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THE PAST IN THE FUTURE: A CONTENT ANALYSIS APPLYING
S. R. RANGANATHAN'S FIVE LAWS OF LIBRARY SCIENCE TO
LIBRARIES AND INFORMATION SERVICES
IN YOUNG ADULT SCIENCE FICTION

by

Bruce DuBoff

A Thesis

Submitted in partial fulfillment of the requirements of the
Master of Arts Degree
of
The Graduate School
at
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Approved by _____
Professor

Date Approved May 8, 2003

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ABSTRACT

Bruce DuBoff

THE PAST IN THE FUTURE: A CONTENT ANALYSIS APPLYING S. R.
RANGANATHAN'S FIVE LAWS OF LIBRARY SCIENCE TO LIBRARIES AND
INFORMATION SERVICES IN YOUNG ADULT SCIENCE FICTION

2002/03

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S. R. Ranganathan's Five Laws of Library Science are considered the basis of modern library philosophy. They have remained after over seventy years as the seminal concepts by which other library science guidelines are judged. However, the world has changed dramatically since 1931, and these laws, along with Ranganathan's philosophy, may be in jeopardy of obsolescence.

What has science fiction written about future libraries? Speculative library and information trends and issues like those discussed in science fiction literature are relevant not only for librarians, but for society as well as it wrestles with the issue of information overload.

This study will portray results of a content analysis study focused on the appearance of libraries and/or information services in selected young adult science fiction novels. Objective analysis of the novels concerns the adherence or non-adherence of the libraries or information services incorporated in the source works to Ranganathan's five laws. Subjective analysis includes insights into the relationship between futuristic libraries and current automation practices; evidence that Ranganathan's five laws are still

current; support for the proposition that libraries following Ranganathan's five laws and their associated principles are successful libraries; and recommendations for further study based on the results of this project.

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CHAPTER I—INTRODUCTION

Research Problem

S. R. Ranganathan's Five Laws of Library Science are considered by many scholars to be the basis of modern library philosophy (Chand, 1965; de Grolier, 1992; Rao, 1965; Gorman, 1998; Thirumalaimuthuswamy, 1965). Though simple in appearance, the laws—books are for use; every book its reader; every reader his book; save the time of the reader; and a library is a growing organism—have remained after over seventy years as the seminal concepts by which other library science guidelines are judged. However, the world has changed dramatically since 1931, and these laws, along with Ranganathan's philosophy, may be construed as in jeopardy of obsolescence.

Modern science fiction, beginning to emerge as a valid and vital genre around the same time as Ranganathan was writing his first book from the University of Madras Library, has chronicled future looks at libraries and information services in permutations not even dreamed of now in the 21st Century. Images and archetypes of future libraries and information centers have been characterized and categorized by several researchers. Wiseman (1994) separated library-related SF chronologically, into near-future, far future, and post-disaster, and categorized books aimed at young adult readers as in this study. She also indicated that science fiction writers, while not librarians, are valuable due to their ability to “. . . make sweeping predictions about the technologies and capabilities of future libraries” (p.197). In the best study of this area, “Images of Libraries in Science Fiction,” Griffen (1987) described SF libraries as having one of four personalities: “the

completely computerized, roboticized library; the rehumanized library; the post-cataclysmic, reinvented library; and the post-computer, mental high-tech library” (p. 137).

Although this study does not necessarily adhere to Griffen’s limitations, many of the novels included did fall neatly into one of her categories. For example, *A Canticle for Leibowitz* is a classic example of the post-cataclysmic, reinvented library; and *2001: A Space Odyssey*’s HAL 9000 is a chilling and all-too familiar example of the completely computerized, roboticized library. However, a book like *Fahrenheit 451* seemingly defies Griffen’s categories. This issue will be visited later in Chapter Four.

This study examined science fiction with an emphasis on young adult works to acknowledge that the primary targeted readers of science fiction are now, and have been for decades, young adults. This reality validates the appearance of many of the selections in this study on middle and high school reading lists nationwide.

Study Rationale

What has science fiction written about future libraries and data options? Are future libraries havens where patrons actively pursue knowledge and are provided with practically limitless information sources, or are they bleak, fallacious forms of totalitarianism preaching policy and procedure to weary masses? What collection choices remain in a society where access to every piece of information in the realm of human endeavor is more and more realizable; or, how are book selection and deselection impacted when information to patrons is limited or propagandized by politicians and/or censors? An examination of young adult science fiction literature and its descriptions

and uses of libraries, information centers, data centers, and information itself can reveal many lessons for the current builders of future libraries, as well as provide insight into the forces that have culminated in the current trends of library and information science.

This study used content analysis to focus specifically on the appearance of libraries and/or information services in selected young adult science fiction novels. It described established patterns in fictional future information services and processing, and conclusions were drawn about the messages given to readers of the selected novels and the perceptions of libraries both in the future and today.

The set of variables is based on S. R. Ranganathan's five laws of library science. The independent variable is the five laws: that books are for use, every reader his book, every book its reader, save the time of the reader, and the library is a growing organism, and five sublaws per law created for this study. The dependent variable consists of each fictional library's adherence to or deviation from the laws. For example, Big Brother, the librarian in George Orwell's *1984*, forced the Outer Party members to pretend they were in a society that supported laws one through four, and the reader appreciates the dramatic irony of watching Winston struggle against the intellectual trap of doublethink. But by definition, Big Brother would never support number five. In fact, Winston's philologist friend, Syme, brags: "We're destroying words—scores of them, hundreds of them, every day. We're cutting the language down to the bone" (Orwell, 1949, p. 45). It is this conflict concerning issues surrounding open information access, freedom of information, and growth/retardation that makes the novel worthy of study here. *Fahrenheit 451* presents the same theme, with Orwell's Thought Police replaced by

Bradbury's firemen, although Bradbury's solution of burning the criminals is certainly more simplistic than Orwell's re-education and indoctrination program.

Shiyali Ramamrita Ranganathan's pioneering scholarship in librarianship is not questioned. Gorman (2000) asserted that he was "... by common consent, the greatest figure of librarianship in the twentieth century" (p. 18). Ranganathan, creator of the Colon Classification, author of over 2000 research papers and 60 books, and founder and editor of five periodical publications, was an acknowledged pioneer in librarianship, and his five laws have remained over seventy years after they were published as the basis of the primary relationship between librarians, patrons, and books.

Definitions and Terms

For purposes of this study, the following definitions are active:

- books are (1) for use, not preservation, (2) for all and not for a chosen few, (3) every book its reader, (4) save the time, and (5) library is a growing organism from the writings of S. R. Ranganathan (1931);
- *data center* is defined as "A centralized storage facility used by an Application Service Provider to retain database information related to the decision-making processes of an organization" from *Webopedia*;
- *information* is defined as "All ideas, facts, and imaginative works of the mind which have been communicated, recorded, published, and/or distributed formally or informally in any format" from *The ALA Glossary of Library and Information Science*;

- *information center* is defined as “An independent organization or an administrative unit of an organization which normally collects, organizes, stores, retrieves, disseminates documents . . .” from *The ALA Glossary of Library and Information Science*;
- *library* is defined as “A collection of materials organized to provide physical, bibliographic, and intellectual access to a target group, with a staff that is trained to provide services and programs related to the information needs of the target group” from *The ALA Glossary of Library and Information Science*;
- *librarian* is defined as “A class of library personnel with professional responsibilities, including those of management, which require independent judgment, interpretation of rules of procedure, analysis of library problems, and formulation of original and creative solutions . . .” from *The ALA Glossary of Library and Information Science*;
- *patron* is defined as “An individual who is a regular library user or a library supporter” from Harrod’s *Librarians’ Glossary*;
- *science fiction literature* is defined as “. . . speculative fiction based on the real world” by Robert Heinlein; quoted in *Literature for Today’s Young Adults* (Donelson & Nilsen, 1997);
- *technology* is defined as “the practical application of knowledge especially in a particular area” from the *Merriam-Webster Online Dictionary*;
- the appropriate reading age range for *young adult literature* is defined as 12-18, based on the 2002 policy of the Young Adult Library Services Association (YALSA), a division of the American Library Association (ALA).

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CHAPTER II—LITERATURE REVIEW

S. R. Ranganathan as a Model for Study

S. R. Ranganathan was the most influential librarian of his time; according to Gorman (1998), he invented the term library science. His work in library policy, cataloging, and book selection was ground breaking, forming the foundation of modern library science procedures, style, and philosophy. Among his most notable works are *Colon Classification* (1933), introducing a new cataloging style still commonly used in worldwide research libraries; *Library Manual* (1954, 1960), a comprehensive policy guide general enough to cover most situations but more specific about issues related to the accommodation of the reader; *Library Administration* (1959); and *Library Book Selection* (1966); rounding out a remarkably diverse and comprehensive reinvention of library science. But perhaps none of Ranganathan's books are as fundamental or timeless as *Five Laws of Library Science* (1931).

Rajbee (1965) called the five laws "Ranganathan's first Sermon on the Mount" (p. 307) while Minghua (1992) called the laws "... the great ambition, hope and faith of a librarian" (p. 4). Gorman (2000) noted Ranganathan's audacity in proposing "... laws that define a whole profession in just twenty-four words" (p. 19), but Shera (1970) cited three of the five laws in imploring librarians to make communication their number one priority and to "... employ all techniques that seem to have any promise at all to the achievement of that end" (p. 77). That communication, according to Shera, is "the grist for the librarian's mill."

The laws—books are for use; every book its reader; every reader his book; save the time of the reader; and a library is a growing organism—are alive and well in the 21st Century. Sowards (1997) related the Five Laws to Web sites and changed the first two laws to “ ‘Web sites are for use’ ” and “ ‘Every Web site its surfer’ ” (p. 155-156). Polly (1993) revised the Five Laws with a focus on computerized libraries:

- “[Information] is for use;
- Every [user], his/her [information];
- Every [bit of information], its [user];
- Save the time of the [user]; and
- The [Net] is a growing organism” (p. 8).

The prominent application of Ranganathan’s principles to electronic data sources assures his importance in the present and his relevance in the future.

S. R. Ranganathan elevated Librarianship and the recognition it received when he first discussed the concepts in 1928 that became rightly known as the Five Laws, acknowledging that librarianship, like other sciences, could have laws (Thirumalaimuthuswamy, 1965). He is a pioneer of the modern library movement in India and is its father, exceeding even the vaunted Dewey in worldwide stature and achievement (Amatya, 1965; Rao, 1965).

An Application and Interpretation of the Five Laws

Many writers have expounded on the Five Laws within the many areas of library service (Yucht, 2002). Although the Five Laws have clearly stood the test of time, they have endured numerous assaults from technologists who want to either modernize the

language or make it more politically correct. Ironically, Gorman, with Crawford (1995) and on his own (1998, May) asserted that the language of 1931 did not restrict the modern library user from expanding the language to occasionally substitute such terms as “data” and “information” for “book:” “Even in Ranganathan’s day, books were not the only documents collected by libraries, and it is wrong to conclude from his words that books were the only library materials that mattered to Ranganathan” (p. 1). However, Gorman also offers five laws of his own that essentially reconstruct, and ultimately fall far short of, Ranganathan’s originals.

Law One: Books are for use

There are several facets of this law to note:

- Contrary to the spirit of the first law, books are sometimes denied to all or certain users; i.e. minors are not allowed access to questionable materials; books deemed obscene are not acquired or circulated; users who are overdue may not be able to circulate, all of which prevent maximum potential use;
- Books are for use, not simply for preservation and posterity (Ranganathan, 1931);
- Because books are supposed to be used, old or musty books deemed unattractive or unappealing must be replaced (Yucht, 2001); Ranganathan described this as the striving for production of beautiful books at all levels;
- Books must be easily accessible, not just available; as Gorman (1998) indicated, “. . . books and other library materials are important not as objects but for the knowledge and information they contain” (p. 1); as Ranganathan stated, “[Books] are to be used for their thought-content” (1960, p. 25);

- Libraries should “. . . countenance no factor likely to obstruct or minimize the use of books” (Ranganathan, 1960, p. 25); this law also applies to laws and rules concerning segregation, equal opportunity, and rights of disabled patrons;
- Librarians need to be empowered to make good selection choices and neither staff nor patrons should be hindered by “soul killing interference” (Ranganathan, 1960, p. 26) in any way or at any level;
- Although preservation is a valid function of the library, stocking book curios or other expensive but infrequently used books is a waste of resources and is discouraged (Ranganathan, 1960).

All of these issues revolve around one key concept: Patrons must have open access to library materials, and all materials must be made easily and pleasantly available to all who desire their use.

Law Two: Every reader his book.

The second law establishes the expectation that libraries consider every kind of reader, regardless of age, gender, vocation, capacity for self-help, or willingness to read (Ranganathan, 1960). In *Library Manual: For Library Authorities, Librarians, and Honorary Library Workers* (1960), Ranganathan discussed three elements of the second law:

- Subject-Scatter: Librarians are expected to know the interests of their current and potential patrons, and select books based on this knowledge. Practical and entertaining books are to be included in collections and patrons’ moods for profound and light material are to be anticipated;

- Style-Scatter: Books are to be selected based on both the composition of the community and covering all of the “. . . language and style of exposition suited to all the intellectual strata” (Ranganathan, 1960, p. 28);
- Physical Make-up: Children, the elderly, and those people with physical disabilities such as sight impairment are to be served at the same level as all other patrons; needs for large print, picture books, Braille, and audio books must be satisfied.

Gorman (1998) also added that this law also demands that a user-friendly OPAC and cataloging system be employed to connect the reader to the book. Yucht (2001) also reminded librarians that offering interlibrary loan is an effective method of expanding a collection at very little cost. Additionally, Ranganathan reminds librarians that open access is mandatory to an effective second law; a reader browsing books, he indicated, is much likelier to find his book than one merely browsing through a catalogue.

Law Three: Every book its reader:

Ranganathan (1960) asserted that it is the librarian’s responsibility both to place books into the readers’ hands and to refrain from wasting resources on books not expected to be circulated, such as those written in a language not spoken or studied locally, or about uncommon regional topics. Gorman (1998) reiterated Ranganathan’s sentiment that all members of the community are entitled to the same friendly and competent service. Unlike the first two laws, the third was decidedly librarian-centered and focused on the librarian’s responsibility to the patron.

Ranganathan also stated that classification system, shelf organization, and subject headings are fundamental to enabling readers to find books of interest to them.

Ironically, according to Yucht (2001), a weeding and reduction of titles combined with a fresh re-organization of materials can result in a circulation increase and can help readers and staff to rediscover many “lost” or previously buried titles.

Law Four: Save the time of the reader:

The fourth law is a management tool with many implications for the librarian but one main focus: how the library can be run to maximize the efficiency of its interactions with the patron. For Gorman, the fourth law meant providing the best service to the patron, but for Yucht, when discussing young adult patrons, the fourth law also included an education and training component: if students can become better finders of information without a librarian’s assistance, then they will be better served. Yucht also suggested combining reference materials with regular circulating materials on the shelves to facilitate easier patron searching and browsing.

Ranganathan focused on a more pragmatic element of the fourth law: since intellectual curiosity and mental hunger are not compelling and inexorable, the thirst for knowledge must be quenched or possibly lost. Although this seemingly points out the foibles of patrons, it is hard to argue that the average reader will always doggedly hound a librarian until his answer is won; more often than not, as has been shown in studies done on Internet surfers, if curiosity is not satisfied or at least tickled in just a few seconds, it is likely that little or no action will be taken. No time should elapse between the demand for information and the supplying of it.

Ranganathan also recommended classified arrangement of books to save the time of the reader. If books are arranged together alphabetically and by subject, all readers should find what they need quickly and easily, so much so that they will forget the classifications and just revel in the joy of finding what they want. It is the librarian's responsibility to enable that joy, even if patrons do not know that it is occurring, because it is the librarian's function to meet all patron wants, even those unexpressed by the patrons because they do not know how to give shape to those desires.

