are not solely at the mercy of the environment. Rather, they may use a set of tools to mitigate the effects of the environment, or to choose what they will focus on to ensure the health of their organization. These tools include use of information, communication, relationships, and vendor- and publisher-created workflow management systems. I refer to these tools as strategies. I asked the librarian participants a series of questions designed to uncover the strategies they used to carry out their CDA work in an environment constrained by actors and resources. I describe and analyze these strategies below, first grouping them by category, then discussing the patterns evident in these strategies.

It is important to note that some elements of the environment—the actors, resources, and considerations that influence and constrain librarians—may also be strategies. Further, many of these strategies are part of traditional librarian practice and have not necessarily been created in response to the current environment. Rather, it is the way these librarians have modified their traditional strategies to accommodate resource stress and focus on use, variations in format, and the role of vendors and publishers that show the influence of the environment.

Strategy: Use of Information

Information-gathering—formal and informal. Librarians were very comfortable with information-gathering as a strategy in carrying out their CDA duties. Some of these efforts were formal, involving scheduled time to review websites, publications, social media feeds, and syllabi of faculty in their disciplinary areas. Others were informal and impromptu, such as information gathered through chance reading or in-person encounters. Several subject specialist librarians indicated they valued their status as faculty members, as this allowed them to gather information in the course of faculty meetings and events.

The reference desk was a service point in the library where librarians were able to gather information from students. Both libraries had recently reduced reference desk support, eliminating designated desk shifts for librarians. One subject specialist expressed regret about this because it limited their interactions with students, who sometimes offered additional insight on the types of materials that might be helpful for a particular course. Students might also shed light on courses and projects the librarian was not aware of from interactions with faculty and which needed collection support.

> …This is one of the reasons why I don't like that we've been taken off the desk—because working with students, not just in my areas, but in all the areas, you'd see what kinds of assignments were out there, what kinds of topics were in the courses. I remember when it came on my radar that somebody in history was teaching the history of food. … That sort of thing. And I'm really missing that contact because that did help me.

One subject specialist was less regretful because of their experience with the overall nature of the questions asked at the reference desk. They did miss the occasional opportunities student interactions provided to communicate with faculty.

> …The majority of the questions we were asked were about where the bathrooms were or how to print—I mean, they're not research questions. But when a student would come in and say I need to find a film from the 1940s to watch and write a paper on for my film class, and you start searching, and it's like "Well, we don't have a lot of films from the 1940s…" Okay, lightbulb! I better buy some more films from the 40s. …now the faculty in that particular department are a little better at letting me know what they're going to be

> teaching so that I can be prepared. … Faculty's happy and we go our merry ways…it's a combination of…there's advocacy, you're advocating really for the students, "Hey, we need to know what you need for your teaching and to help the students." You know, the video stores have disappeared and not everything's available on Netflix or Hulu.

Librarians also gathered information from sources not related to their faculty or students. These included social media, websites, review publications, and professional journals. Most of the librarians I interviewed indicated that although they valued these resources and wished they had more time to spend with them, they generally couldn't prioritize time for reading independently when they had other ways of gathering information on potential collection purchases, like talking directly with faculty or using sources available in the course of placing orders.

The librarians in this study engaged in formal information-gathering, like reading reviews, on their own time, when they could spare it. They appreciated chance in-person encounters. For some, this was due in part to their lack of opportunities to interact directly with students and faculty at the reference desk. Even though these desk interactions only provided access to a subset of their potential users, the structured nature of in-person contact at the reference desk provided some librarians with concrete opportunities to show their value.

Budgetary management. The budget for library materials at each institution served as a constraint—librarians indicated their budget never seemed to be enough, and the librarians' ability to secure resources was constrained by the amount of money allocated to the library as a whole by university administration, and by subject by library administration. This constraint lessened librarians' power in some cases, limiting their ability to serve their university communities. However, when librarians used information about the budget to maximize their spending, move money from one line to another, or negotiate for options to preserve unspent funding, it was also part of their strategy.

Each library employed a librarian at the administrative level to oversee collection development. This librarian was responsible for setting the overall collections budget in coordination with upper level library administration and worked individually with subject selection librarians to set budgets for disciplinary areas and negotiate amounts for new and existing needs. Library administrators in this study indicated they felt they were in a constant struggle with upper level administration to preserve their budgets. CDA administrators never knew exactly how much their serial and database resources would cost—they used an average inflation percentage to estimate. An analysis of each institution's published budget helped to confirm the financial stress under which librarians were working and served as a comparison with known inflation rates for library materials, particularly journal inflation. As public institutions, both libraries were able to share publicly available information about their general, acquisitions, and overall budgets for 2012-2017. Although detailed figures were not available, these overall figures served to confirm what librarians had indicated—funding for the libraries had remained relatively flat over the 2012-2017 period. These figures confirmed librarians' reports of declining budgets, resulting in the juggling of resources and cutting funds for monographic materials.

Although librarians at RIB indicated that the Provost had preserved funding for library acquisitions even when general library funding remained flat, the figures they provided showed that even the acquisitions budget remained mostly flat throughout the five-year period. When combined with an inflation rate that averaged 3-10% annually for journals, a flat budget translated to a cut in funding for library acquisitions. At RIA, the libraries enjoyed one relatively generous year, when they received an 8% increase in their overall budget, with the acquisitions budget seeing a 13.8% increase over the previous year. However, the library took a 1.5% cut in the following year, with the acquisitions budget returning to a 4% increase. Although this 4% increase was better than a flat budget, it left the library no wiggle room for a higher inflation rate. Library administrators indicated this up and down pattern was common. Combined with the volatile nature of journal price inflation, librarians used the information they had from previous budget cycles to develop a strategy for dealing with any budget situation, although this always required an element of risk. As one librarian remarked:

> …when you start in the new fiscal year you have that weird problem that nobody else I've ever dealt with has to deal with, which is that your periodicals are 90 percent or 85 percent of your budget or whatever, and you don't know what they're going to cost next year, so you have to create a budget based on your guess, based on inflation and what is the result of that. You could have a whole bunch of money left over at the end of the year, because you never want to guess low, so we guess six percent because that's what *Library Journal* said, but if you actually come through at four percent suddenly you've got two hundred thousand dollars, and the question—do you carry it forward, do you try to spend it on end of year things…people say you don't know what you're doing. But, how much worse would it be to say it was only three percent last year, and have it come in at six percent…now you're really incompetent! So, if you come up short and you have to ask people for more money…that's not how that works. …God only knows what it's going to cost, and it varies so much… We try to pinch pennies in a lot of ways, to be sensible… I cannot tell you at the beginning of the year what my budget's going to be. The vast majority of my purchases are subscriptions, not one time, and so I can't just say,

"Well, I have extra money, let's just get a bunch of subscriptions, because then the next year it could all be gone."

The particulars of managing a budget were new for most librarians. As one librarian remarked:

> I have no idea whether people who get a bachelor's degree in business could walk into a job like mine and know what to do, but they would know more about budgets than I do…did. I'm a lot better now.

However, most indicated they learned quickly, particularly from their peers. Librarians used their knowledge of their budgets for each subject area and their university's budget cycles as a source of information that helped them in carrying out their CDA duties. Librarians had a sense of how to make the most of the budget allocated to them, and how they needed to work with it throughout the year. Librarians used their funds differently at the beginning vs. the end of the year. As one librarian noted:

> We have the end of the year. We need to burn up all of the extra money, I might buy a lot more stuff. Or I'm more cautious because I'm at the beginning of the fiscal year…just spacing out the spending.

Although the unpredictability of inflation from year to year left librarians feeling vulnerable, their responses to the interview questions indicated that they had a deep understanding of the nature and costs of the scholarly publishing environment and used this information to develop a set of strategies to help them deal with the variations from year to year.

Data-driven decision-making. As noted earlier, libraries rely on data to help them demonstrate value and support funding requests. The librarians in this study sought to develop metrics to indicate their use of data to make decisions. Nearly all of the participants indicated their reliance on use information—counts of how many times an item was used. Prior to the widespread acceptance of electronic resources, this use was measured through circulation data—how many times a volume was checked out and/or renewed—and in-house use—how many times a volume was found on a table or shelving cart, indicating that it was likely used in some fashion. Now that most journals are used electronically, it is, in theory, easier to quantify use, with data available to the article level for many journal titles. However, librarians primarily rely on vendors and publishers to develop tools for measuring and reporting on use. This includes collecting statistics gathered and published by vendors and publishers or working with a vendor to purchase a third-party tool to record use independently. Recent developments in metrics include COUNTER (Counting Online Usage of Networked Electronic Resources), a standard for reporting use data, and SUSHI (Standardized Usage Statistics Harvesting Initiative), a protocol that allows publisher and vendor statistics reporting tools to communicate with a library's reporting system. Even though this data collection can be automated, it still requires a significant amount of work on the library's part to standardize this data and publish it in a format that is useful for those involved in decision-making. As one collection development manager reported:

> We spend a lot of time…gathering usage statistics so that we can make evidence-based decisions and not just decisions based on what we've always done or what someone says they want…it's an important part of the decision-making process to be able to use these statistics and…use them wisely.

Most of the librarians in this study expressed comfort with the inclusion of use statistics in decision-making and welcomed this additional information. In an environment where financial resources were constrained, this information on use allowed them some control over their purchases and gave them talking points to use when faced with a decision to cut one item in favor of another.

> I'm very data driven. And if something makes sense, if the data proves that something isn't being used…I don't want to keep it, unless there's some overriding reason or we need to market it more...

However, those librarians in the humanities fields indicated discomfort with this practice, and one indicated outright disdain, stating "in the humanities it's a completely different value system." Humanities librarians indicated they were often the losers when use took precedence or reliance on use data was a factor. However, quantifying the importance of materials in this way also flew in the face of what they saw as important—building a comprehensive collection based on a set of standards and policies and in communication with their faculty. Use did not indicate value to these librarians, and in some cases, negated the value of personal relationships and interactions that they believed had served them well throughout their career.