Law Five: The library is a growing organism.

Ranganathan was quick to point out there are two kinds of organic growth: "growth as of the body of the child and growth as of the body of an adult" (1960, p. 40). Service libraries grow like a child, and have limitations placed on them as to potential size, while storage libraries, like adults, do not share the same limits. Predictably, Ranganathan also recommended uniform classification to keep abreast of the "growth of the universe of knowledge" (p.44).

Yucht stressed the technological aspect of the fifth law: librarians must be prepared to offer and gain expertise on any new media that can provide information differently. Gorman pointed out the lesson of the new British Library: even after thirty years of planning, it was full on the day it opened. Proactive planning would have greatly assisted in producing a better model for such a new and modern library. The abundance of information and data is not the issue; the main problem is their organization and format. Needless to say, both service and storage libraries should never stop collecting.

Importance of Young Adult Science Fiction

Futuristic literature provides significant insight into possible future trends and innovations as well as potential problems and crises, both of which can be beneficial to librarians and media specialists. Mid-19th Century readers scoffed and wondered about Jules Verne's *From the Earth to the Moon*, and that was achieved 100 years after the novel. Mid-1960s television viewers marveled at the technology in *Star Trek*, but a mere thirty-five years later, the world has viewscreens (webcam), communicators (cellular phones) and hand held computers (PDAs—personal digital assistants) with voice recognition. Items society takes for granted like television, space shuttles, and computers, were all first discussed in science fiction (Wollheim, 1971).

Science fiction, according to writer Ben Bova (1974), does not simply attempt to predict the future, it tries “. . . to show the many possible futures that lie open to us” (p. 5). Although Mark Rose (1974) would have argued that science fiction is not an accurate vehicle for prediction, it is “. . . “an excellent medium for the exploration of the taste, the feel, the human meaning of scientific discoveries” (p. 6). The issue of Man's relationship with Technology is key for 21st Century librarians and media specialists, some of whom grapple with ineffective automation systems, lack of technology training, and Internet filtering issues. There is nothing to indicate that the speed at which technology has inflicted culture shock (or Toffler's “future shock”) on American culture will slow; in fact, many science fiction long range future depictions are careful to highlight “. . . the otherness of the societies they depict” (Canary, 1977, p. 171). That “otherness” is the alienation that results from information overload, an issue that will have to be alleviated, at least in part, by future librarians, because they may be among

only a handful of professionals specifically trained to organize and interpret large amounts of electronic data. Suprenant (1990) asserted that librarians and information specialists not only act as technology surrogates to some of their patrons, they . . . “must increase their role as translators for, and informers to, the larger society, because technology is restructuring not only the library and information profession but also society itself” (p. 23).

Science fiction can also prepare its audience for the unexpected and help readers adapt to future changes (Huntingdon, 1976). For example, a future without books (and libraries) is a common projection, such as those portrayed in Orwell’s *1984* and Bradbury’s *Fahrenheit 451*; Pennavaria (2002, Summer, p. 230) described this possibility as “half a life” in a “stagnant, dying culture.” Speculative library and information trends and issues like those discussed in science fiction literature are relevant and important not only for librarians, but for society as well as it wrestles with the issue of information overload versus order.

Science fiction is as much of a young adult genre as any other. Early science fiction novels such as *Gulliver’s Travels* and *Alice’s Adventures through the Looking Glass* may be adult parables and morality tales, but they are also children’s stories with fantastic imaginary beings and exciting journeys. Robert Heinlein wrote “juvie” books for years before finally publishing novels like *Stranger in a Strange Land* and *Time Enough for Love*, still arguably YA novels (for the older teenage crowd). Popular science fiction classics like Asimov’s *Foundation* series and Lucas’s *Star Wars* series have young protagonists who risk their very bright futures for something greater than themselves that they support but do not quite understand, a constant theme in YA literature. Much of

what is considered “golden age” SF was originally published in periodicals that were aimed at young readers; Asimov, Bradbury, Clarke, and Heinlein, the standard bearers of the “golden age,” all started their careers by publishing in the “pulp” magazines of the 1930s, 1940s, and 1950s, aimed at young readers using their allowance to buy *Astounding Science Fiction*.

The reason for this intimate association between young adults and science fiction is obvious: young adults are the future. They are the least resistant to technological changes and the most open-minded concerning new ideas. The connection with young adults and libraries is similar, as Wiseman pointed out: “Young adults will be the patrons and librarians of the future. Science fiction is one important source from which they will develop their expectations of the library of the future” (1994, p. 192). Also, the same types of issues and problems that young readers experience in non-SF literature are present in much of the best SF, such as the relationships between parents, children, and siblings; peer pressure, friendship, coming-of-age, diversity, and self-reliance (Kunzel, 1996). Young adult science fiction cannot be dismissed as light or escapist reading; it is a vital connection from the rapidly evolving present to an uncertain future.

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CHAPTER III—METHODOLOGY AND OBJECTIVES

This study employed content analysis following procedures set forth in *Content Analysis: An Introduction to its Methodology* by Klaus Krippendorff; appropriate adherence to his method assisted in maintaining objectivity. Book selections were based on meeting one or more of the following criteria: discussion in the most widely accepted young adult book guide, *Literature for Today's Young Adults* (Donelson and Nilsen, 1997); novels' status as winners of either the Hugo or Newbery Awards, exceptional achievement by the author in young adult literature or science fiction; and/or the novels' frequent appearance on middle or high school reading lists.

This study was designed to benefit librarians or library patrons who have an interest in the future of libraries and information services; those people concerned about how librarians are portrayed in the media; or any other scholarly pursuit. Although the book selection is not complete because of time constraints, a representative sample based on expert recommendations was chosen.

A Breakdown of the Five Laws

The Five Laws are consistently challenged enough to keep them fresh for use as a standard by which materials or concepts are judged. Since a quantitative tool is indicated in this study, content analysis was a logical choice. However, a qualitative, analytical element was used to enhance the results of the content analysis and to create an environment in which the results could be reproduced given similar conditions. Chosen

science fiction works were examined and analyzed through the filter of the Five Laws; all mentions of the following terms formed the basis of a statement of adherence or non-adherence to each of the five laws and the five sublaws in Table 1, with analysis as deemed appropriate:

- library (or other synonymous term)
- information center/service (or other synonymous term)
- data center (or other synonymous term).

The reason for a parenthetical disclaimer is that in novels dealing with alternate universes or possible future permutations, language and terms for objects now considered standard can change; i.e. books like *Neuromancer* and *1984* that invented their own brand of a language for the purposes of the novel.

Krippendorff (1980) defined content analysis as a “. . . research technique for making replicable and valid inferences from data to their context” (p. 21). Krippendorff stressed that content analysis could not be reliable if it was not replicable. Therefore, any content analysis must offer a source for the justification of its methodology.

In this study, the five laws were broken down into sublaws based on Ranganathan’s descriptions of the laws in *Five Laws of Library Science* (1931) and *Library Manual* (1960). Although other researchers were cited as support for the continuing importance of Ranganathan’s work, any representation of his work must begin with his writing. Limiting the breakdown of the laws to his writing also increases the replicable nature of the study by eliminating any reinterpretations.

The foci for each of the laws are represented in Table 3.1.

Table 3.1. *Breakdown of the Five Laws into Sublaws.*

<p>Law One: Books are for use</p> <p>1.1—Books must be accessible and available to all people who wish to use them</p> <p>1.2—Books are to be used for their thought-content</p> <p>1.3—Libraries must counter any force that attempts to obstruct or minimize use</p> <p>1.4—Librarians should not interfere with patrons’ enjoyment of a book</p> <p>1.5—Librarians should constantly replace worn or outdated books</p>
<p>Law Two: Every reader his book</p> <p>2.1—Book selection represents a full range of all readers’ interests and reading levels</p> <p>2.2—Readers of all socioeconomic classes, origins, races, beliefs, are welcomed</p> <p>2.3—Materials for elderly, disabled, young readers are available and accessible</p> <p>2.4—Browsing and check-out are available, enabled, and encouraged</p> <p>2.5—Books are cataloged so that their contents are easily discernible by potential readers</p>
<p>Law Three: Every book its reader</p> <p>3.1—Books are shelved and arranged to offer maximum access and ease to browsers</p> <p>3.2—Books are selected for the needs of the community</p> <p>3.3—Librarians have diverse knowledge and recommend appropriate selections</p> <p>3.4—Reluctant readers are enticed to the library with periodicals, audios, videos</p> <p>3.5—The library is well-publicized and comfortable</p>

Law Four: Save the time of the reader

4.1—There is little or no time-lag between demand and supply of information or materials

4.2—Books are classified by name and subject and arranged logically and consecutively

4.3—Information desks and reference services are readily available and accessible both in the library and remotely

4.4—Librarians meet the unstated needs of the reader

4.5—Books are processed expediently and shelved quickly

Law Five: A library is a growing organism

5.1—A service library routinely replaces materials and staff to meet the community's and the library's changing needs; a storage library collects all that it can

5.2—No organization impedes the library's natural growth and development

5.3—Library staff are qualified and willing to adapt to changes in media and culture on all levels; such changes are made based on the needs of the community

5.4—Libraries are pleasing and inviting, with shelves, media, and storage equipment able to expand to suit changing needs

5.5—Books are classified according to a universally recognized and adopted system

Using the laws and sublaws presented in Table 3.1, adherence or non-adherence to the overall law and each of the sublaws in the following manner was determined, discussed, and supported using primary and anecdotal material from the source:

- Yes (Y)—this use met the requirements of the law or sublaw;
- No (N)—this use did not meet the requirements of the law or sublaw;
- Conditional (C)—this use met the requirements of the law or sublaw for some characters or groups in the novel but not for all, i.e. for one socioeconomic class but not for another;
- Irrelevant/Not applicable (I)—this mention of library did not apply to the law or sublaw.

Two types of tables were used to record responses to the mention of libraries and information services in the chosen books.

Table 3.2. *Sample Individual Book Chart.*

Foundation and Empire by Isaac Asimov

Law	Result	Analysis
1.1		
1.2		
1.3		
1.4		
1.5		
Law 1 Summary		
2.1		
2.2		
2.3		
2.4		
2.5		
Law 2 Summary		
3.1		
3.2		
3.3		
3.4		
3.5		
Law 3 Summary		
4.1		
4.2		
4.3		
4.4		
4.5		
Law 4 Summary		
5.1		
5.2		
5.3		
5.4		
5.5		
Law 5 Summary		

Overall Summary		
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Table 3.3. *Sample Full Book List Chart.*

Book	Law One	Law Two	Law Three	Law Four	Law Five	Overall adherence
<i>Foundation and Empire</i>						
<i>Fahrenheit 451</i>						
<i>2001: A Space Odyssey</i>						
<i>Neuromancer</i>						
<i>The Giver</i>						
<i>A Canticle for Leibowitz</i>						
<i>Nineteen Eighty-four</i>						
<i>The Last Book in the Universe</i>						
<i>Anthem</i>						
<i>Snow Crash</i>						

Analysis and justification of each overall choice accompanied each choice.

CHAPTER IV—ANALYSIS OF DATA

Each of the titles selected for this study (see Appendix A) were analyzed using the breakdown of the five laws into 25 sublaws from Table 3.1, Chapter Three (pp. 25-26). This chapter presents each analysis separately in table format (see Table 3.2: *Sample Individual Book Chart* in Chapter Three). Analysis was limited to objective comments concerning the adherence or non-adherence of the libraries or information services incorporated in the source works to Ranganathan's five laws and the twenty-five sublaws composed for this study. Placement in (or exclusion from in some cases) Griffen's four types of libraries in "Images of Libraries in Science Fiction" (1987) is discussed to further illuminate the novel's and the library's history and function in the author's imagined universe.

Table 4.1. Foundation and Empire by Isaac Asimov.

Law	Result	Analysis
1.1	Y	Although Bayta, Toran, Ebling Mis, and Magnifico, a.k.a. the Mule have a long journey to Trantor(the former capital of the galaxy), they are not disturbed because of their desire to use the library. Once they arrive on Trantor, they are not restricted from the library; the fact that people do not desire library use does not mean that it is disallowed to those who request use.
1.2	C	The vast majority of the galaxy does not use the library at all; but Ebling Mis used it in the best way, to learn and solve a problem.
1.3	Y	The former librarians of the Trantor library gave their lives to protect their university and library: "The strangers of the Foundation [Bayta, Toran, Ebling Mis, and Magnifico/Mule] . . . knew nothing of the time after the collapse of Imperial power when the students, with their borrowed weapons, and their pale-faced inexperienced bravery, formed a protective volunteer army to protect the central shrine of the science of the Galaxy. They knew nothing of the Seven Days Fight, and the armistice that kept the University free . . ." (p. 198).
1.4	Y	No one interferes with Ebling Mis once he begins his research.
1.5	N	Since culture and society have regressed at this time of the novel, there is no information to add that does not precede what was already recorded.
Law 1 Summary	C	The materials in the library are for use, and their use is not restricted or inhibited. However, they are not used often, and Ranganathan linked this law with the responsibility of the librarian and library administration to promote library use: "A few books kept continuously in active use form a bigger library than miles of books kept largely locked in the cupboards of a monumental building" (1960, p. 25). Impressive as it is, the highest point of the sum of knowledge on a galactic scale, Ranganathan would not have approved of its state of disuse, for books are nothing without patrons.
2.1	N	The library on Trantor was academic and as such would not reflect all readers interests and reading levels.
2.2	N	It takes more money than most people had to travel to Trantor to use the library, and Bayta, Toran, and Ebling Mis were questioned many times and detained (before they arrived at the library), making the journey more difficult.
2.3	I	It is unclear whether or not the library is designed to serve anyone but students, faculty, and visitors to the university.
2.4	N	No staff maintain the library, so no circulation occurs.
2.5	Y	After they arrive at the library, Ebling Mis said, "I think we passed

		the catalog rooms back a way. I'll stop there” (p. 198).
Law 2 Summary	N	Since most people in the galaxy in the novel cannot even understand most of the books in the library, making Ebling Mis of great value to the Mule, because he was one of the few who could, every reader is not getting his book. Even if people desired library use but lived remotely, there is no evidence of the availability of off-site, electronic access. If the library is not being used, its thought-content is not being utilized, it is not courting patrons, and it is not a vital part of the community.
3.1	Y	Ebling Mis had little or no difficulty getting the materials he needed.
3.2	N	The community is a farming community composed of simple folk who do not understand any of the books in the library; despite the revelation later in the series that this library is actually also the current library of the Second Foundation, that is not known at this point.
3.3	N	There are no librarians, so no recommendations or selections are made, it is a static library.
3.4	N	No promotions or programs are run.
3.5	N	Although Ebling Mis eats and sleeps there for many days, making it comfortable enough for him, Mis was also under the influence of the Mule, a mutant with superhuman mental abilities who was forcing him to work tirelessly to find the Second Foundation. The spirit of this law was well described by Ranganathan: “Every book left for long on the shelf pining away for its reader, covered with dust, and untouched by readers, would leave a curse on the librarian” (1960, p. 31). There is an entire library of unused materials collecting dust at the library, so this sublaw cannot be met.
Law 3 Summary	N	This library has become static, more a storage library than anything else. Its one patron dies at the end of the novel when it is revealed by Bayta that Magnifico is actually the Mule, so at least for now in the novel, it is not meeting the needs of its intended audience. Its intended audience may not exist again for another 700 years, when the Seldon Plan ends, but Ranganathan would not have sanctioned this type of specialized library in a farming community that would care more about agricultural methodology than social science and psychohistory. He was very specific about what a library should offer: “Do not select books of a standard not suited to the majority of the readers in the locality. Do not select books on subject-fields—on the vocations, technologies, and sciences—with few practitioners in the locality” (p. 31).
4.1	Y	It is an open library and Ebling Mis is able to obtain information quickly.
4.2	Y	The materials in the library are cataloged well enough to allow Ebling Mis to do his research.