Data-driven decision-making had become a key strategy for the libraries in this study in managing their collection budgets. Librarians differed on their feelings about the use of data to influence or assist in making collection decisions. Of the librarians in this study, those with a science-related background expressed greater comfort with relying on data in making collection decisions. However, it was also true that the librarians who were responsible for humanities and traditional liberal arts in this study were more likely to feel the effects of cuts made through the use of data focused on use. In this study, librarians indicated that humanities and liberal arts materials often received lower use. Or, because many science- and health-related materials received such high use and also were higher-priced, humanities materials were more likely to be sacrificed, particularly funding for books.

As financial resources were constrained, librarians were unable to purchase items simply because they were considered to be important in a “good” library. The librarians in this study continued to engage in information-gathering strategies to enable them to make sound CDA decisions, but traditional strategies, such as reading reviews and interacting with students at the reference desk, took up less of their time. New strategies, particularly budget management and data-driven decision making, were favored by most of the librarians in this study. This reliance on data gave some subject specialist librarians a leg up over others, particularly those responsible for science- and health-related disciplines. Although many of the librarians in this study were comfortable with using data to make collection decisions and believed it was logical, for others, it weakened their ability to use their knowledge and relationships and gave them less power overall.

Strategy: Communication

Librarians relied heavily on communication with faculty and students in understanding their collection areas. This included directly talking with people when feasible, whether in planned interactions or informal meetings. One subject specialist librarian called themselves an introvert and talked about “going stealth” to learn information. This included what might seem like friendly or random conversation to the other party, but which the librarian was steering in order to gather information.

> It’s just remaining aware. And, it’s behind the scenes, too, I’m not going out to people and asking them all the time. … It’s casual conversations when I run into them…I see myself on an information seeking mission, gathering intelligence, promoting the library, finding out more about what’s going on. Absolutely an intelligence mission, intelligence gathering.

At other times, librarians' communication involved listening and observation. As one remarked, "I would rather step back and observe… one on one, you know, just very gradually…or very subtly find out information that I'm interested in." In other cases, librarians indicated regular patterns of communication with disciplinary faculty that spanned years.

> I am in contact with most or many members of faculty in my areas. And because my research is also in the same area, sometimes our paths cross at conferences, or sometimes we share a room when we go to conference presentations. … And I do get together for coffees, lunches, dinners...everyone likes to talk about their research, and I keep asking them about their research, and I know what they're doing—after all these years I know what they're doing… Talking with them plays a big role in my collection development decisions.

However, these communication efforts were not always returned by disciplinary faculty. One subject specialist related her experience in trying to engage faculty in the CDA process—she had hopes of working closely with them to develop a comprehensive needs analysis for her areas of responsibility. Faculty simply would not respond, even when the librarian communicated with faculty about cuts.

> When we did the serials review and I sent out "This is what I'm planning to cut," to my whole faculty, I got one person to respond. And so, I'm not holding my breath for them to come back and do an in-depth needs assessment with me. So it's really more of a one-on-one, you know, "Oh, hey, what are you working on? Oh are you doing case studies with that? Oh, did you know the library can blah blah blah," so it's really more conversational.

Librarians engaged in communication with faculty to ensure their CDA work was in line with the needs of those they served. Communication was both formal and informal and friendly conversations were often steered by librarians to help them get information to facilitate their CDA work. Since faculty might not return formal communication requesting faculty assistance in shaping the collection, the librarians in this study preferred informal communication with faculty. In an environment where resources were constrained and cuts were the norm, librarians used more frequent and informal communication of a positive nature to offset the effect of communication about cuts.

Advocacy. In the course of the interviews, subject specialist librarians referred to advocacy. I asked follow-up questions about advocacy, a specific communication tool in which librarians made a case, whether for funding or for another kind of support, for their discipline. As one librarian remarked, "…we're not necessarily told we have to advocate. But I think we all do." The subject specialists in the humanities were more likely to see advocacy as part of their role, and an activity they were duty-bound to engage in. For humanities librarians, advocacy included extensive explanations in library meetings to build support from colleagues, and in reports to faculty in their subject areas to make their value visible. One subject specialist librarian advertised this advocacy to faculty and graduate students in their areas as a benefit of having a librarian liaison, increasing their reputation with their constituency.

> That's how I see myself and that's how I sell myself to graduate students and faculty. I say, "I'm one of you. … I understand what you're doing. I understand why you think it's important... I get it. I will honor that for you." Even if it's not overt, it motivates me. … I even have it in my little blurb. My number one job for you guys as graduate students is to be your advocate and to be your ally.

Others understood advocacy was part of their role, an option they had, but they hadn't needed to use in their work so far. "Well, it comes down to new programs, eventually. I would need more funds here…that’s hypothetical for me, because I haven’t had to do it.” Still others simply saw it as making a good case in times of scarce resources.

> …we're having a bit of a budget…not crunch, but you know…we've got to be more careful with how we spend our money. So, I know if some major expensive thing comes up, I will have to really justify it.

Sometimes subject specialist librarians worked with a disciplinary faculty member to speak as the advocate. One in particular found this strategy to be successful in working with administrators.

> I've noticed our library here responds more positively and more quickly to a request from a faculty member than from an internal library employee. If I were to say “I want to get this resource, it’s awesome...” [shrugs] Then if someone were to say “I need this,” they're like “Yes, let’s figure this out,” which is good and bad. You learn to spin it. … This is for a class. This is a concrete need directly related to curriculum.

However, advocacy might also put a subject specialist at odds with their colleagues in library meetings. One subject specialist regretted feelings of confrontation with their peers when their opinion differed but felt it was their job to advocate for their faculty.

> Because of my areas, because of my field…I have to be constantly vigilant... Sometimes it sounds confrontational but so be it. It’s not personal. It’s my job. It’s written in my job description that I advocate. Sometimes people start rolling their eyes. That's my job. It’s my work. It is written in my job description. I advocate and I take it very seriously.

Although not every librarian in this study took part in advocacy-related communication, all realized that it was something they might have to do. Some indicated it was part of their job description, while others saw it as inherent in their work as a subject specialist.

Administrative communication. In talking with participants, it became clear that some communication was expected to come from librarians at particular levels. The subject specialist librarians saw themselves as colleagues with the faculty in their areas, and although they made faculty in their areas aware of cuts in budgets and other constraints on the amount of material they could purchase, they preferred that detailed communication on cuts or other changes they thought would be perceived as negative to come from library administrators, prior to their own interactions with faculty. Both librarians and librarian administrators saw these difficult conversations as setting policy on how library funding would be allocated, and not appropriate for subject specialists to engage in, even if they had wanted to.

> …the project gave us an opportunity to downsize duplicate titles across the state… That was a difficult message, and so that needed to come from library leadership. …this summer we're going to be cutting…our bound periodical collection in half, and so again that message needed to come from library leadership. …And then the librarians can fulfill their liaison role, but they don't have to be in a position where they're setting policy, they're just implementing policy. That's a challenge.

Many subject specialist participants in this study indicated relief that they did not have to initiate these conversations. Simply having to reiterate the fact that the library had made cuts was stressful enough. Relaying a cut in budget was a negative conversation, and whether they realized it consciously or not, indicated a loss in a subject specialist's power in serving their constituency.

Although subject specialist librarians acknowledged the role administrators play, and many indicated sympathy for the difficult conversations they knew library administrators must engage in, some felt frustration at absent or insufficient communication.

> …you need to keep the faculty informed. We did not do that. And then, the rumors were flying, "You're gonna throw out all the books..." It caused a flap to the point that the Dean ended up having a meeting with the chairs of the humanities departments, they were up in arms. It was like, "You need to let the faculty know what you're doing and why you're doing it." … You need to tell them, "Here's what we're doing. We are throwing some things out. Many things are going to the stacks. Some things are going into storage." You just need to let them know, especially in my field. You need to let them know. Believe me, 7,000…they might notice 7,000 books suddenly disappearing from the stacks. They might notice that.

Insufficient communication from library administrators put subject specialists at odds with their faculty, lessening their influence and infringing on their time. For some subject librarians, their administrators' ability to communicate with the University community was a direct constraint on their ability to serve their constituency.

Despite the expectation that library administrators engage in communication about policy, subject specialists could use their knowledge of their disciplinary areas to communicate with faculty in an effort to change an administrative decision. Two subject specialist librarians indicated a distinct understanding of their influence, relaying instances of reaching out to their faculty when they felt administrative decisions were not well-communicated. In the words of one librarian, "If there's any concern, or if I felt that something was being threatened, they'd be right here."

Overall, library administrators acknowledged subject specialist librarians' ability to provide essential information and indicated they communicated with subject specialist librarians regularly. As one remarked, “how one gets that kind of intel…what faculty need, is through the liaison program.” Another described their work in detail:

> I meet with each of them…what is going on with the curriculum of that department, that school, or college…? Have there been any changes, what do they need in terms of books, or journals, or databases? If suddenly you see that there’s a huge drop in their requests for books, what might be behind that? What’s going on in that department? So, I’m trying, as one of my major goals, to extract…the information I need to make good decisions about how our collections support research, teaching, and learning.

Administrators reserved the right to communicate about projects and initiatives that resulted in a change in policy, and subject specialist librarians expected administrators to do so. Administrators took the brunt of negative feedback for communications about budget cuts and reduced collections, making a way for subject specialist librarians to reach out to faculty with solutions and to put cuts in context. When administrative communication was missing or considered inadequate, subject specialist librarians indicated this created a hardship for them. Administrators indicated they relied on subject specialist librarians in setting overall policy and making allocations decisions.