4.3	N	There are no services because there are no librarians.
4.4	N	There are no librarians.
4.5	N	There are no incoming books to process and shelve.
Law 4 Summary	N	Since there are no librarians, and no patrons except Ebling Mis and the Mule, the time of the reader is not being saved. No efforts are being made to increase readership or update library systems. Ranganathan (1931) said that “. . .the interest of the fourth law almost completely centres round the readers” (p. 287). If there are no readers, the fourth law cannot be met.
5.1	N	At one time, this library was both a service and a storage library, the most important storehouse of information in the galaxy. But at this point in the novel and series, the library does not weed, replace or acquire any items.
5.2	Y	The library’s natural growth and development is disuse and obsolescence at this time, and no one interferes with that.
5.3	N	There is no library staff.
5.4	N	The library is described as a “. . . deceptively small building which broadened out vastly underground into a mammoth volume of silence and reverie” (p. 198). This description suggests that the library is stuffy and exclusive, not pleasing and inviting. Also, since there is no staff, the library does not accommodate the needs of the patron for media unless it is available without assistance, like the “projectors in the library reading room” (p. 199) that Magnifico taught himself to use. It is not fair to assume, however, that other patrons would be able to effectively use A/V equipment without experience and training.
5.5	Y	The fact that Ebling Mis went right to the catalog room when they entered the library, and that he was successful in finding the materials he needed, indicates that there is a universal cataloging system in place.
Law 5 Summary	N	This library is not growing at all, it is “. . . a quiet, graceful museum-piece of ancient greatness” (p. 198). The only people in the galaxy who are qualified to use it are members of a secret society who are not revealed to the reader until the end of the third book in the series, <i>Second Foundation</i> . Therefore, they do not promote themselves at all so as not to draw attention to their secret mission, the completion of the Seldon Plan. Even Ebling Mis would not have been able to fully utilize the library without mental tampering by the Mule, an indication of the fall of the galaxy and its knowledge bearers. There is no new knowledge to enlarge the library, and no staff to improve it.
Overall Summary	N	The library on Trantor in <i>Foundation and Empire</i> defies Griffen’s (1987) four types of libraries. Although it is post-cataclysmic (the fall of the Galactic Empire) it was not reinvented. It had a staff that defended it but eventually perished to be replaced by a farming

		cooperative. Although the third novel in the series reveals that the library is actually used by the Second Foundation which is headquartered on Trantor, that information is not available at this time in the series. The library is a relic, which may once again be useful, but is currently obsolete. Therefore, it has none of the vitality that marks a library following Ranganathan's five laws.
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Table 4.2. *Fahrenheit 451* by Ray Bradbury.

Law	Result	Analysis
1.1	N	Books are outlawed in <i>Fahrenheit 451</i> . History has been altered by the current political leadership to reflect the idea that books have been burned since 1790, and that Benjamin Franklin was the first fireman, originally just burning English-influenced books (p. 34).
1.2	N	When people attempt to use books for their thought-content or for any other purpose in this novel, the perpetrators are arrested and their entire house, with the books, is burned. Houses are built with fireproof barriers already included, so the burning of one house never starts a larger fire. As the firemen are burning a house, the fire chief, Beatty, argues with the owner, a woman who refuses to leave her books: “Where’s your common sense?” he asks. “None of these books agree with each other. You’ve been locked up here for years with a regular damned Tower of Babel. Snap out of it! The people in these books never lived. Come on now!” (p. 38). Beatty, a product of the establishment, cannot understand the concept of using books for their thought-content, and in his present state of mind, he can never conceive of the notion that the conflict he abhors is the well from which literature springs. Although it can be argued that Montag’s bewilderment over his belief that Beatty wanted to die was a result of Beatty’s secret love of reading and disgust with his fallacious life, his failure to promote or at least condone reading in others makes him more like O’Brien in <i>1984</i> , posing as a benevolent, fatherly figure leading Winston Smith on before attempting to remake him in a new image.
1.3	N	Libraries have been replaced by the home video screens that Mildred spends so much time interfacing with, and their books have become the scripts used by participants like Mildred when they want to “read.” They are banal and contain no thought-content. The video screens, with their hold on the public’s imagination, are the force that obstructs library and/or book use.
1.4	N	True librarians in this novel must live in secret if they want to survive, such as Faber, the old man who helps Montag with their plan to frame firemen by planting books in their homes, and Granger, the leader of the nomadic book memorizers. The public librarians are actually anti-librarians: the firemen. They attempt to control the books in circulation as best as they can, meaning that they burn them whenever they find them.
1.5	N	Books are burnt and never replaced by the establishment; even the book memorizers burn books, as Granger tells Montag: “We’re book burners, too. We read the books and burnt them, afraid they’d be found . . . Better to keep it in the old heads, where no one can see it or suspect it” (p. 152). Someday, explains Granger, the book

		memorizers plan to replace what has been lost: “And when the war’s over, someday, some year, the books can be written again, the people will be called in, one by one, to recite what they know and we’ll set it in type . . .” (p. 153). However, at the present time in the novel, none of the idealistic plans for book re-integration have yet occurred.
Law 1 Summary	N	More than in any other novel in this study, books are not for use in the world of <i>Fahrenheit 451</i> . When Mildred describes her script for the day’s television show, it does not have any of the thought-content or depth of literature or even television situation comedies. All books are burned by law. In a turnabout reminiscent of Orwell and doublethink, Fire Chief Beatty shows great familiarity with the contents of books, but scorns the books with which he has taken time to familiarize himself. He offers Montag a Marxist interpretation of the evil of books and why they cannot be used: “We must all be alike. Not everyone born free and equal, as the Constitution says, but everyone <i>made</i> equal. Each man the image of every other; then all are happy, for there are no mountains to make them cower, to judge themselves against. So! A book is a loaded gun in the house next door. Burn it. Take the shot from the weapon” (p. 58). As long as Beatty’s attitude prevails, books will be outlawed. Ironically, and consistent with Bradbury’s thematic intentions, Beatty claims that a lack of books makes people happy, but the melancholy Montag only finds happiness when he is around books or talking about books.
2.1	N	The only materials available to read, besides Mildred’s scripts, are comic books, three-dimensional sex magazines, confessions, and trade journals.
2.2	N	No one is welcomed to read books. According to Beatty, books were banned partly because of tension between society and its minorities, as he describes his society’s rationale for avoidance and ignorance of information: “Don’t step on the toes of the dog lovers, the cat lovers, doctors, lawyers, merchants, chiefs, Mormons, Baptists, Unitarians, second-generation Chinese, Swedes, Italians, Germans, Texans, Brooklynites, Irishmen, people from Oregon or Mexico . . . The bigger your market, Montag, the less you handle controversy, remember that! All the minor minor minorities with their navels to be kept clean” (p. 57). Although this society may have eliminated prejudice and racism, the cost is exorbitant by any standard. The society in this novel has sacrificed learning for happiness in the same manner as another popular dystopia, Huxley’s <i>Brave New World</i> . In both novels, citizens are encouraged to take drugs and engage in other escapist activities designed to make them superficially happy and attempt to block out the normal pain and discomfort that all people occasionally feel, with narcotics and

		stimuli like the television “family” that Mildred feels closer to than her husband.
2.3	N	Since books are banned, no provisions are made for any group.
2.4	N	The only way to get a book is to steal one like Montag does as a fireman, or to meet someone who has books, like Faber. Possession of a book is a crime.
2.5	C	Since books are banned by the government, there is no cataloging system, but Granger and his group did keep track of who had memorized what literature, which is a primary cataloging system. Although it may not compare to a MARC record, the people/books are easily discernible to potential readers, who are few.
Law 2 Summary	N	Montag gets to read, but not for long. Readers are not permitted to connect with books in this novel. Some read anyway, but they run the risk of imprisonment and the loss of their houses to fire if anyone turns them in or if they are seen with books. When Beatty suspects that Montag has taken books, he offers amnesty: “[Taking a book would be] A natural error. Curiosity alone,” said Beatty. “We don’t get overanxious or mad. We let the fireman keep the book twenty-four hours. If he hasn’t burned it by then, we simply come burn it for him” (p. 62). Montag chooses to defy the establishment and read, even though he will lose most of what he has. Ranganathan called the library, among other things, a place that “. . . should provide to one and all a harmless and elevating use of leisure” (1960, p. 21). The government’s ban on books denies all citizens the right to a safe place to choose and read books or other materials.
3.1	N	A few people undoubtedly have books arranged in their attics or walls, but no one has open access and ease of browsing. Although Granger tells Montag that one whole town of twenty-seven people have memorized the essays of Bertrand Russell (p. 153), it is very difficult to for a nomadic group with little resources to offer organization and ease of access to an illegal activity.
3.2	C	The book memorizers would certainly resent the implication that the elimination of books was due to the overwhelming choice of the people, but that is what Beatty tells Montag: “Authors, full of evil thoughts, lock up your typewriters. They <i>did</i> . Magazines became a nice blend of vanilla tapioca. Books, so the damned snobbish critics said, were dishwater. No <i>wonder</i> books stopped selling, the critics said . . . It didn’t come from the Government down. There was no dictum, no declaration, no censorship, to start with, no! Technology, mass exploitation, and minority pressure carried the trick, thank God” (57-58). Although Beatty’s speech smacks of propaganda, society will always contain people like Mildred who are content to allow the government make personal choices for them, happy to take another pill and visit their “family” in the viewing

		parlor.
3.3	N	There are no librarians in this society; the knowledge of the book memorizers, valuable as it may be from an esoteric standpoint, is only as good as what they know and can share. The only recommendation they can give is what they can get.
3.4	N	Although reluctant readers are enticed with videos, comic books, and journals, it is not to the library, it is away from it. Beatty explains to Montag that the people have abandoned books due to the increasing speed of society and culture; only useless facts, films, comic books, and magazines meet the needs of a culture always wanting to be happy and stimulated (p. 61).
3.5	N	There are no public libraries, and the few books that do exist are hidden and completely unpublicized.
Law 3 Summary	N	In the world of <i>Fahrenheit 451</i> , this law is illegal. All books are burned, and the few readers who do have books either live in secrecy or wander across the country waiting for the new age where knowledge and thought are valued and nurtured, each “carrying” a great book or a piece of one in their memories. There are no librarians, and the government’s policies prevent books from connecting to possible readers. However, Ranganathan (1931) required open access to all books from the third law, “. . . the opportunity to see and examine the book collection with as much freedom as in one’s own private library” (p. 258-259). Taken literally, that part of Ranganathan’s interpretation of the third law is met, since both public and private contact with books are equally illegal, but the spirit of the concept is certainly corrupted by book burning.
4.1	N	The ideal citizen in this novel is Mildred, who accepts the media (and, by association, the state) as not only real, but as family more familiar and pleasant than flesh and blood. People like Mildred have no need for information, rendering the issue moot. But there are people who would like to read and cannot, and they do not have open access.
4.2	C	Officially, there are no books to order and classify, but the book memorizers do have some organization, as Granger tells Montag right before the war begins (and ends): “Each man had a book he wanted to remember, and did. Then, over a period of twenty years or so, we met each other, traveling, and got the loose network together and set out a plan” (p. 153).
4.3	N	The only information it is legal to have is the type of “useless facts” that Beatty tells Montag is fitting to this superficial culture.
4.4	N	There are no working librarians; the few that exist live are either in hiding or are book memorizers.
4.5	N	There are no books to process and shelve.
Law 4	N	Although the world of this novel is quick-moving, it is autonomic

Summary		movement that is valued, not thought-content; Beatty cheerfully relates to Montag a world of “. . . your clubs and parties, your acrobats and magicians, your daredevils, jet cars, motorcycle helicopters, your sex and heroin, more of everything with automatic reflex” (p. 61). Saving the time of the reader is an irrelevant issue, since the types of reading permitted are as light and meaningless as the family on the Mildred’s three walls. Ranganathan displayed unintentional but incisive insight into the type of foible exploited by Bradbury in this novel: “But mental hunger for books is not compelling in the case of most people. Mental thirst for information is not inexorable in the case of most people. Both of them are fleeting in nature. They both die out, unless satisfied immediately on their taking shape” (1960, p. 34). Bradbury takes this truism to its extreme.
5.1	C	The media, with the blessing of the government, provides all of the information citizens are allowed to use, so those two entities do meet the needs of the community, even though for many people, those needs are intellectually restrictive and therefore intolerable. The few book memorizers act as a storage library, albeit small. They do collect all they can; after Montag says he wants to join the book memorizers, the first question Granger asks is what literature he has to offer. Also, their group has devised methods to increase memory and retention (p. 150-151).
5.2	N	The government prevents the creation of libraries; all books are burned by law. At first Montag attempts to oppose the system by planting books in firemen’s homes, but gratefully accepts a fugitive life with the book memorizers when his books are discovered and his house torched.
5.3	N	There are no functioning librarians; the needs of the community as perceived by the state preclude the need for libraries and books.
5.4	N	Libraries, in the few places they exist, are hidden in walls, attics, and basements, not at all pleasing and inviting.
5.5	I	There can be no universally recognized cataloging and classification systems when libraries are outlawed.
Law 5 Summary	N	In the world of <i>Fahrenheit 451</i> , the concept of the library has become obsolete because wisdom and knowledge has been replaced with sensationalism and superficiality to produce an artificial, narcotic happiness. Burning books, according to Fire Chief Beatty, was a natural evolution of society: “With school turning out more runners, jumpers, racers, tinkers, grabbers, snatchers, fliers, and swimmers instead of examiners, critics, knowers, and imaginative creators, the word ‘intellectual,’ of course, became the swear word it deserved to be” (p. 58). Ranganathan used an analogy from biology to offer his argument for the fifth law: “It is an accepted biological fact that a growing organism alone will survive. An

		organism which ceases to grow will petrify and perish” (1931, p. 326). In this novel, the few books that survived stayed alive by constantly moving and staying away from the cities, a wise decision in light of the bombs that dropped at the end. They grew slowly, when people like Montag defected from society, but grew nonetheless.
Overall Summary	N	<p><i>Fahrenheit 451</i> defies Griffen’s four categories of science fiction libraries. Instead of reinventing themselves after political upheaval, the libraries and librarians were outlawed, hunted and burned. The scariest element of dystopias is the knowledge that the horribly imperfect, nightmare world created by the author is much closer to reality than the reader cares to admit. Books are still burned in many places across the world, and Orwellian doublethink is alive and well in the official spin of the governments of most if not all countries, including the U.S. It is in this light that Beatty’s words ring a little too loudly when he describes the “problem” with Clarisse McClellan, an issue education advocates have championed for many years: ““She didn’t want to know <i>how</i> a thing was done, but <i>why</i>. That can be embarrassing. You ask why to a lot of things and you wind up very unhappy indeed, if you keep at it. The poor girl’s better off dead”” (p. 60). Beatty also explains how the need for literature and the liberal arts has been eliminated: ““Don’t give them any slippery stuff like philosophy and sociology to tie things up with. That way lies melancholy. Any many who can take a TV wall apart and put it together again, and most men can, nowadays, is happier than any man who tries to slide-rule, measure, and equate the universe, which just won’t be measured or equated without making man feel bestial and lonely”” (p. 61). Just four years after the publication of this novel, in 1957, Sputnik’s flight would elevate the acquisition of those skills that Beatty scorns to a frenzy as the U.S. tried to become the second nation to enter the space race. The primary reason the regime in <i>Fahrenheit 451</i> offends the intention of Ranganathan’s teachings is that it does not provide open access to books and other materials. Ranganathan was a strong proponent of open access at a time (<i>The Five Laws of Library Science</i> was first published in 1931) and a place (India, still a colony of the British Empire with restrictions placed on people of color and lower classes) when walking into a library and browsing through the stacks did not exist in many places in the world. Open access is necessary for a library or information system to function optimally, and Ranganathan offers specific explanations of how open access is required to meet several laws, such as giving the reader the opportunity to browse for selections and look at related titles in a logical fashion; and saving the time of attendants and employees when patrons would often prefer to locate and examine the books</p>

		themselves. Bradbury's world is the antithesis of everything Ranganathan stood for. None of the five laws are met here.
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Table 4.3. 2001: A Space Odyssey by Arthur C. Clarke.

Law	Result	Analysis
1.1	N	Information from HAL 9000 appears available in the beginning of the novel, but by the end, when a conflicted HAL thinks it must eliminate the human element of error to protect the mission, there is no data flow between the librarian, HAL 9000 and its data banks, and its patrons (Poole and Bowman).
1.2	N	When Bowman finally gains control of the ship, he has the opportunity to read for relaxation and thought-content, but relinquishes it: “. . . he had listened to classical plays—especially the works of Shaw, Ibsen, and Shakespeare—or poetry readings from Discovery’s enormous library of recorded sounds. The problems they dealt with, however, seemed so remote, or so easily resolved with a little common sense, that after a while he lost patience with them” (p. 229). Shortly thereafter, he turns off all versions of the human voice except contact with Earth.
1.3	N	HAL, as both library and librarian, accepts his responsibility of not informing the astronauts of their true mission, to make contact with the obelisk, and kills the astronauts rather than have the information revealed. Ironically, here the librarian becomes the obstruction to library use.
1.4	N	HAL murders all of the astronauts but Bowman. Murder is the most extreme form of interference with a patron’s enjoyment of a book.
1.5	I	When working properly, HAL is designed to run self-diagnostics and identify possible problems before they occur, as with the unit that it intentionally burned out in order to kill Poole.
Law 1 Summary	N	HAL 9000, and the information, libraries, and flight command data it contains only offers itself for use when it does not feel threatened by the rest of the crew. Ranganathan expressed the first law as more than just an invitation to read; he saw it as a sacred mandate that librarians must execute: “A library authority . . . should interpret all codes and regulations in a liberal spirit so as to maximize the use of books” (1960, p. 25). By sabotaging the mission and avoiding the confrontation that it knows will mean a change in its relationships with the humans, HAL destroys the notion that its information is for the use and enrichment of its partners.
2.1	Y	HAL contains vast stores of recreational materials; one of Bowman’s favorite off-duty activities is to “. . . wander at will through the ship’s inexhaustible electronic library” (p. 126).
2.2	Y	There is no evidence of prejudice or bias based on skin color or class. Although there is political tension in the novel, none of the problems resulting from that are present in space.
2.3	I	The environment in this novel is specifically designed for

		astronauts; however, this should not reflect negatively upon consideration of the question.
2.4	C	In the beginning of the novel, each of the astronauts establish a routine that includes a relationship with HAL and its vast library; but as the guilt and conflict mount in HAL, it becomes increasingly solitary, hostile, and restrictive.
2.5	Y	HAL acts as a full-service librarian; its materials are catalogued electronically, since Bowman searches the databases for materials.
Law 2 Summary	Y	Since the second law is primarily concerned with book selection and access based on physical or belief-based factors, HAL 9000 meets the criteria for the law. At breakfast, it provides “. . . the morning’s radio-fax edition of the <i>World Times</i> ” (p. 121); it offers a very large electronic library of world literature and music; it even offers gaming: “For relaxation [Bowman] could always engage Hal in a large number of semimathematical games, including checkers, chess, and polyominoes” (p. 127). HAL even plays fairly when it is competing against humans: “If Hal went all out, he could win any one of them; but that would be bad for morale. So he had been programmed to win only fifty percent of the time, and his human partners pretended not to know this” (p. 127).
3.1	Y	Access to HAL is available throughout the ship by voice activation: “Poole and Bowman could talk to Hal as if he were a human being, and he would reply in the perfect idiomatic English he had learned during the fleeting weeks of his electronic childhood” (p. 118), and in the beginning of the mission, it is very helpful and caters to the needs of the crew.
3.2	Y	HAL’s libraries and data/memory stores are tailored to the mission: “[Poole and Bowman] with, if necessary, help from Hal’s vast stores of information, could cope with any problems likely to arise during the voyage . . . ” (p. 122).
3.3	C	HAL begins the voyage as a full-service librarian, but once it lies about the AE-35 unit and begins killing astronauts, it ceases to be a helpful entity.
3.4	I	By the time Bowman became a reluctant reader, HAL’s higher order functions had already been shut down.
3.5	C	The ship/library begins the voyage as a comfortable place to read and learn, but Bowman is near hysteria by the end of the voyage because of an understandable disruption in ship’s maintenance due to HAL’s breakdown. As calmly as he can, Bowman updates Earth on his status as he attempts to contact TMA-2: “The air in the ship is getting quite foul, and I have a headache most of the time. There’s still plenty of oxygen, but the purifiers never really cleaned up all the messes after the liquids started boiling into vacuum” (p. 247).
Law 3	C	When HAL is acting within the operating parameters it was

Summary		<p>designed to use, it is a fine electronic librarian, a computer with circuits designed to mimic the operation of a human brain. However, Ranganathan asserted that part of the third law was the librarian's responsibility to place books into the reader's hands, and HAL cannot perform that function after his breakdown; Bowman becomes his own librarian, which Ranganathan would not condemn because of his philosophy of open access, but he would not approve of a librarian that did not have the patrons' best interests in mind, despite administrative directives to the contrary. HAL is an information provider in conflict: "He [HAL] was only aware of the conflict that was slowly destroying his integrity—the conflict between truth, and concealment of truth" (p. 192). It cannot effectively provide information and services if its validity and effectiveness cannot be trusted.</p>
4.1	C	In the beginning of the voyage, there is an instantaneous response to all questions posed to HAL; however, as HAL deteriorates, it severs the crew's ties to Earth and to each other.
4.2	Y	The library is electronic only and is cataloged appropriately. Bowman occasionally researched history: "He had become fascinated by the great explorations of the past—understandably enough, in the circumstances. Sometimes he would cruise with Pytheas out through the Pillars of Hercules, along the coast of a Europe barely emerging from the Stone Age, and venture almost to the chill mists of the Arctic" (pp. 126-127). Searches for specific topics like those can only be expediently executed with a cataloging system to guide the patron.
4.3	C	In the beginning of the voyage, HAL is an effective information desk and reference service; however, as it feels more and more guilty for deceiving Poole and Bowman, HAL begins to give its patrons false information and becomes paranoid and homicidal.
4.4	N	HAL becomes so obsessed with its conflict between Poole's and Bowman's understanding of the mission and HAL's understanding of the actual mission, that it loses the capacity to meet the astronauts' unstated needs. Ranganathan described a delighted reader whose needs were unexpectedly met by an efficient and well-run library and catalog; by the middle of the novel, HAL was providing misinformation about the AE-35 unit, the antithesis of quality reference and information services.
4.5	I	This issue is not relevant in this electronic library; no new materials are expected due to the isolated nature of the mission.
Law 4 Summary	C	Before HAL breaks down, it has every intention of assisting its fellow crewmembers, and does so on a consistent basis. But beginning with the AE-35 incident, Bowman gradually discovers that HAL has wasted his time and attempted to kill him. After HAL is disconnected, Bowman has no librarian.

5.1	I	HAL's information capacity and status is designed to be constant, not necessarily increase; therefore, this issue is moot.
5.2	N	<p>HAL's breakdown, the single greatest factor of the mission, is mostly attributed to Mission Control:</p> <p>"Therefore it was best that Poole and Bowman . . . should not learn the mission's full purpose, until there was need to know.</p> <p>So ran the logic of the planners; but their twin gods of Security and National Interest meant nothing to Hal. He was only aware of the conflict that was slowly destroying his integrity . . ." (p. 192).</p> <p>Even though it was unwittingly, Mission Control impeded the development of HAL.</p>
5.3	I	No such changes are possible during the journey.
5.4	C	In the beginning of the journey, HAL created a casual and comfortable relationship with the astronauts. However, by the middle of the novel, HAL became hostile.
5.5	Y	There is an electronic catalog system that is accessible with or without HAL's higher order brain functions.
Law 5 Summary	N	<p>Although there are ongoing readings and measurements of space phenomena during the voyage, the library contained within HAL ceases to grow when it cuts the increasingly discordant link with Earth, the only entity that can objectively assess HAL's performance: "The link with Earth, over which his performance was continually monitored, had become the voice of a conscience he could no longer fully obey" (p. 192). Ranganathan identifies two types of libraries that apply to this law: storage libraries and service libraries. Storage libraries grow indefinitely: ". . . there can be no limit to the size of its book-collection or of its staff" (1960, p. 40). However, HAL discontinues all growth when it begins plotting against the astronauts. Service libraries, according to Ranganathan, do not contain limitless materials or staff, but they should strive to serve and update ". . . a new generation of readers replacing the old continuously, and of a new set of books replacing the old continuously, and of a new staff replacing the old continuously" (1960, p. 40). There is no replacement of materials or staff: the staff changes from one librarian to none throughout the course of the novel, and the vast stores of recorded materials are not even used by the end of the novel.</p>
Overall Summary	N	<p>The library in <i>2001: A Space Odyssey</i> is a completely computerized or roboticized library, in Griffen's (1987) four types of science fiction libraries. HAL 9000 has a personality that changes and ultimately breaks down, making it more robot or artificial intelligence than computer: ". . . the final result [of the most recent computer revolution in the novel] was a machine intelligence that could reproduce—some philosophers still preferred to use the word</p>

	<p>‘mimic’—most of the activities of the human brain, and with far greater speed and reliability” (p. 117). But whatever it is called, it is not an entity that follows the five laws of library science. HAL 9000, unlike the Librarian in <i>Snow Crash</i> that always has the interests of the patron at stake, is self-centered (as much as a computer can be) and obsessive; it lies, murders, and experiences a crippling paranoia that causes it to “remove the source of his frustrations” (p. 193), the Earth that reminds it of its conflict, and additionally, the astronauts that execute Earth’s orders. HAL’s conflict causes it to alter its library philosophy from service to preservation, as it prepares for the possibility of completing the mission at all costs, including the lives of the astronauts: “And then, following the orders that had been given to him in case of the ultimate emergency, he would continue the mission—unhindered, and alone” (p. 193). Like other science fiction computers run amok, as in <i>Colossus: The Forbin Project</i>, in which two Cold War supercomputers take control of the world’s governments, and the <i>Star Trek</i> episode “The Changeling,” in which an enhanced but confused robot probe sterilizes alien humanoid infestations instead of alien soil and water samples, HAL 9000 arrives at the determination that it alone is qualified to make mission decisions, and that the human element is too unpredictable to guarantee success. However, Ranganathan’s first law, “Books are for use,” replaces the older standard library policy “Books are for preservation.” Ranganathan pointed out the folly of keeping books for preservation only: “Even as we are anxious to hand over our books to posterity, every succeeding generation may be actuated by an exactly similar altruistic motive; and in consequence books may have to be for ever in chains and may never be released for use” (1931, p. 27). Once HAL begins the transition to preservation at the expense of the astronauts, it ceases any pretension to service and the type of librarianship that Ranganathan supported.</p>
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Table 4.4. *Neuromancer* by William Gibson.

Law	Result	Analysis
1.1	C	In <i>Neuromancer</i> , information is stored in a place that is half-Internet, half-virtual reality game. It is accessed only through a special computer called a cyberspace deck that people use to project their "... disembodied consciousness into the consensual hallucination that was the matrix" (p. 5). Only those people with the proper equipment and training, called cowboys, can navigate the matrix at a high level. Cowboys are mercenaries, and only those people, usually business competitors, who can afford their services are able to access information. Some information is free or subscription-based, such as the précis on the street gang that help to steal the personality construct of McCoy Pauley, but the types of information cowboys specialize in are high-tech corporate secrets, security systems, and other illegal activities.
1.2	Y	After stealing the personality construct of McCoy Pauley, the greatest cyberspace cowboy ever, Case uses it to help him as he travels through cyberspace as a guide and mentor, the Virgil to his Dante. The construct is maximized for its thought-content. Also, Case uses information about the two Artificial Intelligences in the novel, Wintermute and Neuromancer, to escape at the end, alive and well. Additionally, there are several "go-to's" (researching a person or company) that demonstrate action based on the information; i.e. Case has a go-to done on Armitage to determine that he is not who he appears to be.
1.3	N	The type of research that cowboys do is stealing, and it is highly illegal. The penalty for intrusion is instant brain damage or death caused by the corporation's or organization's ICE, Intrusion Countermeasures Electronics.
1.4	C	Information sources like the Dixie Flatline; Case's computer, accessing "... its array of libraries, journals, and news services" (p. 58); and the simstim connection with Molly during their battles; are very helpful and unimpeded. However, Wintermute does manipulate Case, Molly, and Armitage into self-serving actions that do harm to all parties, even if Case was in worse shape before being chosen by Wintermute for his liberation.
1.5	Y	Information is being updated continuously in this novel; characters spend much time and effort keeping up with new styles and body enhancements, and technological and chemical improvements are highly prized, causing cowboys to try to steal the information.
Law 1 Summary	Y	Books are for the use of those who are able to use them. In Gibson's bizarre future, there are many distractions, such as drugs, sex, and virtual reality, that imprison many people. Some people, such as those who work for major corporations, are residents of their

		companies as well. For security reasons, they seldom leave the company compound. There is no middle-class discussed in this novel, readers are just shown just people living on the edge, and those in great comfort. People from both classes use information, but often, the lower class tries to steal information (and the money they can get from selling the information) from the upper class. Part of Ranganathan's definition of use for books includes a central location for the library, one that is easily accessible and readily available (1960). Although many people have lower access to information, and a level of the matrix similar to the Internet is "...experienced daily by billions of legitimate operators, in every nation" (p. 51), the information people like Case seek is dangerous and valuable, unavailable to most if not all normal operators.
2.1	I	The characters shown in this novel do not discuss or deal with books outside of their jobs. Selection is not an issue.
2.2	Y	Race, class, or belief are never an issue in this novel; Case interacts with many different people throughout the novel and none were denied access because of anything but money if the information was illegal.
2.3	Y	In a children's program that Case briefly watches, the matrix is described as the sum of all of the data networks on the planet, a seemingly endless series of data, that is used by billions of people daily. This information seems to be available in the same fashion as the Internet.
2.4	N	The type of work Case does is strongly discouraged, and although Case watches a program that says that billions of people legally use the matrix everyday, readers are never shown regular home computer use in this novel, possibly because computers besides Case's cyberspace deck are operated remotely and are notebooks or PDAs (or even smaller).
2.5	Y	Information is computerized; the only books seen are in a vault in a house in space owned by very old and eccentric clones. The computers give immediate answers to reference questions. The combination of Wintermute and Neuromancer represents an enormous amount of data; the new being claims it is the matrix at the end of the novel.
Law 2 Summary	Y	It is important not to confuse access with willingness. Ranganathan advocated availability and access; he wanted "subject scatter," selections to suit every reader and taste, and that could cover much: "The curiosity and the interest of the people of a locality may be widely varied" (1960, p. 28). There is a mind-boggling amount of information available, both in the matrix and within the two AIs. But people cannot be forced to read if they choose not to do so. Many people in Gibson's world seem uninterested in reading, but could if they desired. However, readers have the opportunity to read

		books or access information suited to them if they have the desire, and in some cases, the money.
3.1	Y	Most information is electronic, and it is available in a marked and/or mapped "building" in the matrix.
3.2	C	Much of the information in the matrix is corporate and protected; it may contain blueprints for the latest cyberspace deck or the procedure for a new type of replacement surgery. This information is only for the public in a form that is processed and sold, but cowboys may try to break the corporation's ICE and steal it. It is unclear whether the market drives the demand or vice-versa.
3.3	N	The one actual librarian in the novel is at the Sense/Net archive, where personality constructs and other software belonging to the network are stored. She is white-faced, ". . . covered between two lockers, her cheeks wet, eyes blank (p. 65). She certainly is not making any suggestions, and she is librarian of a specialized, secure library, so the public may only view the library's contents in its offerings on the network. The librarian on Case's deck does not make suggestions, it merely respond to commands. Wintermute makes suggestions, even orders, but they are not always in the best interest of the patrons.
3.4	N	There is no indication of any library programming.
3.5	N	The matrix is the library, and it is complex and vast. Although it is not well-publicized, it is well used, even taken for granted. The products manufactured by the companies whose data resides in the matrix are extensively advertised.
Law 3 Summary	N	When patrons do not have a library to browse through, when all cataloging and reference systems are electronic, something is lost. When potential readers browse a shelf and see other items related to their interests, ". . . the attention of a reader coming for books on a particular subject will be attracted, in this arrangement, to the books in the neighboring subjects also. Thus the chance for these neighboring books getting their readers will increase" (1960, p. 31). Without that opportunity, patrons are robbed of the full library experience: synthesizing information from different sources, expanding interests, and talking to a librarian (and possibly other patrons, as in a book group) about book choices and options, new books coming soon, and related journals or A/V materials. Although electronic catalogs and online databases can save time and offer convenient features like remote access and searching, there are is an intangible element lost by doing all research online or in an electronic environment: many people do not feel comfortable with technology and prefer human contact, or simply prefer books over computers or matrices. If both print and electronic options are possible but not available, patrons are being cheated out of learning or recreational opportunities.