Collection development policy (CDP). In the course of communicating about policy, libraries had the option of referring to their CDP. As discussed in the literature review, any collection development book or course is likely to include a lengthy discussion of the CDP. This policy is meant to guide the library and librarians in acquiring materials, whether through purchase or donation, and in all formats. Although policies may become quite detailed, including policies at the individual discipline level, most are general and meant to encompass a broad range of decisions. The CDP offered librarians a shortcut to lengthy communication about some areas of CDA.

Despite the core nature of the CDP, very few librarians mentioned their library's policy. One librarian did mention the CDP, but only to indicate that it was not a factor in their work.

> You know, the policy is the policy…it's just sort of there, and I don't even think I've ever read it. ...I've just learned more about how to do collection development from doing it and talking to people who already do it.

Despite the seeming absence of the CDP in the actual day-to-day work and decisions of the librarians in this study, a review of each library's policy showed the CDP laid some basic ground rules for the purchase and scope of library collections. Both policies included a rationale for developing a policy, details about selection priorities and responsibility and the roles of library and disciplinary faculty, the types of materials collected—and in some cases, not collected, and how the collection would be evaluated.

Both policies included guidelines for removing materials from the collection, known as deselection, and more commonly called weeding by librarians. Librarians weed for practical reasons, particularly when books are lost or damaged. In fields like medicine, unless the collection serves a research or historical purpose, it is possible for books to be so out-of-date as to be considered dangerous. However, librarians must also weed for other reasons, some of which may cause controversy. Most notably, these include weeding to free space in the library, to shape the collection, and to ensure currency. Library and disciplinary faculty may find themselves at odds in determining an item's worth to the collection. One subject specialist librarian described a faculty member in their discipline who told them "he got himself on the university library committee to save the books." Librarians' feelings on weeding were mixed. As the librarian quoted above went on to describe their interactions with the faculty member, they indicated sympathy with his views: “I mean, I share that value with him. It's a value. If you are not like a new librarian in your 20's, it's a value.”

Both policies established the library’s right to weed the collection, whether for deselection or moving some items into storage. RIA’s policy was specific in defending the library’s right to weed, specifically naming it as a responsibility of librarians, acknowledging that librarians might choose to consult with disciplinary faculty. As indicated above, libraries had taken heat for insufficient communication about collection decisions, particularly weeding and moving items to storage. However, the CDP might prove useful as a defense when disciplinary faculty, singly or as a body, felt communication was inadequate.

CDPs served as proactive communication, allowing a library to set the parameters for how and what they collected, including what they wouldn’t collect, and how they removed items from the collection. These policies served to formalize the library’s power as an independent unit and the library’s overall discretion in determining the content of the library’s collection.

Collection development committee. Each library held collection development meetings involving librarians responsible for collection development supplemented by librarians and staff from administration, acquisitions, and interlibrary loan (ILL). These committees were responsible for reviewing data and making decisions on large purchases that supported multiple disciplinary areas. These large-scale communication opportunities allowed all librarians to communicate with one another and make a case for keeping or increasing funds allocated directly to their areas. These meetings also offered an opportunity to discuss resources that benefitted multiple disciplines.

…when a big item comes up…I'll make a presentation for why we should have it, or maybe…contact the faculty. … So, that's how those decisions get made, no matter what the discipline is. The pricey things come to collection development. And so then we all discuss it, whoever is the liaison for that area makes the presentation about what it is we're discussing and then, you know, it's an up or down vote, do we get it or not. …and of course the science and the medical things cost the earth compared to say the other areas. … I mean, there'll be a little joke and a little snarking about how the sciences always cost more, but that's just… People still, if they understand why we think it's necessary... I've never had anything turned down.

However, another subject specialist had a different view.

I'm always fascinated in the collection development committee. We'll be talking about two databases. One database may be $15,000 for a humanities discipline and the other might be $50,000. We can spend more time on that $15,000 humanities whereas we will not bat an eye to renew a really pricey... It’s crazy to me. ... I found it baffling at times.

The collection development committee gave subject specialist librarians power in terms of making an individual case for resources and winning over their colleagues, as well as cover for relaying unpopular decisions to disciplinary faculty.

Summary. Communication, on both the small and large scale, had become increasingly important to the librarians in this study. Those librarians with more years of experience noted the frequency and types of their communication had changed over time. Until recently, librarians were more likely to communicate with faculty to tell them about library resources and to solicit feedback on library materials and services. More recently, librarians have had to communicate unpopular news, including news of budget cuts and deaccessioning materials from the collection.

Library administrators and subject specialist librarians relied on one another to ensure communication was handled at the proper level, but this also put librarians at odds with one another. Overall, administrators felt the current state of budget instability and competition for space campus-wide weakened the library's position within the community. In turn, subject specialists' felt their reputations with faculty in the disciplines they served were jeopardized when they were more likely to be communicating about cuts than new materials. However, subject specialists also had the opportunity to act as an advocate, potentially mitigating the negative news of budget cuts. For some of the subject specialist librarians in this study, proactively communicating about their work as an advocate, and using the information gleaned from faculty through this advocacy, allowed them to retain some of their leverage with faculty that they lost in buying power. Librarians' emphasis on demonstrating their value through advocacy and an ability to preserve funding for their disciplines was a reaction to an environment in which resources were constrained and power was defined by their ability to obtain resources.

Strategy: Relationships

Some librarians in the study talked of going beyond simply communicating to building relationships. A majority of the librarians talked of the importance of relationships, regardless of how deep these relationships were. Often, relationships were one-sided in terms of the librarian perceiving the relationship even if the faculty member did not. These one-sided relationships developed due to librarians' information-gathering practices. In cultivating relationships, librarians were primarily concerned with faculty, due in part to limited opportunities available to them to develop relationships with students. Librarians in this study used their educational background to build relationships with faculty if they shared a common education—one librarian considered their faculty to be friends and partners in writing and presenting and sought opportunities to publish in their original field of study. For some librarians, their background allowed them the opportunity to grow closer to faculty in their disciplines through their use of a shared language and understanding of resources. For others, it provided a rudimentary knowledge, or knowledge of process, if not in-depth knowledge, of a particular subject. Most of the librarians in this study felt their background and understanding of their discipline gave them influence in relating to their faculty, and respect from their students. Librarians indicated an understanding that students relied on their faculty to point them in the right direction in the library. One subject specialist librarian felt their experience as a graduate student helped them make connections to both students and faculty.

> I would say that just being a graduate student and just being in a really demanding graduate program that was constant really helps me. It’s one of the only experiences that I can point to that says I know the research that you're doing…I understand the rigor of the work. I think that's essential. It provides experience that you can't learn.

As discussed previously, library administrators indicated a reliance on relationships with subject specialist librarians in carrying out their budget responsibilities. Administrators understood that librarians possessed in-depth knowledge of the faculty in their areas, and they relied on these librarian-faculty relationships to make decisions and disseminate information to make faculty of aware of budget cuts or other issues the library was dealing with. Some of the subject specialists said that they had a strong relationship with their faculty, and this was a point of pride. It also gave them a tool with which to influence library administration, especially when faculty in their disciplines directly pushed back on cuts or other negative changes. This aspect could also be tricky when librarians needed to communicate about cuts but were concerned that this would limit their ability to work collegially with one another and with administrators. Overall, positive relationships between subject librarians and administrators were essential to getting things done, allowing librarians to rely on their personal power even when their buying power was compromised due to budget cuts.

Reliance on colleagues, coworkers, and administrators. Colleagues and coworkers were key partners with the librarians in this study. Each library was a collaborative enterprise, and this level of collaboration served both as a constraint and a source of power. The librarians in this study primarily agreed that their background and education were useful to them in some ways, but that it paled in comparison to the knowledge they gained on the job and from experienced peers. The participants in this study indicated an ability to do their work because of their colleagues and coworkers, empowering them by allowing them information to make decisions and engaging in work that freed up their time. Two librarians reported that they relied on their peers to cover areas of the collection that overlapped with theirs—they engaged in spot checks to do due diligence, but they knew they could rely on a colleague to help ensure coverage for their areas, whether because there was overlap, or they were new to a discipline and working with other liaisons to develop expertise. “I do my best, and I rely on my fabulous colleagues.”

Several participants expressed appreciation for the positive influence the work in other units had on their ability to do their work, with acquisitions staff receiving the most kudos. Knowing that these colleagues were working on other pieces of the resources puzzle gave librarians peace of mind in juggling all of their responsibilities. The librarians in this study focused on collection development—making decisions about what to purchase. The acquisitions staff they worked closely with were responsible for actually purchasing materials. Acquisitions staff work most closely with vendors and publishers, and subject specialist librarians indicated a strong reliance on their acquisitions coworkers' knowledge of how best to purchase something. Acquisitions staff also possessed a particular knowledge of the collection that subject librarians found helpful, including knowledge of earlier editions, duplicate purchases, and the reputation of publishers.

> …our acquisitions staff does a great job of liaisoning between the subject librarians and our vendors…and then, making sure when the vendors come that we have ample notice and we can set up appointments with them to discuss our approval plans and so forth.

Another librarian said of acquisitions staff:

> …they know everything. They're like the wizards of collection development. They're the ones that are always saying "You know, you requested this book but we actually have it in the older edition, do you really need the older edition?" …I try to check these things but I don't always. And so they are...I kind of defer to them unless I've got a specific faculty request that says "I want this."

Librarians also mentioned assistants who prepared use statistics and other collection reports, staff who worked with budgets, and ILL staff. The staff in these areas collected data, prepared reports and analyses, and secured materials on loan from other libraries. These functions were essential to both internal and external communication and ensured that the library collaborated with other libraries to meet the needs of its users.

Although subject specialist librarians had always worked closely with technical services librarians and staff, in an environment where time and financial resources were limited, these working relationships were essential. Of particular interest in this study was the librarians' reliance on the acquisitions staff's knowledge of the collection and their understanding of vendors and the formats and delivery models available for individual resources. This knowledge helped subject specialist librarians mitigate the environmental effects of constrained financial resources and helped them navigate new developments in format and delivery.