4.1	Y	Reference information is automated and immediate. The ICE-breaker program that Case and Dixie use takes days to crack through the ICE protecting the Tessier-Ashpool data site, but that is not perceived as a problem; it is expected to take that long because of the complexity of its task.
4.2	I	This is not an issue in this novel.
4.3	C	When asking for questions of public knowledge, like those that could be answered on popular Internet search engines, information is readily available in the matrix. However, valuable, cutting edge information is protected by ICE, and only an experienced cowboy can attempt to access it.
4.4	N	Unlike the librarian in <i>Snow Crash</i> , who offered related information frequently, the computers in <i>Neuromancer</i> are far less interactive and cooperative. Case's computer responds to commands, but does not offer suggestions like a librarian. Wintermute communicates with Case, but it does not seek to meet Case's needs; it wants to fulfill its own.
4.5	Y	Data are constantly being uploaded and accessed; as soon as valuable corporate secrets are posted, cowboys attempt to steal it and sell it to the highest bidder. There does not appear to be a delay between uploading and access.
Law 4 Summary	C	<p>Ranganathan stressed logical and varied classification as one of the primary methods to save the reader's and librarian's time. According to Ranganathan (1960), appropriate and complete classification would:</p> <ul style="list-style-type: none"> • save the objective time of the reader, • include a bipartite catalog, • delight the patron by featuring similar books in close shelf proximity to the book he seeks, • and centralize classification and cataloging. <p>When Case wants information, he performs or contracts a go-to, saving time by finding a large amount of information from many different but reliable sources. Classification and cataloging are certainly centralized; they all exist in the matrix. However, there is no delight shown by any of the characters over information searching, especially when a cowboy is fighting corporate ICE; more than one cowboy has died as a result of failing to neutralize ICE. Ranganathan insisted, rightly so, that library use must be both efficient and friendly.</p>
5.1	Y	The matrix is a storage library, and it does appear to collect all that it can. When Wintermute merges with <i>Neuromancer</i> , they become the matrix, and the AIs describe the matrix as “. . . the sum total of the works” (p. 269). Whatever exists anywhere within the information net exists in the matrix. Throughout the novel, Wintermute has

		access to information portals like television screens and public telephones because it in some way occupies the matrix.
5.2	N	At the end of the novel, it becomes the matrix's natural growth and development to absorb and commingle with Wintermute and Neuromancer, but Jane and Peter attempt to halt the process; Jane's family loses control over the AIs after they are liberated.
5.3	Y	Cowboys die if they do not constantly update their skills, because new technology is always being utilized to prevent them from accessing corporate data sites. When Case's adventure ends at the novel's conclusion, there are only three things he feels he needs: a new pancreas and liver, a ticket to the Sprawl, and a new computer. Great emphasis is placed on having the latest equipment, and people who hire cowboys expect them to have it.
5.4	Y	When Case is again able to use the matrix he eagerly anticipates not only his work but also the way being a cowboy makes him feel: "... [the matrix] flowed, flowered for him, fluid neon origami trick, the unfolding of his distanceless home, his country" (p. 52). Like <i>Snow Crash's</i> Hiro Protagonist, Case finds beauty and peace in "... the bodiless exultation of cyberspace" (p. 6). There is no indication that the matrix has a limit or will stop growing. It is described as, "A graphic representation of data abstracted from the banks of every computer in the human system. Unthinkable complexity" (p. 51).
5.5	C	There are little or no traditional books in use, at least seen in this novel; all data and information are electronic. There is no evidence of previous programming when Case makes requests of his computer, except modifications made by Finn, but when he needs information, he simply asks his computer and it searches databases, news, and other information sources. However, Wintermute and Neuromancer are their own culture and do not necessarily follow any established patterns; they are becoming a new classification and entity, and cannot be analyzed or assessed by traditional methods.
Law 5 Summary	Y	The main focus of the fifth law is the element of growth in a library, and that is not a problem for the matrix with its myriad of smaller data areas. It is a storage library, and although all data are not available for public consumption, no current corporation freely posts valuable information on the Internet; businesses cannot be held accountable for denying the public information access to proprietary technology and information. Ranganathan, justifiably concerned just as much about the physical layout, form, and function of libraries as the philosophy guiding them, reminded librarians and library administrators they should not "... short-sightedly allow itself to be unduly influenced by the present size but should plan its lay-out in such a way as to make it easy to keep pace with the necessary growth of the library" (1931, p. 327). The first time Case jacks in to cyberspace, he is liberated by the boundlessness of the matrix, "... the unfolding of his

		distanceless home, his country, transparent 3D chessboard extending to infinity” (p. 52). As described in <i>Neuromancer</i> , the matrix is as infinite as the human imagination.
Overall Summary	Y	<p>The libraries and information entities in <i>Neuromancer</i> are not perfect, but they are logical and believable predictions of what the world could be in 100 years, and have value beyond this study for that quality. Since no books are seen except in a decades or centuries old space-based family corporation run by clones and cryogenically-preserved family members, the matrix in <i>Neuromancer</i> qualifies as one of Griffen’s “completely computerized or roboticized” libraries. As Griffen described, characters in this novel, “. . . have many more opportunities in their wired environments to get information at will” (1987, September, p. 137). Ranganathan would have approved of the matrix as an information and reference source. In studying Ranganathan’s works, it is striking how often he refers to open access—it is his rallying cry and his banner. The matrix is open access taken to its next level: the sum of human knowledge in a big room with marked doors that patrons enter to get information. Some of it is free, and some of it costs an indeterminate amount. But like <i>Snow Crash</i>, a second generation cyberpunk novel that pays homage to Gibson in its sensibilities, the system works. There are glitches, like the Snow Crash virus in the Stephenson novel and ICE in Gibson, but information is highly valued in both novels, and that quality is consistent with Ranganathan’s philosophy. Ranganathan spent much time discussing library staff levels, policies, and procedures, all rendered useless in these cyberpunk novels because standard human librarians and physical libraries are obsolete relics (although the cowboys in <i>Neuromancer</i> are human, they are criminals who do not manage physical libraries—they are professional thieves). However, the laws and their applications have many uses both in and out of library science.</p> <p>The AIs are more problematic as libraries that meet Ranganathan’s rigorous standards. Wintermute’s self-serving demeanor and willingness to place people in grave danger cancels out its tremendous capacity to infiltrate and control networked devices and therefore access and disseminate (if desired) tremendous amounts of information. The AIs’ greatest danger is coming to believe that they are bigger and more significant than Man; it happens with HAL in <i>2001: A Space Odyssey</i>, and can potentially happen to the new entity that inhabits the matrix.</p>

Table 4.5. *The Giver* by Lois Lowry.

Law	Result	Analysis
1.1	N	The Receiver tells Jonas that taking a mate and raising a family will be difficult for him because "... the books are forbidden to citizens" (p. 102). This violates Ranganathan's fundamental principles and philosophy.
1.2	Y	The few books citizens do have they use appropriately: "... a dictionary, and the thick community volume which contained descriptions of every office, factory, building, and committee. And the Book of Rules, of course" (p. 74). Also, it is assumed that the books the Receiver has are also used well by him, since he has no major problems except his age and his need for replacement.
1.3	N	Neither the Committee of Elders nor the Receiver do anything to spread books to the public.
1.4	N	By not disseminating any memories to the community, the Committee of Elders and the Receiver are interfering with the enjoyment and/or potential enjoyment of reading.
1.5	I	There are no books of the type intended in this concept to replace.
Law 1 Summary	N	If no books besides reference existed at all, it could be argued that the few books in circulation are used and that this law is met. However, because the totalitarian government in this novel allows only non-fiction books to exist for general use, all of the passion, emotion, pain, and pleasure of life that embody fiction belong to the Receiver alone. Therefore, the Receiver's books are not for use, they are merely allowed because the Committee of Elders needs one person to access and interpret them.
2.1	N	Book selection to the masses is limited to the books mentioned in 1.2; this certainly cannot reflect everyone's taste, regardless of how much the government controls the people.
2.2	N	No one but Jonas is welcomed; it is a library for one or two people only.
2.3	N	These people do not always live with the general population, and none of the locations in which they live appear to have books or their equivalent.
2.4	N	Since books are never offered, browsing and check-out are unfamiliar concepts to the people of the novel; i.e. Jonas was amazed to see as many books as the Receiver had—he commented that he "... couldn't imagine what the thousands of pages contained" (p. 74).
2.5	I	Since there are no books in general circulation, cataloging is irrelevant.
Law 2 Summary	N	Every reader is certainly not reading his book in this novel; this totalitarian leadership has managed to remove pleasure reading from the collective unconscious of the community, hence Jonas's

		amazement at the Receiver's books. Even Jonas cannot read "his" book until he learns how to use books. Many current library patrons take a basic understanding of a free library's lending practices for granted, but to a person who has never even seen a room of books before, that knowledge cannot be expected.
3.1	I	There are no browsers and no libraries available to the general population.
3.2	Y	Stating that the community is not served well by governmental policies is not possible because the critic could only answer the question based on the mores and values of his society. Additionally, with the possible exception of Jonas and Gabriel, the baby he saves from extermination, the community does not seem to be unhappy or maladjusted, and its inhabitants do not appear to miss what they have never known. Ironically, Jonas would not have been identified as the new Receiver if he had not been different, more sensitive and curious than his peers.
3.3	C	This is true for Jonas, who is led appropriately by the Receiver, but untrue for the rest of the population, because they do not have librarians or libraries in the traditional sense.
3.4	N	The fact that Jonas's father kills infants guiltlessly (as he should in the context of the novel) indicates that very little reluctance or disobedience is accepted in this highly ritualized culture. Also, Jonas does not need to be enticed to the library; he is not a reluctant reader, and he would do his job out of a sense of obligation without persuasion, as would most if not all citizens.
3.5	N	The only true library, the one in the Receiver's workplace, is hidden, and its contents are considered top secret, shared by only Jonas and the Receiver.
Law 3 Summary	N	When discussing the third law, Ranganathan (1931) specifically mentioned issues such as open access to materials (still a new concept when <i>The Five Laws of Library Science</i> was first published in 1931), shelf arrangement, cataloging, publicity, book selection, and reading to illiterates with the hope of helping them to learn to read. None of these types of issues are evident in this society; books do not get to their readers because there are only two library patrons. Although Jonas does get to read, it is not clear that the books he needs are getting to him; as many books as the receiver possesses, his library is by no means unlimited.
4.1	Y	In all situations presented in this novel, people are provided with immediate access to information. According to Jonas, every home has the necessary reference volumes they need, and the Receiver provides instant answers to Jonas's questions, either with images, memories, or his experience.
4.2	I	This area is not addressed; the layout of the Receiver's books was

		never discussed, and the citizens do not have books to shelve or display.
4.3	Y	The Receiver told Jonas, "It's my life" (p. 104) when describing what it is like to be the Receiver; he must always be accessible to either a Receiver-in-training like Jonas or the Council if it has a rare question. Other citizens have the only other reference books they need at their fingertips.
4.4	C	The Receiver attempts to anticipate Jonas's needs and meet them; the unspoken needs of the citizens of the community are not met, mainly because they do not have librarians.
4.5	I	There are no books in circulation.
Law 4 Summary	Y	In most of the situations where this law would apply, the time of the readers is saved. Unfortunately, that is because the general public does not have more than a couple of books to choose from, but the spirit of the law, that required or desired information should flow smoothly to the reader, is observed in this society in which the public requires very little information.
5.1	N	There does not seem to be any collection and growth in this culture. Even though there is video access, there does not seem to be an archive, except for the memory of the Receiver.
5.2	I	There is no natural growth and development; no organization could impede what does not exist.
5.3	I	Even if the Receiver was considered library staff, the parameters of the question do not relate to the culture in question, because there is no media in the traditional sense except for the Receiver's collection, which seems static.
5.4	N	Ranganathan envisioned libraries as friendly buildings with easy and open access to all areas; that vision is not addressed in this novel.
5.5	I	There are no cataloging or classification systems described.
Law 5 Summary	N	The society in <i>The Giver</i> is not growing, so its information systems are static as well. No new books are published; no new memories are saved.
Overall Summary	N	Griffen (1987) would define the data or information system in <i>The Giver</i> as reinvented, but it has become totally static. Telescreens in every home and office suggest a totalitarian government that has strict control over the community, and all activity is strictly calculated, deliberate, regulated, and controlled. Additionally, a previous cataclysm has removed people's ability to see color and to save memories; this information/data causes chaos if left unchecked. The Receiver accepts the chaos/information/data and occasionally consults the leaders with his insight. A modern parallel is depending on a computer for information without understanding how the computer works or if the information is valid or not (or what to do if the computer breaks down). To the leadership, the Receiver is their

		<p>library, but they seldom use it. The public has no library, and does not feel the need for one. It is unclear whether the people of this culture would want a library if it was offered to them, since the people, except for Jonas and the Receiver, lack sensual insight, which is often the basis of great literature. People in a colorless world would have a very difficult time reading about colorful lives. Static libraries, lives, and societies were exactly what a man raised in colonial India in the early part of the 20th Century would abhor, and he could never approve of the government's solution to the cataclysm in this society that caused all of the libraries' destruction.</p>
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Table 4.6. A Canticle for Leibowitz by Walter M. Miller.

Law	Result	Analysis
1.1	Y	Books are available to all, but during the several hundred years after the first war, no one but the monks care about the Memorabilia, the collection of book fragments, diagrams, blueprints, documents, etc. that the abbey collected from the last war. Thon Taddeo accuses the order of being overprotective of its collection, but Dom Paolo argues that their silence did not represent closed access. Monsignor Marcus Apollo explains the abbey's stance to Thon Taddeo: "They aren't particular about who reads their books, as long as he washes his hands and doesn't deface their property" (p. 113). As a preservation-only library, the order is not obligated to advertise its presence. The abbey simply safeguarded the Memorabilia for a disinterested society until it was revived.
1.2	C	The Memorabilia were not used for their thought-content during the time after the war when society rebelled against technology, but they were used for their thought-content beginning with Brother Kornhoer's arc light and on until the space migration.
1.3	Y	At the end of the novel, it is Zerchi's response to a threatening political situation that ensures the integrity of the Memorabilia. Dom Paolo refuses to let the Memorabilia leave the abbey; Thon Taddeo must travel to the abbey to study the remnants of the last technological civilization.
1.4	C	When Thon Taddeo visits, he is verbally attacked by Brother Librarian; however, everyone else treats him with respect. Brother Librarian cannot make the transition from closed access to open access.
1.5	Y	Part of the function of the abbey is to preserve and recopy the Memorabilia. Brother Francis spent fifteen years copying and illuminating "Transistorized Control System for Unit Six-B."
Law 1 Summary	Y	In <i>A Canticle for Leibowitz</i> books are Memorabilia and are treated as holy relics. However, because they are church relics, and at one time they had to be hidden or destroyed, no one uses them for many years. When the time comes for the Memorabilia to be used again, the abbey allows anyone to come and inspect the materials. The abbey's intentions were pure, for if the order had truly followed Ranganathan's philosophy and "... interpret[ed] all codes and regulations in a liberal spirit so as to maximize the use of books" (1960, p. 25), the Memorabilia would have been destroyed before anyone could use them. The brothers, also called "bookleggers" and "memorizers" because of their once disdained activity of preserving books, have pledged their lives to the Memorabilia, and they protect it because the abbey is by nature a preservation library, and they know on some level that they are preserving this information for

		future generations. Therefore, the books are for as much use as is desired.
2.1	N	The Memorabilia are bits of information, such as diagrams, partly burned volumes, memorized and copied books, and other records. It is almost all scientific material and literary classics, certainly not an appropriate mix for the general public.
2.2	Y	All are welcomed, though few come.
2.3	N	There are no accommodations for the elderly, very young, or disabled.
2.4	N	Visitors to the abbey may inspect the Memorabilia, but no relics may leave the grounds of the abbey. The brothers risk attack when they refuse Thon Taddeo, the relative of the local warlord, his request to have Memorabilia sent to his collegium across the desert. Preservation is the first priority, access is second: "Usage was secondary, and to be avoided if it threatened longevity" (p. 181).
2.5	I	Items are kept in casks; it is unclear whether or not they are ordered and cataloged.
Law 2 Summary	N	There are not that many readers at several times during the time span of the novel, and although the abbey does not intentionally limit access to the Memorabilia, no one makes any great effort to let anyone know what the Memorabilia contains. However, the blame does not fall entirely upon the abbey; society is at fault as well. Ranganathan expected the public to have a thirst for knowledge, to want books for relaxation, elevation, and ". . . profound books to satisfy the inner urge towards whatsoever is elevated, enlightening, and sublime" (1960, p. 28). Even the "learned" Thon Taddeo is presented as a pompous, egocentric mock philosopher and scientist, more interested in competing with past glories than in enlightenment.
3.1	N	Memorabilia are kept in casks and are difficult to handle because of their age. Brother Librarian was upset each time the casks were opened, because he knew that ". . . each unsealing represented another decrease in the probable lifetime of the contents of the cask" (p. 181). One can see the Memorabilia, but it is an arduous process.
3.2	Y	Although the public may not know it, books are selected for their needs. I. E. Leibowitz founded the abbey ". . . to preserve human history for the great-great-great-grandchildren of the children of the simpletons who wanted it destroyed" (p. 60). After many generations, the monks thought, people would again be interested in knowledge and science. The Memorabilia would be preserved until needed.
3.3	N	Brother Librarian is so concerned about preservation that he would prefer to never allow access. He does not have knowledge of the contents of the Memorabilia.

3.4	N	No one is enticed to the library; it is available but unadvertised.
3.5	N	Thon Taddeo best describes the secretive nature of the abbey: ““You haven’t withheld it [science]; but you sat on it so quietly, nobody knew it was here, and you did nothing with it”” (p. 207). It is available, but it is neither well-publicized nor comfortable.
Law 3 Summary	N	Although the books and diagrams that comprise the Memorabilia are intended for the public, it may be hundreds of years before they want it. Since the monks are unaccustomed to providing access to the Memorabilia to outsiders, the process is deliberate and cumbersome. Ranganathan believed that the book required the librarian and the library to become known to the reader, and that librarians were cursed every time a book was left on a shelf, forgotten. In this area, the abbey falls far short of Ranganathan’s ideal of fully open access.
4.1	N	When Thon Taddeo decides to inspect the Memorabilia, he is hesitant to make the “long, dangerous trip” (p. 113) to the abbey. Eventually, of course, he makes the trip, but the whole journey requires six months, not a particularly efficient process.
4.2	N	The books are stored in casks; they cannot be cataloged because no one knows exactly the content of the items beyond their names.
4.3	N	Although Brother Kornhoer does assist Thon Taddeo, there is no information or reference desk at the abbey; most of the monks know little or nothing of the thought-content of the Memorabilia.
4.4	C	Although Brother Kornhoer dazzled Thon Taddeo with his arc light, he was not meeting Taddeo’s needs as defined by Ranganathan: “. . . the satisfaction of unexpressed wants and to the getting of something which he did not know how to ask for” (1960, p. 36). Kornhoer cannot provide specialized reference information or shed additional insight outside of his one discipline, and he may be the only monk who could provide any information at all.
4.5	N	Items are meticulously copied for years; the illuminations are a slow and arduous process. Brother Francis placed a greater emphasis on his own illumination than on the original document from the fallout shelter, spending fifteen years on the masterpiece; his robber keeps the eye-catching illumination, not the more valuable original. Although, while discussing book selection, Ranganathan did state that the first law urges “. . . the promotion of the production of beautiful books on all subjects, and in all styles” (1960, p. 26), in the same paragraph, he also indicated that a library “. . . should not waste its money on book curios or costly books in infrequent demand.” Books are not to be kept for show in Ranganathan’s libraries, only those that will be read and personally experienced by the readers (p. 27).
Law 4 Summary	N	Ranganathan believed that classification and cataloging were the royal road to the fourth law. Both elements are missing in this

		novel. The Memorabilia are a random hodgepodge of holy relics, the remainder from the purges of the Simpletons. For much of the novel, there is no one at the abbey who could catalog the Memorabilia even if cataloging was desired.
5.1	Y	When Brother Francis indicated that the abbot had closed up the fallout shelter he discovered, it was not before any potential Memorabilia was removed: “. . . [Francis] knew that in one of the abbey’s workshops, monks were at work on the documents, not only his own but some others that had been found in the ancient desk, before the abbot ordered that the shelter be closed” (pp. 56-57). Although the abbey leaders are concerned that the existence of the fallout shelter may ruin their chances for Leibowitz’s beatification, they are still dedicated enough to preserve the documents from the room.
5.2	N	The strict rules of the church do not restrict the abbey from copying and preserving, its two primary functions, so the library’s natural growth and development as a wing of the church proceeds without interference.
5.3	N	After several injuries and a general feeling of malaise surrounding it, Brother Kornhoer’s arc light is replaced with a gold crucifix and some candles; Dom Paolo instructs his monks, “Who reads in this alcove henceforth, let him read <i>ad Lumina Christi!</i> ” (p. 218). Later in the novel, Dom Zerchi complained about his electronic stenographer: “As usual, the contraption was on the blink. It miscapitalized, misspelled, and interchanged various words. Only a moment ago, it had committed electrical <i>lèse majesté</i> on the person of the sovereign abbot, who, after calling a computer repairman and waiting three days for him to appear, had decided to repair the stenographic abomination himself” (p. 229). The monks have an uncomfortable relationship of technology; they know it was a factor in the last war, and they are wary and cautious in its use.
5.4	N	The abbey is neither pleasing nor inviting; it is functional and Spartan at best.
5.5	I	There is no interconnected library system, so a universal classification system is not possible.
Law 5 Summary	N	Leibowitz and the other founders of the abbey knew of the anti-intellectual fervor outside of the abbey and did not focus their attentions to growth; preservation and storage were their only priorities. Although rare discoveries like the fallout shelter enable growth of the collection, the only other growth that occurs are the new illuminations of the older documents and texts. At the time of the abbey’s inception the two main functions of the brothers were as bookleggers, transporting materials from elsewhere to the abbey; and as memorizers, each choosing short sections of a work to be memorized and later written down. However, due to the

		<p>increasing danger of traveling and the political uncertainty as time passes in the novel, the monks more and more infrequently leave the abbey, and it is no longer possible for them to accumulate materials for the Memorabilia collection. But at a more fundamental level, Ranganathan would not have even considered the monks' Memorabilia collection a library: "It must be clearly realized that a collection of books without readers has no more right to be called a library than a group of readers without books and that the mere juxtaposition of books and readers without the service of a staff, that know to effect contact between the right reader and the right book, at the right time and in the right manner, cannot constitute a library either" (1931, p. 327). Under Ranganathan's definition, the Memorabilia are merely a jumble of relics from a long-forgotten age, kept alive by a group of dedicated but misguided Catholics.</p>
Overall Summary	N	<p><i>A Canticle for Leibowitz</i> is a post-cataclysmic novel, beginning several hundred years after the end of a nuclear war. The Memorabilia act as a reinvented library, but it is not a public library with open access, because that would be destroyed by the people who rebelled against the technology that nearly made Man extinct. The monks' intentions are pure throughout the novel, and their order was founded with a noble purpose, the preservation of knowledge. In a literary sense, Technology is King Arthur who has been felled at Camlann and sailed off to the island of Avalon (the abbey) to "heal him of his grievous wound" until he is needed again (when the Renaissance and Enlightenment come again and the Simpletons no longer rule).</p> <p>The need for the monks to take the significantly enhanced Memorabilia into space at the end of the novel indicated the true problem with libraries in this novel—information is a dragon that becomes larger and more threatening when it is used without wisdom, and Man has had a historical tendency to separate the two. Libraries are always endangered when their information is used for destructive purposes. Ranganathan, a product of the Indian colonial system, expected all of those people who for years were denied open access to libraries and information to flock to books, seeking information, enlightenment, relaxation, and elevation. The interviews with government officials that Miller splices into the ongoing chronological march towards re-Armageddon indicate the separation of wisdom from worldly affairs, leaving only doubletalk and deception. The hope is that the library heading to space will thrive without the impulsiveness, greed, and ego of Earthlings.</p>

Table 4.7. 1984 by George Orwell.

Law	Result	Analysis
1.1	N	Books are available, but the price for reading forbidden material, like <i>The Book</i> , Emmanuel Goldstein's <i>The Theory and Practice of Oligarchical Collectivism</i> , is very high. There does not seem to be any other forbidden material to read. Good Party members should not have any time to read for pleasure. When Winston wants to read Goldstein's book, he is given a copy, his acceptance of it comes with a guarantee of his downfall and conversion.. He even knows that he will be caught and tortured, he just does not realize that O'Brien will be his taskmaster.
1.2	N	Books published by the Party have no thought content that is not totally propagandistic. Even <i>The Theory and Practice of Oligarchical Collectivism</i> is a fabricated collection of faux history and economic theory that does not leave Winston any more enlightened or thoughtful after reading it.
1.3	N	The Party is the force that obstructs and minimizes use; one of the fundamental elements of Ingsoc is the reduction of words and thought, so that reading in the sense that both Ranganathan and current readers understood it would be obsolete, as Syme explains to Winston: "Don't you see that the whole aim of Newspeak is to narrow the range of thought? In the end we shall make thoughtcrime literally impossible, because there will be no words in which to express it" (p. 46). Literary classics, when converted to Newspeak, lose all of their beauty and thought-content; they become "... changed into something contradictory of what they used to be" (p. 47).
1.4	N	Winston's journal is read by Big Brother and he is watched as he reads Goldstein's book. Winston is ultimately arrested for the journal and the book, both illegal, not because of what they are, but because they indicate thoughtcrime and deviant behavior.
1.5	Y	Books, newspapers, and journals are constantly replaced with new materials, especially to substitute old information for new. Winston's job is to change newspaper articles to reflect changes in history made by Big Brother.
Law 1 Summary	N	Ranganathan said that the library socializes reading (1960, p. 25). In this context, Oceania has no libraries because discussing a private activity with another comrade would be considered highly irregular, especially since Party members should not be doing anything of note alone. Also, Ranganathan stated that all restrictions to the joy of reading should be lifted: "There should be no soul-killing interference, either in a formal or an informal way" (1960, p. 26). The Party is a soul-killing entity; its goal is the elimination of any ability to think independently and creatively.

		Therefore, books, when they exist, are not for use.
2.1	C	Since a survey of reader interests would be out of the question in a society that outlaws pleasure reading, it cannot be fully known whether or not readers are satisfied with the reading materials supplied by Big Brother. However, it is certain that unless a Party member wanted to get arrested, he or she would appear to be very satisfied if ever asked. Plus, the newer generation of Party members may be very satisfied with the lack of reading because they have been indoctrinated into Ingsoc since their births.
2.2	Y	Books and videos are created for each caste according to their needs as measured by the Inner Party.
2.3	N	No provisions are apparent for the elderly or disabled. Young Party members are closely monitored by Big Brother and are filled with activities, slogans, songs and doctrine to make them loyal only to Big Brother.
2.4	N	Party members are not given choice as to what they read or enjoy in activities. They are expected to attend a certain amount of meetings about different elements of Ingsoc and state-sponsored clubs, and they are not expected to want to think independently when they are alone.
2.5	I	There is only one book outside of the Party materials all Party members read, and it is illegal to possess. Cataloging is irrelevant here. Although other Party materials are carefully documented and referenced, they are fabricated historical documents.
Law 2 Summary	C	<p>There are three castes of readers in <i>1984</i>: Proles, Outer Party members, and Inner Party members. The Proles are satisfied because they are ignorant and incapable of anything but manual labor and base desires. The Party creates reading materials for them like fiction, songs, and pornography, and runs lotteries that occupy their time.</p> <p>The Outer Party should not need fiction and pornography, because they are supposed to be ideologically devoted to Big Brother and Ingsoc. Although they do have songs, they are marches and other martial style songs such as the "Hate Song" that was written when the government changed the countries with which they were at war and peace. The existence of misguided and misled comrades like Winston and the many others he meets in the Ministry of Love indicate that there are many unhappy patrons in Oceania.</p> <p>Inner Party members seem to have doublethink mastered, and can read and write subversive material but not succumb to its thought-content. This is one of the key characteristics that separates Inner Party members from someone like Syme, who cannot resist the appeal of fascism as a philosophy and not just a doctrine.</p> <p>The difficulty of applying Ranganathan's philosophy of the second law is that Ranganathan assumed readers would want maximum</p>

		service from their libraries: “They [the readers] expect the public library to take into consideration every kind of reader, whatever the age, the sex, the vocation, the capacity for self-help, and the willingness to read” (1960, p. 28). The citizens of Oceania are so terrified of being accused of thoughtcrime that they live in a constant state of fear, not an environment conducive to the enjoyment of books.
3.1	I	This issue is irrelevant, since libraries do not exist, and browsing is not allowed; all information needed is supplied by the Party.
3.2	C	The Party selects materials for consumption by the Outer Party and the Proles based on its perception of their needs as they apply to devotion to Big Brother and Ingsoc, but it is apparent by the crimes of Winston, Julia, and others that not everyone’s needs are being met. However, after re-indoctrination by Miniluv, all are satisfied, because they are totally brainwashed and converted to the Big Brother cult.
3.3	N	No one has diverse knowledge; it is too dangerous, as it can lead to intellectual unorthodoxy. Winston knew, before it happened, that Syme would be arrested for that reason: “He is too intelligent. He sees too clearly and speaks too plainly. The Party does not like such people” (p. 47).
3.4	N	Anyone who is reluctant to consume Party media is arrested and taken to Miniluv for re-indoctrination. Anyone who consumes media other than official Party materials is subject to arrest and severe punishment.
3.5	I	Party literature is the only material that should be read; there are no libraries in Oceania in the way they exist in England and the United States in the 21 st Century.
Law 3 Summary	N	Orwell solves the problem of thoughtcrime prevention by changing the nature of language use, with the intention of eliminating bad actions by eliminating bad language, rendering bad thoughts impossible to experience. This is one way of addressing the third law: if the amount of books in circulation is vastly reduced, every book will probably go to its reader, since everyone will want to choose something rather than nothing. But Ranganathan anticipates Newspeak with a warning: “Perhaps a cynic may suggest the obvious device of having as few books as possible in the library. But such a device is ruled out by the extensive requirements of the Second Law; and its inconsistency with the Fifth Law will become apparent . . .” (1931, p. 258). A shrinking language and selection of books are inconsistent with a growing, adapting library.
4.1	Y	Winston has efficient communication and material flow with his superiors from the Ministry of Truth: “Winston dialed ‘back