For subject specialist librarians, library administration was a key partner. Administrators, particularly the collection development librarian, determined the amount of money each librarian had to spend individually, as well as the amount of the budget spent on aggregated materials designed to serve multiple subject areas. Subject specialist librarians' ability to meet the needs of the disciplinary faculty they served strengthened their own power and reputation with their faculty and students. Library administrators also determined and enforced the policies that governed CDA practices and made decisions about the timeframe for CDA activities. Further, subject specialist librarians relied on library administration to work with university administration and engage in communication at the university level.

Subject specialist librarians often referred to library administrators, primarily the librarians responsible for leading collection development, as an actor who influenced their strategies. "The collection development director has an influence…reminding us constantly…make sure that you're getting what your faculty need." Library administrators have tremendous influence on subject specialist librarians due to their responsibility for setting budgets, determining priorities, and making policy. Similar to the conversations library administrators had with upper level administrators, subject specialists knew they had to take care to couch their requests in the language of their faculty and students. It was not enough for a resource to be important for a discipline. It needed to tie specifically to a faculty member or course. This constraint lessened subject specialist librarians' power in shaping the collections for their disciplines based on their own disciplinary knowledge or knowledge of individual faculty members.

Some subject specialists also expressed frustration with techniques prized by administrators, but which they felt were at odds with scholarly practice. Data-driven decision-making was considered both a blessing and curse, often depending on the educational background and the disciplinary responsibility of the librarian. However, most of the librarians in this study understood that librarian administrators were making decisions to ensure the overall health of the library.

Peers. Although peers and peer organizations did not receive mention throughout, library administrators spoke of the importance of being part of national and statewide efforts to advance libraries and collections. These efforts included large-scale organizations and efforts like SPARC—the Scholarly Publication and Resources Coalition—and the Center for Research Libraries (CRL), as well as local efforts such as MI-SPI, the Michigan Shared Print Initiative. Although this support wasn't always financial for the libraries in this study, given their inability to justify funding in the context of their overall budget instability, they could support the large research libraries who were funding these initiatives by participating in shared print collections, keeping accurate holdings in resources like OCLC Worldcat, and educating faculty on their campuses.

> …looking at the overall academic library community…how do we help to further and champion some of what we're trying to accomplish as a community of libraries? What is our role in the human record as a research institution?" …as one of the research universities in the state, what is our role in helping to support our large research libraries if they need to downsize? …we aren't in that ballgame…so our expectations are a bit different, but we do have a sizeable collection in the state.

Subject librarians were more likely to refer to peers in terms of gauging their own work in relation to holdings in actual and aspirational peer libraries, as they were able to observe using tools like OCLC Worldcat and MeLCat, the Michigan Electronic Library Catalog, and peer library groups in their vendor tool.

> I look and see how many other libraries have ordered it. "Well, if they ordered it," and if 50 libraries have ordered it, I look at it harder. If two libraries have ordered it or ten, I'm thinking, "It may be a little more esoteric than we need." So, I do look at the number of libraries that have ordered...to help me be a little bit more selective.

However, these mentions were rare. Subject specialists were more likely to indicate that they would like to check these resources, but they were unable to justify it given the other demands on their time.

The librarians in this study valued their collaborative work, and they relied on other libraries to help them provide the resources their users needed, whether through ILL or the creation of aforementioned entities like HathiTrust, a digital repository. To ensure they had access to collaborative partners, librarians worked at the macro- and micro-level to create and sustain partnerships that built their reputation with their peers.

Summary. The librarians in this study formed relationships with faculty and students to facilitate their CDA work. Although always a part of library work, in an environment where resources were scarce and cuts needed to be made each year, relationships helped sustain trust and ensured that difficult communication about cuts and other changes perceived as negative could be weighed in context. Relationships with colleagues and coworkers saved time for the librarians in this study and allowed them to maximize the financial resources available to them. Relationships with external library peers gave some librarians a sense of legitimacy when they compared their selections against those of peers. More often, these peers and colleagues provided materials on loan to supplement the libraries' collections and offered opportunities to engage in efforts to advance the work of preserving scholarly communication and making it accessible on a wider scale.

Strategy: Vendor and Publisher Tools

As mentioned above, vendors and publishers played a key role in CDA, particularly with monographs. Librarians had little time to spend in reading book and resource reviews and found that disciplinary faculty also had little time—although they did receive some requests from faculty, librarians made most selections. Vendor tools for monographs included reviews so that librarians didn't have to consult multiple sources when ordering, allowing them to rely almost solely on the vendor tool. This was more difficult for some disciplines, like music, or for audiovisual formats—librarians responsible for these formats indicated they sought vendors who could do something similar to what the book vendors did, such as including information at the point of selection and offering approval plans, but this wasn't always possible.

Vendors and publishers provided a wealth of information and tools that were useful to librarians, helping them choose the best resources for their disciplines and ensuring they were available and usable. Some of the librarians in this study indicated they placed a high value on information gathered from publishers and vendors, whether this was from online and print promotional materials, library visits, or conference interactions. However, as reported above, these interactions could quickly result in overload depending on the publisher or vendor representative. Although librarians valued publishers and vendors as partners, as noted earlier, they were cognizant that these actors' primary goal was to sell their products and increase their own revenues.

Representatives from vendors and publishers were also key relationships for librarians. Salespeople knew firsthand what a vendor would be coming out with, and whether one vendor would acquire another vendor and take over their collections. Meeting with these actors helped librarians learn what was new in their disciplines and what was available in the event they were selecting for a new discipline.

> …going to meetings…talking to the vendors and seeing what they have is very helpful. I try to attend the vendor meetings when we have them here, even if they're not exactly relevant to my field, to find out what's new.

Although vendors and publishers served to constrain librarians as a component of their environment—wielding power over the types of resources offered, the format they were offered in, and how much they cost—these actors also served as valuable partners for librarians. Librarians indicated that vendors helped them stay abreast of new resources in their disciplines and provided tools to help them use resources. Librarians' reliance on vendors and publishers was not new, but it had become more intense as resources were concentrated among a smaller number of vendors.

Vendors and publishers created tools to facilitate discovery and acquisition of materials for the library collection. These included reviews of materials, approval plans, and systems that allowed for both individual "shopping" and centralized purchasing of materials.

Reviews. Traditionally, the librarians in this study relied on reviews in published sources. For the librarians in this study, and academic librarians in general, ACRL's *Choice* magazine and the *Choice Reviews* database served as the most important resources for review. Librarians valued *Choice's* reviews, written primarily by subject specialist librarians, and including a ranking system to help librarians determine whether particular resources were a fit for their collections—essential, highly recommended, recommended, not recommended—often with an additional sentence indicating the type of library for which the reviewer recommended the resource. Subject specialist librarians indicated they might also go to the literature for a specific discipline to read reviews written by disciplinary experts.

Although one of the subject specialist librarians in this study indicated they spent significant time reading reviews, most spent little to no time reading reviews. When they did read reviews, they were usually in the context of the purchasing process. Vendors included reviews in the tools they provided to librarians to use to select titles for acquisition, saving them time in referring to multiple resources.

> We tend to rely on that, at least I do, for a lot of book decisions. I don't go out and look for other books, or if I do, I do it very rarely. I don't read reviews. I just don't have a lot of time to do that. So I just rely on my approval forms. But again if things aren't coming through there, I don't see them. So ideally I would love to be able to spend more time and go out and maybe just look at publishers and see what's new. But honestly, the vendor has a lot of it and I feel pretty confident they've got most of what I need. I had two situations this year where a faculty member emailed me, said, “I would like to buy this book,” and I could say I bought that book two months ago. Yay! I know what I'm doing.

Another subject specialist remarked:

> “I've worked with <vendor> for many years now, and they seem to have it down now. They monitor several…periodicals. I monitor a couple of them, but they watch all of them.”

Working with reviews allowed librarians to benchmark their collections with other libraries and added legitimacy to their purchasing decisions. In some cases, reading reviews helped librarians keep up with disciplinary faculty, who might be more aware of new resources that were directly related to their teaching and research. However, most of the librarians in this study indicated a lack of time to go to multiple sources to read reviews. Having these reviews available at the point of purchase, courtesy of their vendor partners, allowed them to retain contact with these resources in the context of their CDA workflow.

Approval plans. Without exception, the subject specialist librarians in this study used an approval plan of some sort, an agreement between a library and a vendor to automatically approve materials for purchase so long as they fit a disciplinary profile. Approval plans came into broad use along with computers in the 1960s, and as libraries found they had more funding for books than they had for librarians to select them (Flood, 1998). Vendors were able to help librarians speed up the purchasing process—getting books into the hands of library users more quickly—and offered discounts to libraries, along with other time-saving strategies, in conjunction with an approval plan (Flood, 1998). Most librarians in this study appreciated the ability to set a profile and leave it be for a long period of time, only making time at intervals throughout the year to review the profile and update it as necessary. “I don't actually do a whole lot of ordering outside of the approval plan. …I do review the approval plan periodically, and I'll spot check, but I've always been satisfied with my spot checking.” In some cases, when a subject specialist had worked with disciplinary faculty for many years, the accuracy of the approval plan cut down on the number of requests from faculty. With regard to requests from faculty, one subject specialist said of their approval plan “That hasn't happened for the last couple of years… The stuff they're looking for is in there.”

However, for those librarians whose collection areas included items other than monographs, or whose subject areas didn't neatly fit an approval plan's subject area, the approval plan created additional work.

> Most of the items I do add to the collection, although some... I don't think I've had a single shipment where I haven't sent anything back. Maybe one or two shipments, maybe, but it seems like I usually send things back because for whatever reason, they will include something that I don't want to have in here.