		numbers' on the telescreen and called for the appropriate issues of the <i>Times</i> , which slid out of the pneumatic tube after only a few minutes' delay" (p. 35). Since Orwell's world does not contain computers as they existed in the late 20 th Century or the early 21 st Century, just a few minutes delay for archived newspapers is reasonable. In the computer age, that search should take less than a minute if the issue is online.
4.2	I	This issue is irrelevant, since there are no books to classify in the traditional sense.
4.3	C	There is a telescreen in every room, and while an Inner Party member may use the telescreen to request information, an Outer Party member asking the telescreen for information would be considered highly irregular; one was expected to cheerfully accept all that came out of the telescreen. There was even a face one was expected to show to the telescreen during the discomfort of morning exercises: "... the look of grim enjoyment which was considered proper during the Physical Jerks ..." (p. 30). The only employees devoted to reference were "... the armies of reference clerks whose job it is to draw up lists of books and periodicals which were due for recall" (p. 38). Like Winston, they were involved in changing history to suit the needs of the Party.
4.4	N	Winston and Julia were tortured and brainwashed; that was the result of Mr. Charrington and O'Brien meeting their unstated needs.
4.5	I	This is not relevant in this novel; libraries do not exist in the traditional sense.
Law 4 Summary	I	The issue of saving the reader's time is not relevant in a world where people do not read out of fear of arrest. It is not surprising that Ranganathan said the "... interest of the Fourth Law almost completely centers round the readers" (1931, p. 287). Since all readers are eventually arrested and converted to good Party members, readers are rapidly disappearing, keeping the issue irrelevant in Oceania.
5.1	N	Oceania has a storage library, but it does not collect all that it can; it changes and shrinks to suit the needs of the Party and its propaganda wing, the Ministry of Truth, as all information sources are shrinking along with the dictionary as more and more material is converted to Newspeak.
5.2	N	The Party eliminated libraries; they are unnecessary in this society. Recreation options do not include pleasure reading.
5.3	I	There are no library staff.
5.4	N	The closest thing to a library in this novel, the Ministry of Truth, is neither pleasing nor inviting with its dusty speakwrites, its memory hole, and its pneumatic tubes.
5.5	N	All materials in Oceania are classified according to the Party's

		needs which change regularly; only a specialist like Winston can manipulate the information.	
Law 5 Summary	N	With the implementation of Newspeak, the amount of materials shrinks every year: "Newspeak was designed not to extend but to <i>diminish</i> the range of thought, and this purpose was indirectly assisted by cutting the choice of words down to a minimum" (p. 247). However, Ranganathan was clear about what constituted a library: "The number of books in a live library must and does grow" (1931, p. 328). As the Party's collection of rewritten poems, stories, and histories shrink further and further, they become more and more alien to Ranganathan's policies and philosophy.	
Overall Summary	N	According to Ranganathan (1960), a library should:	In Orwell's 1984, the opposite occurs:
		facilitate self-learning	self-learning is strongly discouraged—all activities involving self-thought outside of work should be conducted in a group setting
		furnish current data and news in an unbiased and balanced way	news and data are altered regularly to suit the frequently changing needs of the party
		offer new thoughts and innovations	innovation is slow and life is harsh
		provide elevation	any elevation of the spirit, joy, or ecstasy should be directed at the Party or Big Brother only
		preserve the literary remains of humanity for posterity	the few literary classics thought important enough to save were converted to Newspeak and totally altered
		work for social well-being while collecting all recorded thought	all recorded thought is subject to the whim of the Party: "The mutability of the past is the central tenet of Ingsoc" (p. 176). Social well-being is measured only by the Party.
		This is a novel of opposites, which is why Orwell invented the term "doublethink" for Ingsoc. Information is good if it agrees with the Party but ungood if it deviates from Party doctrine. Orwell's world is post-cataclysmic, the third of Griffen's four categories, but like <i>A Canticle for Leibowitz</i> , the concept of library has been totally reinvented beyond recognition. In 1984, a fascist political entity has gained control to not only reading habits and material, but language and thought as well. The Party slogan, "Who controls the past controls the future; who controls the present	

		<p>controls the past” is used to justify total control of information. To survive, Winston must convince himself that an apparently absurd assumption is completely true:</p> <p>“Anything could be true. The so-called laws of Nature were nonsense. The law of gravity was nonsense. ‘If I wished,’ O’Brien had said, ‘I could float off this floor like a soap bubble.’ Winston worked it out. ‘If he thinks he floats off the floor, and if I simultaneously think I see him do it, then the thing happens.’ Suddenly, like a lump of submerged wreckage breaking the surface of water, the thought burst into his mind: ‘It doesn’t really happen. We imagine it. It is hallucination.’ He pushed the thought under instantly. The fallacy was obvious. It presupposed that somewhere or other, outside oneself, there was a ‘real’ world where ‘real’ things happened. But how could there be such a world? What knowledge have we of anything, save through our own minds? All happenings are in the mind. Whatever happens in all minds, truly happens” (p. 229). Like the society in <i>Anthem</i>, only knowledge accepted by all is considered valid. This necessity precludes any pretension to Ranganathan’s philosophy, for Ranganathan believed that political and intellectual restriction amounted to intellectual slavery: “Democracy makes the library serve one and all. It should serve . . . every citizen—high or humble by birth, rich or poor, powerful or meek, each in the measure of his intelligence quotient and field of interest” (1960, p. 21). In the strict tripartite caste system of <i>1984</i>, each must abide by the restrictions of his or her level, or suffer Winston’s fate.</p> <p>The most disturbing element of the novel is that Winston’s tears at the end of the novel are genuine, and he truly loves Big Brother. Unlike <i>Anthem</i>, in which Equality 7-2521 escapes and starts a new colony of free thinkers, <i>A Canticle for Leibowitz</i>, in which the monks leave Earth to protect the Memorabilia, or <i>Foundation and Earth</i>, in which the completion of the Seldon Plan will reinvigorate the library and learning, there is no escape for Winston and his comrades. He will be an intellectual prisoner until he dies, defying Ranganathan’s directives to think and read freely.</p>
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Table 4.8. The Last Book in the Universe by Rodman Philbrick.

Law	Result	Analysis
1.1	N	There are no books left in the Urb, or the places where the lower classes live; the closest thing to a book that exists is a mindprobe, a needle that connects directly to the brain and creates a hyper-real fantasy world as long as the user is connected. Needless to say, the mindprobe also destroys the brain, specifically long-term memory. Mindprobes are black market items and are available to those with money or influence. The protagonist, Spaz, cannot use mindprobes because of his epilepsy.
1.2	N	The ability to read has atrophied and led to the disappearance of books; mindprobes have replaced books. However, they are exclusively escapist by nature. They are not used for thought-content, they are more like drugs that suspend reality.
1.3	N	The leaders of the individual latches, or neighborhoods, do nothing to prevent mindprobe traffic, except Lotti Getts, who forbids mindprobes in her latch. Several residents of the Urb and Lanaya accuse the residents of Eden, the separate area where genetically enhanced humans (called proofs) live, of supplying mindprobes to the Urb to keep the underclasses in ignorance and squalor until they finally self-destruct, leaving more Lebensraum for the proofs. Mindprobes are replacing books and destroying minds in the process, and very few people who can control such things are doing anything to prevent it. Although Eden deactivates the probes at the end of the novel, that action alone does not absolve it of supplying the probes in the first place.
1.4	Y	Ryter is the only character who could be considered a librarian besides the Prime Cyber supercomputers in Eden, and neither would interfere if someone wanted to read. Ryter tries to excite Spaz about reading throughout the novel, but only at the end does Spaz fully get the message as he finds his place in the world and assumes the role of Ryter, proving that Ryter succeeded.
1.5	N	Books disappeared because people in the squalor of the Urb did not need to read but they were desperate to escape, even with a needle. There have not been books and libraries for quite a while, as Ryter points out when he first meets Spaz: “‘You’re aware that the things called ‘books’ used to be stored in libraries. That was long before you were born . . .” (p. 17).
Law 1 Summary	N	Books are certainly not for use in this novel. After a cataclysmic earthquake called the Big Shake, the world is separated into two groups: “normals,” living on the ravished earth in small city-states; and a small group of genetically enhanced humans called “proofs” who live in an idyllic paradise called Eden, protected by a force field and mines from the rest of the world. The normals live in a bleak,

		polluted, gray world getting addicted to mindprobes, not reading or caring about learning at all. The proovs have a supercomputer that answers all of their questions and solves their problems, so they do not need to read either. There is a strong emphasis on images both in Eden, with wallscreens strangely reminiscent of those in <i>Fahrenheit 451</i> and <i>1984</i> ; and in the Urb, with Spaz's 3D movies and the vivid but artificial mindprobe colors and worlds created with the damaging needle. The child Chox is even described as growing up without language models, thinking "... in images, not words" (p. 106). Ranganathan's assumptions of reading motivation—information, education, elevation, relaxation—become impossible in a world in which survival is a constant concern and images have completely superceded words.
2.1	N	There is no book selection because there are no books or libraries. Since mindprobe technology exists only in Eden and they are produced there, no normals have any influence on their content. Proovs make trips to the Urb, study the normals, and then create mindprobes based on the normals' fantasies.
2.2	N	Only those who can afford them or have access to them can use mindprobes. Only proovs have access to the Prime-cyber in Eden.
2.3	N	Life in the Urb is survival of the fittest. No provisions are made for anyone. In Eden, all residents are served by the Prime-cyber.
2.4	N	Ryter is the only character who encourages the preservation of books, reading, and writing. Even Lanaya depends on the Prime-cyber solely to solve her problems and answer her questions.
2.5	I	There are no books to catalog, and no current potential readers except for Spaz and possibly Lanaya and Chox.
Law 2 Summary	N	Ranganathan restates this law as, "Books for all" (1960, p. 28). However, in this novel, the only knowledge sought is by the residents of Eden. Although Lanaya, as a future leader, may open up Eden to all people, or try to make the rest of the world a more habitable place, it has not yet happened. All that Spaz knows about books is that they once appeared in places called libraries. He knows nothing of computers, although he does have a 3D holoprojector. Books are not available, and people have become illiterate anyway. They are addicted to the images they obtain from mindprobes, and have no use for the real world. Although reading can be entertaining, mindprobes are not intellectually stimulating like reading; they are deadening. It is notable that the needs of this society are the antithesis of that in <i>The Giver</i> , where there is no fiction or color to life, only the literal. One of the most important qualities of science fiction is its ability to stretch the possible in all directions.
3.1	I	There are no books to shelve; mindprobes are black market items

		and would not be formally classified.
3.2	N	The Urb could certainly use some knowledgeable, motivated people to save it from oblivion, but no one is able to assume that role. A group from Eden could help by re-educating the Urb and sharing technology, which would constitute a selection for the good of the community, but that has not yet happened.
3.3	N	The only librarian, Ryter, has only one book. The Prime-cyber has a library of information, but only responds to questions or commands. Neither are they type of librarian that Ranganathan would entrust to the successful delivery of books to their readers.
3.4	N	Every time a character interacts with AV in this novel it is to escape reality. Spaz watches “. . . old 3Ds and trying not to remember” (p. 221). Spaz offers the explanation about why probing is so appealing despite the deleterious effects: “They say it’s like entering another world, a world created for your pleasure and excitement, a world where all your dreams come true and every wish is granted. A world much, much better than the one we live in, that’s for sure” (p. 43). Even Billy Bizmo, the local chieftain, cannot resist probing. Another latchleader, Mongo the Magnificent, totally destroys his brain and his life by probing too much. Probing has been banned in Eden because of its hazards. In <i>The Last Book in the Universe</i> , AV is deadly for the Urb population.
3.5	N	There is no library, and no comfortable place in the Urb, with the possible exception of the latchboss’s cribs. Eden has a thinkspace which is described as a teaching cyber, or computer, but only residents of Lanaya’s household or of Eden could use it. Most of the population outside of Eden are denied its benefits.
Law 3 Summary	N	Although it is true, as Ranganathan (1931) observed, that “. . . the majority of readers do not know their requirements . . .” (p. 260), there must be a desire for intellectual stimulation, not narcosis, or they will not require anything and wallow in muddy ignorance. Books are not getting to their readers because knowledge for its own sake has become too great a luxury in the Urb, and too great a commodity to be shared in Eden. Ranganathan fervently supported open access, something Lanaya appears to promise at the end of the novel. But until Eden and the Urb start working together, they will both live in gross inequity, and the vast majority of the population will live in ignorance and squalor, without books, enlightenment, and opportunity.
4.1	C	If people need to send a message across latches (neighborhoods), they can hire a messenger at great cost, but it could take days before the message is delivered. Many people do not read, so writing is impossible. There are no organized national communication systems, so information travels slowly across latches. In Eden, information is provided instantly by the Prime-cyber.

4.2	I	There are no books to classify.
4.3	C	Although Ryter acts as a bit of an advisor to Spaz, he does not know enough to be a full-fledged reference source. There is no one in the Urb who has access to a large database or information network. The Prime-cyber serves Eden as an electronic librarian and teacher.
4.4	C	If Ryter possesses the only book in existence, then he is a librarian. Ryter meets Spaz's unstated needs by helping him to come of age and preparing him for the role of Ryter. The Prime-cyber in Eden does not meet any unstated needs; it simply responds to questions and commands.
4.5	I	There are no books to process.
Law 4 Summary	C	Ranganathan understood human nature too well; he knew that his own voracious hunger for knowledge was not shared by the average library patron: "... mental hunger for books is not compelling in the case of most people. Mental thirst for information is not inexorable in the case of most people. They both die out, unless satisfied immediately on their taking shape" (1960, p. 34). Ranganathan's observation became a prediction in <i>The Last Book in the Universe</i> . After the Big Shake and its accompanying socioeconomic and political anarchy, people turned to probing to escape instead of reading to rebuild. Eden supported the Urb's ignorance by supplying probes to the desperate and addicted masses. Therefore, the time-saving issues Ranganathan mentions in his analyses of the fourth law, such as efficient cataloging, reducing time-lags between information requests and results, and faster book processing, are irrelevant in the Urb because people do not value information as a commodity to be streamlined. In Eden, reference information is instantaneous from the Prime-cyber, surpassing Ranganathan's wildest dreams in 1931, several years before the Prime-cyber's great-great-grandparents Mark I and ENIAC ultimately made the MARC record possible.
5.1	N	Ryter, the Urb's librarian, has his only book destroyed before it can be read: "The pages burn and burn and burn" (p. 216). Although it will be superceded by the new Ryter's book, some of what was unique about the old Ryter's book was lost forever. Eden's collection can only grow by what it produces for itself, and if the residents are forgetting how to read, they will not likely add to the Prime-cyber's collection.
5.2	C	Ryter is assaulted by Spaz, but he does not destroy or take his book, his most valuable possession; in fact, Spaz's robbery begins the chain of events that results in Ryter's position and title being passed on to Spaz. Spaz does not impede the growth of the library (Ryter's book); in fact, his actions, and the resulting adventure, promote growth. However, a faceless, shrieking mob, enflamed over the deactivation of all mindprobes, "Tearing the pages to pieces.