Depending on the material type or format, or the particularities of the discipline, a librarian might choose hand-selection over approval. All hand-selected titles to some extent, but the majority were comfortable with their approval plans. For the librarians in this study, use of an approval plan maximized their time and allowed them to get materials into their users' hands more quickly.

PDA. Most of the librarians in this study also appreciated the influence of PDA on their collection development practices and the time it gave them to focus on other duties. PDA—also known as demand-driven acquisition, or DDA, depending on the particular vendor a library works with—as described in the literature reviews, allowed librarians to select a range of unpurchased content to add to a library's catalog at no additional cost for the materials, and only charged the library when someone actually used the materials in a significant way, triggering a purchase. This method of acquisition was called PDA because the library users, also known as patrons in many libraries, were essentially making the actual purchase with no intervention from a librarian. As one librarian summed it up: “A lot of these decisions are already…well, I won't say they're already made, but the guidelines are set, so they just happen, more or less automatically.”

Administrators and collection development librarians at both libraries shared that PDA was a discussion item in policy meetings. They indicated it might make sense to make a decision to eliminate individual selection, but that it wasn't something they wanted to do at this time.

> …nobody is willing to make it all PDA...some librarians prefer to do the hand selection, it's near and dear to their heart, I get it. I've been there, done that. And yet in most cases, the user, they're not getting the whole universe, they're getting the universe of records that we think are applicable to our degrees, our programs. So if they consider it valuable and they use it and it results in the purchase of an ebook, or the purchase of a print book, that is just as valid as me in my office guessing that somebody might want this book. I think the love of collection selection at that level is hard to overcome, even though it would free up their time to do other things. There's that loss of something they love.

Similar to approval plans, PDA maximized librarians' time and sped up the acquisitions process. However, unlike hand selection and approval plans, PDA was meant to expand the range of materials added to a library's catalog, giving library users a broader sense of all of the materials available, rather than only those selected by librarians, and allowed library users to choose what was necessary. Despite PDA's widespread acceptance, the lack of mediation was uncomfortable for some librarians, and the model was at odds with some librarians' love for the role of selection in the CDA process.

The librarians in this study had been in partnership with vendors for a long time. Approval plans had been in use for years, and librarians indicated their plans continued to serve them well. Reviews, also a mainstay of CDA, were still considered important, but librarians indicated they were less likely to go outside of their vendor's acquisitions tool to use them and appreciated that vendors incorporated reviews in making selections for their approval plans.

PDA was a completely new method, developed to allow librarians to tie their purchases directly to use. At the same time, PDA offered libraries the opportunity to expand the breadth of materials that their users could see in the catalog. Although PDA had been in existence for over a decade and had proven itself effective enough that administrators felt comfortable discussing PDA as a reliable replacement for most individual selection, no one in this study was ready to rely on PDA as a primary CDA method. Some subject specialist librarians did not trust PDA, due in part to PDA's reliance on ebooks. This was particularly true for librarians who knew the faculty in their disciplines had not accepted the use of ebooks. Administrators observed that PDA held the potential to automate CDA processes and free up subject specialist librarians' time for other duties but understood that this was too much at odds with librarian culture to move forward at the time of this study.

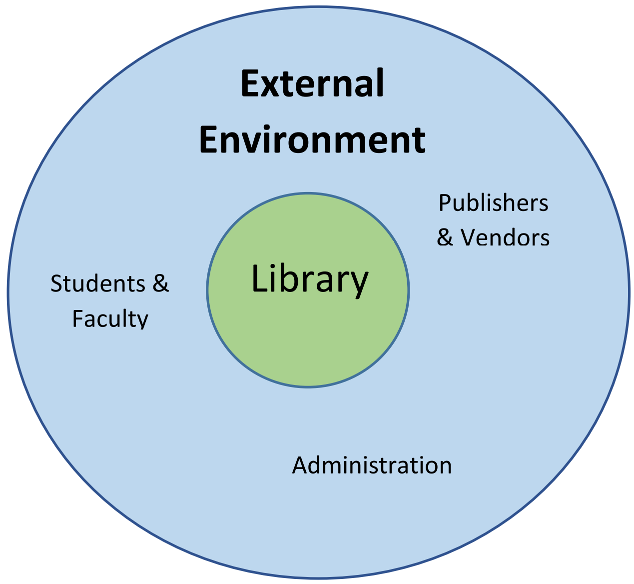
Summary of Strategies

Librarians at all levels were able to identify strategies they used to carry out their collection development duties within the constraints of their environment. Strategies included working with data and other sources of information, communication, building relationships, and working with vendors and publishers.

Interactions between Environment and Strategies

Using RDT as a conceptual framework, this study indicated a relationship between environmental influences and constraints and librarians' strategies at two public regional research institutions. Centering librarians at various levels of responsibility as the unit of analysis, librarians' answers to study questions illuminated an environment shaped and constrained by administrators, funding, vendors and publishers, and the community they served. Some of these constraints were external to the library—not external to the institution, as is typical in studies using RDT in higher education. The academic libraries in this study functioned as independent organizations within their universities, as shown in Figure 4.1.

Figure 4.1. The library and its external environment.



As the subject specialist librarians' responses indicated, they were aware that they were constrained by elements in their environment, whether they consciously considered this or not. This understanding did not stop subject specialist librarians from adapting, modifying, and developing strategies to live within these constraints—and to ensure the students and faculty they served had access to needed resources. In analyzing the data collected in this study, I observed that the majority of the librarians in this study indicated they were able to carry out their CDA work in a manner that was in accord with their professional ethics and practices. This majority expressed comfort in working with vendors, budgets, and administrators—despite the constraints these actors and resources placed on them, most subject specialist librarians understood that these constraints were outside of their control. Despite the need for librarians to work closely with vendors and publishers—companies that rely on the work scholars do for free or as part of their salaried work to make a profit—librarians understood they must maintain these vendor and publisher relationships in order to provide the best content and service to the students and faculty they served. Although the findings of this study indicate that librarians coopted publishers and contributed to academic capitalism by facilitating the entry of for-profit companies into the academy, most of the librarians in this study were unaware of this. Although the collection development librarians in this study took a more cynical view of vendors and publishers due to their close interactions with these actors, as a whole the librarians in this study simply sought to provide the best service and resources possible and understood that vendors and publishers were partners.

In a small number of cases, subject specialist librarians resisted changes in CDA practices brought on by environmental constraints. Occasionally, these resistant subject specialist librarians laid the blame for the constrained environment at the feet of library administrators, particularly when subject specialist librarians felt communication from library administrators was nonexistent or inadequate. Subject specialist librarians rarely laid the blame with vendors and publishers. In most cases, subject specialist librarians who were resistant to changes brought on by constraints in the environment were simply distressed and angry, finding themselves unable to do their jobs in the way they felt was best. Subject specialist librarians worried that they would jeopardize the relationships they had built with disciplinary faculty through years of communication and support.

Although none of the librarians in this study indicated a willingness to abandon their ethics and practices in favor of closer ties to vendors and publishers, this study offered some evidence that librarians knew that opportunities to turn CDA over to vendors and publishers existed and might appear to be a good option in an environment where time, space, and resources were limited. In the current higher education environment, value was determined in large part by return on investment and measurable student outcomes. This change in value caused some administrators to wonder about the future of the academic library. They were keenly aware that many students were able to be successful without using the library or its resources. As one observed of students:

> …they seem very often to be able to have successful undergraduate careers without interacting with us at all. And, it's one thing to say that and then acknowledge that these are successful students, not just the sort of C student who's getting by. If that's true, then you have to ask "What is your relationship to these students? Why do you exist?"

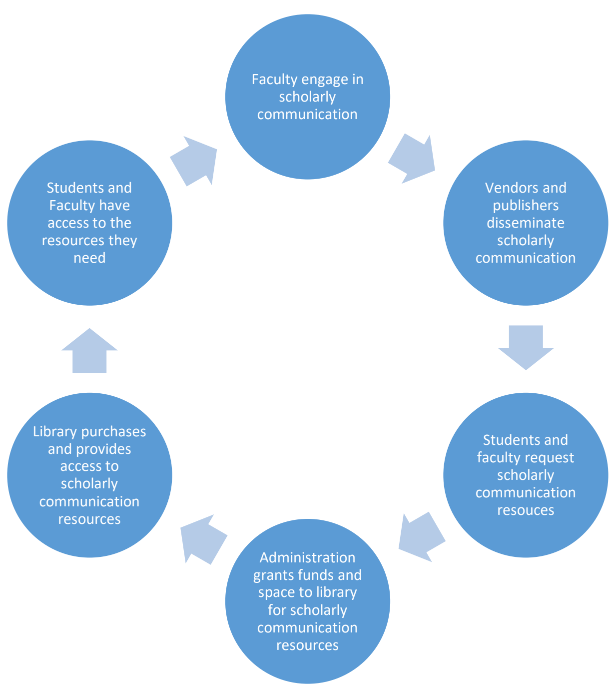
As administrators noted, vendors and publishers might welcome the opportunity to dispense with the library as a middle man. In this scenario, vendors and publishers would work directly with the university, handling contracting and purchasing through centralized procurement and budget processes and working with IT to provide access. However, as one administrator noted, the need remains for a trusted third party, people who understand content, and most importantly, service.

> We have to excel at the service delivery and that is just as much the person on the website having a good experience on the website, getting what they need without barriers, as it is when they talk to us electronically or in person or navigate our buildings. Service is what's going to keep our library going. I always said my worst fear about the academic library is the university is just going to have a closet where there's some servers and they're going to pay some bills and that's the library. I hope it doesn't come to that. …IT's about infrastructure, not about content. Business Services is about paying things, not about the content of what it is they're buying. … Do you want them managing the library?

One librarian also wondered about the library's role as keeper of culture, a role that they perceived to be unique to the library, and a strategy for ensuring continued relevance. "…the IT guys, they're…more interested in the here and now, but somebody's got to think about the longer term, how this is going to be managed and organized…"

As librarians grappled with the changes in their work and the concern that librarians might one day be deemed irrelevant or superfluous, the quotes above indicated librarians' attempt to identify what exactly it was that made a library necessary to the University. The librarians in this study understood that they did what was best for students and faculty by working with vendors and publishers, creating efficient processes, and using technology to increase the quantity, accessibility, and usability of materials. As shown in Figure 4.2, the findings of this study indicated that academic libraries were just one element in a cycle of scholarly communication that also included students, faculty, administration, and vendors and publishers. Ideally, these elements work in concert with one another.

Figure 4.2. The institutional scholarly communication cycle in balance.



The findings of this study indicated that fluctuating or flat budgets, in concert with rising journal inflation, strained library administrators' relationships with subject specialist librarians, university administrators, faculty, and budget managers. A constrained budget decreased the amount and diversity of material librarians could purchase, weakening their role in the university community. As the libraries' ability to serve their constituents at the level they required was compromised, librarians felt a loss of the power and favor granted to them by their ability to provide valued resources. The librarians in this study indicated a lack of balance between these elements due to inflation in the cost of materials. Although librarians adjusted their strategies to contend with inflation, the funds allocated to purchase library materials remained relatively static from year to year. As a result, most librarians in this study found that they were able to buy fewer materials with the funds allocated to them. The librarian administrators in this study saw no end in sight to this situation.

Summary

This study indicated that RDT was a useful framework for studying CDA practices in two regional public academic libraries. Although the librarians' environment was constrained by administrators, funding, and time, they were able to use traditional and newly developed strategies to ensure they continued to provide appropriate resources to the students and faculty they served. Funding served as the primary constraint faced by librarians—as journal inflation rose and budgets were cut or remained flat, the amount of materials librarians were able to purchase declined. However, they were able to use their relationships with one another and with the faculty they served to stretch their funding as far as they could. Vendors and publishers, although a part of the librarians' environment and a driver of the journal price inflation that limited their budgets, also served as resources and partners for librarians in ensuring content was available to library users.

The librarians' environment and the strategies they employed served to shape their CDA practices. Although the librarians' mission to provide access to important content remained constant, this study indicated that the libraries' CDA practices were different than they were in the early 2000s. Although curated approval plans were still important, package deals, PDA, and data-driven decisions had edged out title-by-title selection guided by librarians' knowledge of disciplinary norms and markers of excellence. Whether librarians personally favored automated methods for CDA and data-driven decisions over thoughtful hand selection or not, this study indicated the combined environmental constraints of time and budget were driving these changes. Although both librarians and library administrators planned for a role for subject specialists for the immediate future, library administrators understood that decreasing resources and newer purchasing models such as journal packages and PDA offered alternatives that would provide more data and free subject specialist librarians' time for other work. Regardless of changing CDA practices, librarians maintained their commitment to providing excellent service and preserving culture, key library values—and perhaps, the key to ensuring their continued survival and relevance.

CHAPTER 5: DISCUSSION AND CONCLUSIONS

With this study, I sought to explore the following primary research question and sub-questions:

> How do environmental conditions and academic librarians' strategies interact in shaping collection development and acquisitions practices?
>
> 1. What are the environmental influences librarians perceive in the course of carrying out their collection development and acquisitions duties?
> 2. What strategies do individual librarians develop to carry out their collection development and acquisitions responsibilities in light of environmental constraints?

Environmental Influence

Librarians perceived environmental influence as "just the way things are." Influences included funding, curriculum, faculty, students, administrators, and vendors and publishers and the formats they make available. These influences constrained librarians' practices, determining everything from what they chose to purchase for the collections to how they purchased it. Librarians' identification of environmental constraints indicated that the library functioned as a separate organization within its institution.

Librarians' Strategies

Despite the influence of the environment, librarians employed a variety of strategies to manage environmental constraints. Although many of the strategies identified in this study may also be considered just what librarians do, librarians had to hone their traditional strategies to ensure they purchased only those materials that data indicated were most likely to be used. Information gathering through communication was a primary strategy, including communication with students and faculty, meetings with administrators, advocating for resources, and working with library colleagues and coworkers. Other types of information gathering included reading reviews, websites, syllabi, and social media sites for information about materials and internal budget data and use data to determine how best to spend the funds allocated to them. This information-gathering helped librarians justify their choices given the uncertainty and scarcity of resources.

Most subject specialist librarians relied on their educational background to some extent. Most indicated their librarian training was good background, but much of what they learned was on the job and from colleagues. A few used their background to help them develop and foster relationships with disciplinary faculty, but most admitted that although having a background in a particular discipline helped them in speaking the language, most relied on the disciplinary faculty they worked with as the subject experts. This disciplinary knowledge, and more importantly, the opportunities it gave them to connect with disciplinary faculty, helped them to make a case for resources for their faculty and discipline. Some librarians indicated they were less valued by library administrators for their subject expertise, as it was no longer possible in most cases to acquire materials simply because they were disciplinary staples.

Two resources named as influences were also useful as strategies for librarians—budget and vendors and publishers. Even though the budget constrained subject specialist librarians in terms of the overall funding they had, budgetary management became a strategy, allowing librarians to determine how they spent funds throughout the year, and to use allocated funds as a negotiating tool to achieve other goals. Vendors and publishers influenced CDA decisions due to the content they provided, the format in which content was delivered, and how much content cost, but vendors and publishers also created tools—including resource reviews in purchasing tools and offering approval plans and PDA—that saved time for librarians and helped them ensure as much content was available as possible, both quickly and within budget.

Interaction between Environment and Strategies

Overall, I asked the question "How does the environment and librarians' strategies interact in shaping collection development practices in the academic library?" I chose this question in keeping with the tenets of RDT, which indicate that the environment influences and constrains courses of action, but actors within the environment may develop strategies to counteract the environment. This study bore out these theoretical tenets. Librarians were constrained by the budget available to them and the cost of the materials they had to purchase using that budget, the needs of the curriculum and students and faculty, and decisions made by administrators. However, they carried out their CDA duties despite these constraints, developing new strategies or adapting others, including gathering information, communicating, strategically using the funds allotted to them, working with their colleagues, and working with vendors and publishers to ensure they continued to develop and manage their assigned collections.

One notable exception—the literature review and the results of this study indicate that libraries and librarians have been unsuccessful in influencing vendors and publishers with regard to pricing. Collection development librarians indicated they saw no end in sight to the current pricing structure and worried that it would soon become—if it were not already—unsustainable. Continual increases in pricing made it difficult for librarians to carry out their CDA work and limited the libraries' ability to prioritize budgetary investments in space, service, and personnel. Although librarians and others involved in the scholarly communication ecosystem continue to discuss the costs of disseminating scientific research, for-profit publishers hold a majority of the power, and the discussion of how to pay for scholarly research is being driven by markets.

Librarians worked to maintain their culture—that of the library, and often, that of the discipline they were responsible for supporting. Even though most found the tools they had learned in library school and the library's collection development policy of little practical use, they still acknowledged these documents and believed they were important. Although they realized that it was no longer feasible to purchase everything simply because "a good library must have this," they still did everything they could to ensure they were as close possible to meeting that library ideal. This is also in keeping with the tenets of RDT. Librarians used these strategies to maintain equilibrium. Despite the influence of the environment, the librarians in this study held fast to their values and tools, and in turn, had a baseline for working with each other based on a shared history and values. These values included service to students and faculty, an understanding of scholarly communication and content, and preservation of knowledge and culture. How librarians in different roles enacted these values sometimes put them odds with one another, however. This study focused on using RDT to study the interaction between the library and its external environment, particularly with regard to funding priorities (Cantwell & Taylor, 2015; Taylor, Cantwell, & Slaughter, 2013). However, as noted by Davis and Cobb (2010, p. 38), RDT "still yields great insight into organizational behavior" by diagnosing underlying power structures. The results of this study indicated that underlying power structures were in place throughout the library as an individual unit. A strategy used by an administrator also served to constrain a subject specialist librarian, and vice versa. This micro-level manifestation of the tenets of RDT (Hillman et al., 2009) was outside of the scope of this study but is important to note.

In addition to maintaining library culture, the librarians in this study indicated—both directly and indirectly—that they were working to preserve the culture of the academy. In the culture of the academy, the library serves as the heart of the campus, the central repository of knowledge around which all other disciplines might grow and prosper. The librarians' responses in this study suggest that the students and faculty they served still considered the library of central importance.

Potential Explanations beyond RDT

On its own, RDT does not explain librarians' desire to hold on to their culture. Reviewing the literature, theories regarding the role of culture, agency, and institutionalization in library practice should be used in additional studies. As observed by Gumport (2000), those in academia are more likely to accept changes they see as legitimate rather than efficient. Legitimacy is achieved through shared history and values. As evidenced by this study, in some cases, efficiency was roundly panned when it was at odds with a discipline's culture—this was clear in some librarians' disdain for data-driven decision making.

Social constructivism may be of use in furthering research in this area (Neumann, 1995). Have librarians allowed themselves to be constrained by resource stress for their own purposes? As indicated by some librarians' responses in this study, despite declining resources, no end was in sight for the process of promotion and tenure, and this resulted in an unending rise in inflation costs for scholarly publications. Many participants believed that upper level administrators had little understanding of the reality facing libraries with regard to rising journal costs. How much of this is of librarians' own making? How much have librarians sought to live within the means allotted to them to the detriment of their overall enterprise? This concern was evident in some of the participants' interviews, particularly those of library administrators whose work hinged on being a good partner with the university as a whole—potentially causing them to avoid discussions that favored the library over other units. Some library administrators indicated fear that they could be deemed incompetent and poor budget managers.

Communication between librarians and disciplinary faculty emerged as a key strategy for combatting potential cuts to disciplinary budgets in this study. Subject specialists engaged in many forms of communication—although they found individual meetings hard to schedule, librarians made use of email, department meetings, gathering information about faculty and their research from other sources, and informal encounters to help them in their CDA practice. Library administrators acknowledged the importance of subject specialist librarians' knowledge in making decisions and communicating with faculty. A small number of subject specialists in this study expressed concern about a lack of communication from library administrators. However, practically, subject specialists could play a larger role in communication. Although library administrators were comfortable with their role in communicating about policy, they seemed less willing to ask subject specialist librarians directly for assistance in furthering conversations about resource stress. Once the announcement of cuts had been made, subject specialists had the opportunity to build bridges between the ideals of the discipline and its interaction with library reality. Some subject specialists indicated they felt comfortable empathizing with disciplinary faculty, saying "I hate that we've been cut." Not many subject specialists indicated they did or would be willing to continue the discussion by saying "Let me put this in context for you—I don't make these decisions, but I can talk with our administrators, who will appreciate your perspective, even if they cannot do what you wish." Again, librarians in this study indicated they perceived that university administration did not understand the constraints placed on libraries by vendors and publishers, and that vendors and publishers *can* place these constraints because of the way faculty are hired, promoted, and granted tenure. No librarians indicated that they perceived that faculty had an understanding of the library's intersection with promotion and tenure—although one mentioned that faculty could be an ally when they realized how much a particular resource cost. Although no librarians in this study mentioned discussion of OA, librarians have an opportunity to promote OA in scholarly communication. However, the literature indicates these conversations often fail to address the very real need of faculty to meet publication standards to achieve promotion and tenure. What role can subject specialist librarians play in furthering this conversation from the bottom up? What information do subject specialist librarians need to ensure they can engage faculty where they are?

The participants' responses indicate a tension between the theoretical state of the art in information management vs. the practical preservation of a cultural institution. In general, current thought on library practice believes preserving books is a worthy cause, but this is well behind the curve of what is possible with regard to access to and understanding how to use information. However, as one librarian indicated, to consider book preservation simply about the books themselves misses the point. For some librarians and faculty, preserving materials is a cultural value. A library does not just provide information, it carefully curates and preserves it.

The library literature includes opinions and concerns about the state of graduate library and information education and its role in preparing librarians in different areas of specialization (Bailey, 2010; Chawner & Oliver, 2016; Mitchell & Morton, 1992; Mullins, 2012; Swigger, 2010). Although coursework includes both practical and theoretical elements, most of the librarians in this study indicated the practical aspects of their work were so bound to their individual libraries that they—and most of their colleagues—emerged from school needing significant training and acculturation. Further, because the master's degree is generally considered the terminal degree for librarians, most librarians are unable to develop their specialty—of which academic, public, school, and special are the broad categories—in the way that a faculty member in another discipline might. Academic librarians receive little training in how to be faculty (Bailey, 2010; Mitchell & Morton, 1992), whether in graduate school or on the job. Given that the practical nature of library work is generally thought not to necessitate a PhD, is it possible to better incorporate apprenticeship for those interested in academic librarianship? Although the Association of College and Research Libraries (ACRL) is a staunch advocate of faculty status for librarians, faculty status is by no means the standard across academic institutions, and little has been written or studied on the socialization of librarians, particularly those who are ranked as faculty. This is an area for further study.

Summary

This study furthered our knowledge of the library as a specific unit within an academic institution, and the role of collection development and acquisitions within the library. In reviewing the literature and recording the voices of academic librarians, this study furthered the documentation of changes that libraries have undergone since the advent of the internet. Highlighting the library's role as a network between the academy and the market illustrates libraries' connection to the rise of academic capitalism.

In particular, for the libraries involved, this study confirmed that budget trumps policy, subject expertise, and curriculum in terms of materials acquired. Although librarians in the study tended to use a standard set of tools to do their work, each discipline brought with it a certain set of constraints and responsibilities. Although top-down approaches to live within a budget might improve efficiency, library administrators generally considered this approach to be a bad idea, whether because it was at odds with library culture, would aggravate some key subject specialists, or would result in a loss of flexibility.

With regard to how change happens in higher education, this study confirmed that the environment, specifically budget, did force change in how the participating libraries' collections were developed and managed. Rather than decisions solely made by librarians based on their knowledge of scholarly publication, their relationships with disciplinary faculty, and the needs of their institution, external actors—including university administrators, faculty, students, and vendors and publishers—influenced librarians' decisions.

The librarian participants in this study were clearly aware of environmental constraints on some level, and had developed strategies to push against these constraints, or at least, live within them—particularly communication, whether this was communication with faculty, communication with administrators, communication with vendors and publishers, advocating for resources, or working in library teams. Although the study confirmed the influence of the environment, the interviews showed that culture played nearly as large a role. Despite the ability to eliminate most individual purchasing by subject specialists through the use of Big Deals, PDA, and approval plans, no administrators had yet seriously considered eliminating individual selections by subject specialists. Further, RIAL did away with some big deals to regain flexibility, returning some decision-making power to librarians and the faculty they work with.

The results of this study indicate that a single institutional unit may be required to respond to changes in the external environment without the understanding of the institution as a whole. Despite their desire to preserve institutional culture, the actors in individual units may adapt to change in ways that are at odds with the culture and practices of the institution overall. The librarians in this study understood that the faculty they worked with were not pleased with cuts to the library budget. The librarians also believed that administrators were not aware of the effects budget cuts had on the library's overall function. However, the librarians' experiences suggested that neither faculty nor administrators were interested in working with librarians to make decisions about the collection. This reality made it difficult for librarians to gain a deeper understanding of the significance of the collection university-wide.

In studies of higher education using RDT, the external environment is generally considered to be those elements that are outside of the institution. In this study, the library emerged as the organization, with university administration serving as an element of the external environment. This suggests that RDT may be useful in studying how individual units within a higher education institution experience and adapt to change, and function as individual organizations within a larger organization. Further, RDT may help identify how elements within the university but outside the unit under study function as part of the unit's external environment. Although the nature of interdependencies between different types of library workers within the library created by differences in role responsibilities and function were outside the scope of this study, as noted in the findings, I did observe these interdependencies, confirming the call for using RDT to study micro-level interdependencies (Hillman et al., 2009).

Implications for Practice and Research

Higher education. Librarians at all levels in this study perceived that upper level administrators had little understanding of the academic library, particularly the realities of large legacy print collections and the power that vendors and publishers had in the online environment. Further research is needed to determine whether upper level administrators do understand the scholarly publication environment and the library's role in it. Although librarians know how journal inflation is affecting the library's budget, little discussion exists of the impact of this inflation on an institution's overall budget.

This study, in context with the literature review, indicated that the work librarians do to make scholarly communication available and the conversation about how faculty are hired, promoted, and given tenure are not connected. The former appeared to be simply seen as a budget and access issue. So long as publication requirements for tenure and promotion remain as they are, publishers will have little impetus to change their pricing models. When libraries cannot afford high-quality information resources to support teaching and research, students' and faculty access to information resources is compromised. Although faculty often have other resources they can draw on for information resources, students generally do not. This compromises the work students are able to do.

Library and other higher education administrators must engage in conversation about the impact of scholarly communication inflation on the overall budget. If journal and database inflation is relatively small in relation to the overall budget, upper level administrators should reflect this in the library's budget, allowing for increases that give librarians the opportunity to focus on the needs of faculty and the curriculum and use their expertise to determine what is purchased for the collection. This study indicated librarians are driven to make decisions to fit a relatively static budget from year to year, cutting budgets for some disciplines at the expense of others. Rather than using their expertise to guide students to the best resources, they serve as a network for for-profit publishers and vendors to ensure their content is available to students and faculty, with the highest use materials getting the largest share of the budget.

The tenure and promotion system gives vendors and publishers all the impetus they need to continue to increase content prices. As long as publication in a top tier journal is the standard for promotion and tenure decisions, these top tier journals will remain without competition, and publishers will be able to continue to drive prices upward. Current solutions under discussion do little to address this inflation, and only move the costs from the library to the university or to scholars. Further, with some exceptions, discussions of the scholarly communication environment and its problems are primarily happening in the library world only. Including faculty and administrators should broaden the conversation to include a holistic view of the scholarly communication environment, one that expands the discussion beyond budgets and vendor and publisher constraints, the elements that drive the conversation in library circles. Although some academic libraries are able to raise funds for buildings, programming, and other projects, most libraries rely on institutional administration for funding for their collections and other operations. Although it may seem that libraries are missing the bigger picture by focusing on budgets and vendors and publisher constraints, libraries could not do their work without funding granted by administration and materials created and distributed by authors, vendors, and publishers. So long as libraries must engage in battle every year to stretch a declining budget across ever-inflating materials, they are likely to have little time to engage others in the conversation.

Although this study focused on the library collection, participants' answers hinted at the broad roles librarians and libraries played on their campuses. The opportunity exists for others in higher education to engage in conversations about the role of libraries and librarians as the move to digital collections creates new spaces in libraries. In addition, as some information is democratized, libraries and librarians have been able to shift their focus away from providing basic information and answering simple questions to in-depth partnerships in learning, teaching, and research. Additional research and discussion outside of the library world is needed to determine whether libraries and librarians might expand their roles on their campuses. The librarians in this study were acutely aware of the importance of serving their students and faculty. In most cases, they developed their awareness of students and faculty needs through indirect conversations, information-gathering, observing students and faculty at work in the library, and studying collection use data rather than direct interactions. Administrators may see this distance as a limiting factor in the impact librarians have on students and faculty. However, this distance also allowed librarians to think holistically and critically about the needs of students and faculty and how best to meet them, a perspective that may be lost in direct personal interactions between students, faculty, and others in the institution.

The findings of this study indicated that the libraries perceived themselves as an organization within the organization. Additional research is needed to determine whether this is true of libraries at other types of academic institutions, and other units within higher education institutions.

Libraries. This study highlighted the often-heard need for better communication at all levels—between librarians and administrators, between librarians and faculty, and between library administrators and subject specialist librarians. As this study illustrated, whether intended or not, decisions made by those in different roles throughout the library served to constrain another library worker's options for carrying out their work. All library workers with a budgetary role would benefit from regular communication to help put the library's budget and cuts in context. Subject specialist librarians have the potential to facilitate conversations with faculty due to their knowledge of the faculty in their disciplines, but this study indicated that subject specialist librarians feel this is outside the scope of their work. Library administrators should be clear in indicating communication for policy vs. communication for understanding. Subject specialists and library administrators should discuss each actor's role in budget discussions and develop a communication plan.

I recommend that library administrators use collaborative and adaptive leadership strategies to help subject specialists rethink their role in communication (Chrislip & Larson, 1994; Heifetz, 1994). The authors of these leadership philosophies encourage leaders to take advantage of individual expertise, provide information, and give everyone involved in a changing environment a role in making decisions that will impact their future. Library administrators must be straightforward with subject specialists that budgets trump other issues in collection development decisions. Ultimately, library administrators will be expected to make a final decision that strikes the best balance between needs, funding, and reality.

Library administrators may wish to rethink the subject specialist's role in collection development, taking a centralized approach to collection development. This could allow these librarians to spend their time on outreach and research assistance rather than trying to manage a shrinking budget that seems to buy fewer resources each year. The results of this study indicate that library administrators are discussing a centralized approach that relies heavily on PDA but are hesitant due in part to the preferences of subject specialists. This study did not delve into the faculty responsibilities of subject specialists, but it may be difficult for administrators to change subject specialists' duties depending on how faculty work is defined in librarian contracts. Individual respondents indicated differences in how subject specialists might respond to such a change. Although some participants in this study indicated a feeling that age and time in the profession played a role in a librarian's preference for individual selection over collective purchasing, factors such as disciplinary background, respect for the role of data, the extent to which librarians engaged in continuing education, and the closeness a librarian felt to the library vs. their disciplinary faculty played a role.

More research is needed on the relationship between librarians and vendors and publishers, and the role of vendors and publishers in library collections. As the state of the publishing industry documented in the literature and this study indicate, beating up on these actors over pricing has not and is not likely to work. If librarians were able to focus less on price negotiation, they might have more time to work with vendors and publishers on issues of format and delivery. Librarians might be able to work with vendors and publishers to create new outlets for disseminating the ever-growing volume of scholarly communication. Vendors and publishers provide a wealth of tools that make it easier for librarians to do their work, and they are trusted partners for university faculty and their scholarly societies. As the guiding principles of the Charleston Conference indicate, great potential exists in libraries working together with vendors and publishers for the good of their users.

Library administrators should consider the limits of data-driven decision making. Although data has been useful to a point, as budgets continue to shrink, this study indicates libraries are now cutting materials in ways that have a real impact on how faculty and students in some disciplines do their work. Utility aside, people have an emotional attachment to libraries. As one administrator observed, even when people aren't using the collections, they want them. Faculty want that big collection of books they can walk through and browse and serendipitously find just the perfect one to complete their work. Students want every article they might need at a moment's notice available to them whenever they want it and at no additional cost. Data are important, but they can't tell the whole story. Although a number of quantitative studies (Oakleaf, 2015) exist that tie library use to student achievement, little in the way of qualitative measures have been studied.

This study brought to light other librarian concerns that would benefit from further study. Although it was not the focus of the study, some of the librarians in this study expressed frustration with their role in the academy. Although the librarians in this study were classified as faculty, their role was different from their disciplinary peers. Service is a central tenet of librarianship, and several indicated they regularly reflected on how to focus on service without the assumption of subservience. Librarians saw themselves as partners, not servants, regardless of the service they were providing. The librarians in this study were experts in disciplinary content and in knowing what was available from which vendor or publisher and how to work with these actors. In addition, these librarians had functional expertise in using library resources in all formats. As some librarians in this study indicated, they worry that in an environment in which resources are shrinking, they will find themselves left behind as others take up the functional pieces of their work, leaving content and preservation in the dust.

This study also indicated that library space is in need of further study. Space served as a constraint in terms of how much a librarian might buy if funds were no object, or choosing an electronic resource over a print resource to preserve shelf space, even when the librarian thought students and faculty might prefer the print version. Librarians in this study indicated that students are looking to make connections that help them make sense of and contribute to real world issues. As stewards of library space, librarians felt a duty to the students to preserve space for study, and to surround students in learning environments that allowed them to do their best work. As print collections continued to shrink, the library administrators in this study understood they would continue to be faced with space decisions. Although these decisions might be difficult, they offered librarians the opportunity to create student-centered spaces that allowed students to engage academically outside of the classroom.

This qualitative study focused on a small sample of librarians at two regional public research institutions in Michigan. Further research is necessary to determine whether the findings of this study are consistent with patterns evident in other regions and in academic libraries at other types of institutions.

Conclusion

I was inspired to undertake this study by the voices of my colleagues, particularly those in collection development. Despite the advent of the internet and concerns that the internet would make librarians obsolete, librarians have weathered this change. The ease of navigating the internet has allowed many people to answer basic informational questions on their own, questions that used to take a significant amount of librarians' time. This change in the availability of basic information has offered librarians the opportunity to focus on in-depth research, instruction in the use of scholarly resources, and innovations in information discoverability and accessibility. Far from becoming obsolete, libraries remain a valued element of the higher education landscape.

Neoliberal forces that demand outcomes, return on investment, and value have hindered, and sometimes threatened, librarians' work. As definitions of student success and return on investment narrow, calls for accountability increase, and resources tighten, librarians have increasingly found themselves holding the short end of the stick in decisions involving preserving library space and collections. Although wholesale shuttering of libraries and collections is rare, cases of weeding collections, moving collections to storage, and libraries sharing space with non-library partners are regularly featured in the higher education trade literature. Librarians have found ways to justify these actions, and in many cases, the measurable impact on students and faculty is small. However, these situations send a clear message—

libraries are nice, but only useful when they are furthering the overall goals of the institution, even when the overall goals of the institution are at odds with the library's goals.

Therein lies the conundrum for academic libraries. As the results of this study showed, ultimately, the library was a part of its institution. However, in its goals, operations, and values, the library often stood separate from its institution as a whole. Complicating matters, the libraries generally brought in few resources of their own. They relied on institutional administration to give them the resources they needed. To the extent they are applicable in other academic library contexts, the findings of this study indicated that library leaders would do well to study their environment as they work to position their libraries for sustainability. With regard to collections, despite widespread dissatisfaction with the current scholarly communication model and its dominance by for-profit publishers, most disciplinary and library scholars have little impetus or opportunity to change it in the foreseeable future. Libraries will retain their power and place in the institutional community through their ability to meet the needs of their users. To do this, they need sufficient funding to purchase scholarly resources at a level appropriate for their institution.

All is not gloom and doom. As the 2015 Ithaka S+R *US Faculty Survey* indicates, faculty at institutions of all types continue to value the academic library, even in an increasingly online environment (Housewright, Schonfeld, & Wulfson, 2016). Although no unified data set of student perceptions of academic libraries exists, academic libraries report a high level of student satisfaction with the library and its services in local surveys. Libraries and librarians have remained valuable and relevant due to their focus on service and listening to the needs of their users. As their answers to my survey questions indicated, the librarians in this study were as much experts in the needs, wants, and characteristics of their users as they were in their disciplinary focus areas. With regard to Scott and Davis' (2007) "bag of tricks" (pg. 221) organizational actors have at their disposal to mitigate the effects of the environment, this desire to observe and listen to the students and faculty they serve may be academic librarians' most valuable tool.

APPENDIX

APPENDIX

Interview Protocol – Dean of Libraries & Collection Development Librarian

Profile – preliminary questions on education and work history

Definitions

Interview questions:

What factors play a role in your collection development decisions?

What resources have influence?

How do these resources influence your decisions?

Why do they influence your decisions?

What actors have influence?

How do these actors influence your decisions?

Why do they influence your decisions?

What factors play a role in your acquisitions decisions?

What resources have influence?

How do these resources influence your decisions?

Why do they influence your decisions?

What actors have particular influence?

How do these actors influence your decisions?

Why do they influence your decisions?

What factors play a role in your development of the library's collection budget?

What resources have influence?

How do these resources influence your decisions?

Why do they influence your decisions?

What actors have influence?

How do these actors influence your decisions?

Why do they influence your decisions?

Walk me through your decision-making process in collection development.

Tell me how your education influences your collection development decisions.

Tell me how your experience influences your collection development decisions.

Walk me through your decision-making process in acquisitions.

Tell me how your education influences your acquisitions decisions.

Tell me how your experience influences your acquisitions decisions.

Interview Protocol – Subject Specialist Librarian

Profile – preliminary questions on education and work history

Definitions

Interview questions:

What factors play a role in your collection development decisions?

What resources have influence?

How do these resources influence your decisions?

Why do they influence your decisions?

What actors have influence?

How do these actors influence your decisions?

Why do they influence your decisions?

What factors play a role in your advocacy for funds for your collection area(s)?

What resources have influence?

How do these resources influence your decisions?

Why do they influence your decisions?

What actors have influence?

How do these actors influence your decisions?

Why do they influence your decisions?

Tell me about the role you play in acquisitions decisions.

Walk me through your decision-making process in collection development.

Tell me how your education influences your collection development decisions.

Tell me how your experience influences your collection development decisions.

Walk me through an interaction with acquisitions staff.

Tell me how your education influences your interactions with acquisitions staff.

Tell me how your experience influences interactions with acquisitions staff.

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