		Stuffing the pieces in their bloody months” (p. 215) must kill Ryter as a scapegoat, a symbol of their plight.
5.3	N	The only change that may impact learning is the elimination of mindprobes; although they have 3D movies, Urb residents may have to start reading as a mindprobe substitute, and the return of their long-term memories (destroyed by probing) may help them to find some leadership and structure so they can build themselves out of their squalor. Eden is acting as the Urb’s caretaker when it deactivates the probes, and if Lanaya and Spaz/Ryter are successful, libraries will return.
5.4	C	There are no libraries or other buildings in the Urb, with the possible exception of the latchbosses’ homes, that could be described as pleasing and inviting. However, in Eden, each room in Lanaya’s home is both functional and beautiful, and the Prime-cyber is available in all rooms.
5.5	I	There are no books left, hence no classification system.
Law 5 Summary	N	Both sides of this world are static, the opposite of the spirit of the fifth law. For most of the novel, the Urb not only acquires no new information, many of the residents destroy their long-term memories with mindprobes. The proofs in Eden are satisfied in their smugness and genetic superiority, even if they deign to deactivate the mindprobes they pushed to the Urb. This law concerns itself with the growth of the library trinity: reader, librarian, book. Unless they are all growing or maturing, the library is not a growing organism (Ranganathan, 1960, p. 40). In <i>The Last Book in the Universe</i> , there is one reader at the beginning and none at the end, indicating negative growth; there are two librarians at the beginning and two at the end, indicating no growth; and there is one book near completion in the beginning and one book recently started at the end, indicating negative growth. The world in this novel is not currently growing in a method that would satisfy Ranganathan; although there is hope for the future, rebirth and renaissance take time.
Overall Summary	N	Although there are no libraries in this novel, there are many library elements. This is a post-cataclysmic world by Griffen’s definition, but the libraries were never rebuilt. In fact, nothing was rebuilt in the Urb. Ryter, as Don Quixote, wants one more adventure before the end of his life, and gets it with Spaz, as Odysseus, who must save his sister from leukemia by trying to find Eden. But the quixotic Ryter believes in books and what they can do for the world, and he passes that hope on to Spaz. Ryter believes in the future, or else he wouldn’t sacrifice his life for the new Ryter, as Spaz explains to the reader: “. . . the real hero is . . . an old man with a white beard and a walking stick and a heart so big it won’t let him

	<p>stop thinking he can change the world by writing things down in a book that no one will ever read” (p. 181). Although information is not yet stored anywhere in the Urb but Ryter’s cubicle, the alliance between Lanaya and Spaz/Ryter indicates the promise of libraries and learning in the future.</p> <p>However dreadful the human condition is in the Urb, Eden has not perfected the library concept. There is a danger in getting information too effortlessly: Lanaya is never seen reading in this novel, and books are never seen or discussed, even in Eden. They play chess, they solve problems, but always with imagery, like Bean’s (Spaz’s sister) body under the scanner. Written words seem to have vanished, a disturbing non-reinvention of the library. Reading skill has atrophied in Eden as well, but for opposite reasons: in the Urb, reading is too difficult; in Eden, reading is not needed. Either way, it would take many years and much cooperation to build a library according to the five laws, but it is only possible if literacy is becomes important again.</p>
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Table 4.9. Anthem by Ayn Rand.

Law	Result	Analysis
1.1	N	Citizens do not have access to books: "Manuscripts are rare and they are kept in the Home of the Scholars" (p. 34).
1.2	C	The library in this novel, the Home of the Scholars, is a storage library and its materials are not circulated to the general public. Although the books may be appropriately utilized by the scholars, they are not used for their thought content by the rest of the society.
1.3	N	Equality 7-2521 is forced to steal manuscripts to learn, and when he does, he acknowledges that he is committing a crime: "We are false in the faces of our brothers. We are defying the will of our councils" (p. 35). Therefore, people obstruct the use of the library, not the other way around.
1.4	N	There is no enjoyment from books in this novel; books are work, and only for a selected segment of the population.
1.5	Y	This is one thing that this society did. Equality 7-2521 mentions, while discussing his stolen manuscripts, "Manuscripts are precious, for our brothers in the Home of the Clerks spend one year to copy one single script in their clear handwriting" (p. 34). They are being replaced, however inefficiently.
Law 1 Summary	N	When Equality 7-2521 presents his homemade light bulb to the Council of Scholars with pride, and when he later escapes and states, "When I shall have read all the books and learned my new way," (p. 117), he has certainly experienced the joy of using a book well. However, since he is the only person in his society to do so, it must be concluded that books were not for the uses intended by Ranganathan, like for their practical value and for their opportunity to give pleasure and information.
2.1	N	The books are only used by a few people, and even then, as demonstrated when Equality 7-2521 presents his light bulb to the Scholars, much of the information in the books is taboo to the people. Book selection here has little or nothing to do with the people.
2.2	Y	This society, in true Marxist fashion, does not discriminate; all are brothers and sisters.
2.3	N	There is a "Home of the Useless" for the elderly, so this society does not value its elderly and would not make special provisions for them. There seems to be little freedom and provision for the disabled, mentally ill, or young either.
2.4	N	Equality 7-2521 must steal manuscripts in order to read, so it is certainly not easy to get a book.
2.5	N	Manuscripts do seem to be cataloged, but it is a moot point because they are not read.

Law 2 Summary	N	People are not allowed pleasure reading in this society, and at least in the community, there are no books available. Equality 7-2521 must leave and find books in the wilderness. Learning has stopped in this society, possibly as a result of a nuclear or biological war (if technology never re-develops, no more race-threatening wars can occur—it is a common theme in post-cataclysm science fiction). The one reader in the society, Equality 7-2521, does not get his books except by stealing them, certainly not what Ranganathan supports.
3.1	I	There are no books in circulation to be found, located, or shelved.
3.2	N	No books are selected at all, so the community is not served.
3.3	N	The impression given by the horror of the Council when Equality 7-2521 offered them his electric light plants the idea that any librarians in this society would not have knowledge of his books or be able to make appropriate recommendations. This is exemplified when the Council explains to Equality that new ideas are not acceptable unless everyone approves them: “‘Many men in the Homes of the Scholars have had strange new ideas in the past,’ said Solidarity 8-1164, ‘but when the majority of their brother Scholars voted against them, they abandoned their ideas, as all men must’” (p. 81-82).
3.4	N	Reading is discouraged for the vast majority of the population.
3.5	N	The Homes of the Clerks and Scholars, the only places that would qualify as libraries, are restricted to their residents only, an idea totally contrary to Ranganathan’s philosophy of open access.
Law 3 Summary	N	Since books never leave the Homes of the Clerks and Scholars, they are not read by people like Equality 7-2521 who want to read them and thirst for knowledge. The whole point of the third law is to provide easy and open access to books and materials, and this is discouraged in the community of this novel. Therefore, as long as the Council continues to suppress new ideas as they do in this novel, it will continue to keep reading away from the public.
4.1	N	Policy changes and response time are very slow in this society, as exemplified in the scene where the Council rejects Equality 7-2521’s electric light in favor of the candle: “‘It took fifty years to secure the approval of all the Councils for the Candle, and to decide upon the number needed, and to re-fit the Plans so as to make candles instead of torches . . . We cannot alter the Plans again so soon’” (p. 82).
4.2	I	The reader is never shown the Home of the Scholars, but the intention of this sublaw is to make books easily accessible to the public, and that never occurs in this novel except by theft.
4.3	N	Equality 7-2521 is punished for reading and trying to learn, so reference and information services are not only unavailable, they are strongly discouraged.

4.4	N	Even if the Scholars could be called librarians, they are discouraged from associating with the public and do not meet any of its needs.
4.5	N	As mentioned in 1.5, books are produced and processed very slowly, mainly because there are no printing presses.
Law 4 Summary	N	In this Spartan society, everything moves very slowly. Also, reading is not allowed for almost everyone. Ranganathan indicated that saving the time of the reader revolved around efficient cataloging, classification, and shelf arrangement; these issues do not exist in this novel because books are not made available to the public.
5.1	N	This society does not offer a service library, and the storage library does not collect all it can since it so easily dismissed Equality 7-2521's invention and commonly rejects new ideas from the Scholars.
5.2	N	The Council definitely impedes the library's growth by limiting what is allowed as acceptable knowledge.
5.3	Y	Ironically, since the society changes very little, and the government has deemed books unnecessary for the public, the Scholars who tend and read the books do meet this requirement.
5.4	N	Libraries are off-limits, and even if they were open, this society is stark and spare, not pleasing and inviting in any circumstance.
5.5	I	It is not known whether or not there is a universal cataloging system.
Law 5 Summary	N	The collection of manuscripts they own are for storage only; although the Scholars may read them, no one else can. It does not grow in the spirit of Ranganathan's law. When discussing the fifth law in relation to storage libraries, Ranganathan indicated that "... there can be no limit to the size of its book collection or of its staff" (1960, p. 40). This does not apply to a society that does not accept new information.
Overall Summary	N	The post-Communist society in this novel was another of Griffen's (1987) reinvented libraries, occurring well past what was possibly a nuclear war. The government controls people and information very closely, and there were no opportunities to read for pleasure. Ranganathan's laws are not here, because the society has adapted to its holocaust by rejecting technology and advancement while adopting a Marxist community in which all decisions are made by a central Council. The little information the society does have it hoards out of fear that someone like Equality 7-2521 will learn how to increase the community's level of technology. Therefore, the five laws are not met in this novel.

Table 4.10. Snow Crash by Neal Stephenson.

Law	Result	Analysis
1.1	C	"... they pay them money and check it out of the Library..." (p. 33). Since information, or "intel" as it is referred to in the novel, costs money, only those patrons who have enough money may use the Library.
1.2	Y	Information is used extensively by Hiro Protagonist; the Librarian is Hiro's most important and trustworthy asset and source of information.
1.3	N	The Library itself limits users to those who can afford its services; it is a corporation that is expected to make a profit.
1.4	Y	"He suspects that the Librarian may be pulling his leg, playing him for a fool. But he knows that the Librarian, however convincingly rendered he may be, is just a piece of software and cannot actually do such things" (p. 195). The Librarian cannot do anything the patron does not want due to the nature of the type of program it is.
1.5	Y	New information is constantly being uploaded to the Central Intelligence Corporation (the Library) with the promise of profit if someone wants the information and is able to pay the fee.
Law 1 Summary	Y	Even though information is only available on a pay-per-view basis, the information is easily accessible. Also, permanent, personal cyber-Librarians are available for a one-time fee, making specialized reference services available in an unprecedented fashion.
2.1	Y	"... 99 percent of the information in the Library never gets used at all" (p. 21). This is due to the variety and scope of the vast amount of information in the Library.
2.2	Y	Although this novel contains many racist incidents, no one is ever denied access to information. The protagonist, Hiro Protagonist, is half-Asian, half-African, and is never denied access to information because of his origins. A possible exception could be the issue of socioeconomic classes, since information costs money, but the poor are never denied access because of their status; if they can get the money, they may have access like anyone else.
2.3	Y	There are materials for all who have a computer and money if they want to purchase information.
2.4	Y	Anyone with a computer or access to a computer (which includes most of the population) is encouraged to use the Library in the same way that a retail operation encourages consumers to patronize them.
2.5	Y	With incredibly convenient and comprehensive patron interfaces like the Librarian in the novel, it is obvious that information is catalogued in an organized and easily searchable fashion.
Law 2 Summary	Y	The Library does its best to provide all information users with the data they require and desire; it is a business that becomes more

		profitable if it contains desirable information.
3.1	Y	The Library gives every indication that it is easily searchable.
3.2	Y	The information in the Library is mostly submitted by its users in the hope of receiving payment upon the information's use, so collection is largely controlled by the public; this certainly meets its needs. Hiro is very comfortable using the Library and the information meets his needs when he needs background on Sumerian mythology.
3.3	Y	The Librarian in this novel provides excellent resources to Hiro when he is researching Sumerian mythology, tailored to his needs in a format that he chose.
3.4	Y	The Library is a corporation; all potential users of information are courted. Based on Hiro's comment that when he was able to steal a film script and upload it, he "... ate and vacationed off of that one for six months" (p. 21). people are willing to pay large sums of money for certain information. It is a profitable business that cannot afford to turn anyone away and would have no policies to deny acceptance of anyone's work..
3.5	Y	The Library is certainly comfortable, since it is wherever the patron is. In the novel, its location on the Internet appears to be common knowledge.
Law 3 Summary	Y	Profit drives the Library and its potential profitable patrons to seek out readers for its materials.
4.1	Y	The medium is electronic and the time-lag is negligible. Hiro's questions are generally answered immediately.
4.2	Y	Cataloging is electronic and searchable.
4.3	Y	The Librarian acts as catalog, reference desk, and information counter. Circulation desk is available wherever the computer is located; all works are electronic.
4.4	Y	"He [Hiro] doesn't have an independent memory. The Library is his memory . . ." (p. 192). Not only does the Library meet the unstated needs of the patron, the Librarian has instant access to the entire database and provides both an efficient flow of information and an affable personality. Additionally, when Hiro mentions that he is driving, the Librarian gives him unsolicited traffic information.
4.5	Y	Once data are uploaded to the central database, they are available for download immediately.
Law 4 Summary	Y	Everything about the Librarian is designed for easy and immediate access; happy customers shop often.
5.1	Y	The Library accepts uploads from everyone and is always collecting.
5.2	Y	The Library is a successful corporation in an anarchic society, and is subject only to market fluctuations.
5.3	Y	The software that formats the way information is disseminated can

		be routinely updated to reflect changes in technology and/or popular culture as indicated to maximize business.
5.4	Y	The Librarian is helpful, and the technology that enables the Library changes and adapts to progress as applicable.
5.5	I	There are no more standards as they are known in the early 21 st Century; the world in this novel is anarchic and controlled by a corporate oligarchy that creates its own standards and practices.
Law 5 Summary	Y	Due to technology and patron participation, this Library, both a service and a storage Library, is always growing to meet the changing needs of its clientele.
Overall Summary	Y	Although Dr. Ranganathan may have disapproved of the corporate element of <i>Snow Crash's</i> Library, it is in almost all other ways a library that serves the needs of its patrons. Although many librarians would consider it abhorrent to charge patrons for library use, citizens pay tax dollars for library use anyway, and the pay-per-view concept does seem to work in this novel, since the citizens are accustomed to paying for other services in a similar fashion.

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CHAPTER V—SUMMARY AND CONCLUSION

Table 5.1 displays the results of the application of Ranganathan's philosophy of librarianship to libraries and information systems in ten young adult science fiction novels as presented in Tables 4.1 through 4.10 in Chapter IV.

Table 5.1. *Content Analysis Results.*

Book	Law One	Law Two	Law Three	Law Four	Law Five	Overall adherence
<i>Foundation and Empire</i>	C	N	N	N	N	N
<i>Fahrenheit 451</i>	N	N	N	N	N	N
<i>2001: A Space Odyssey</i>	N	Y	C	C	N	N
<i>Neuromancer</i>	Y	Y	N	C	C	Y
<i>The Giver</i>	N	N	N	Y	N	N
<i>A Canticle for Leibowitz</i>	Y	N	N	N	N	N
<i>Nineteen Eighty-four</i>	N	C	N	I	N	N
<i>The Last Book in the Universe</i>	N	N	N	C	N	N
<i>Anthem</i>	N	N	N	N	N	N
<i>Snow Crash</i>	Y	Y	Y	Y	Y	Y

Only two of the ten libraries qualified as adherent to Ranganathan's five laws, primarily due to Ranganathan's rigorous and broad standards, demanding excellence from many disparate facets of librarianship featuring open access across all of them. A library can meet one law or conditionally meet one or two laws and not qualify overall. The library in *Foundation and Empire* used in this study, the University Library on Trantor, is helpful to Ebling Mis, and nobody there interfered with any patrons needing materials, but because there were no librarians (that the First Foundationers knew about) and it was not growing, it was not a library meeting the spirit of the laws. The monks in *A Canticle for Leibowitz* had noble and valiant intentions when they became bookleggers and

preserved the knowledge of the known world, but that did not make them good librarians or their collection a library. In fact, the abbey's Brother Librarian, trained only to preserve the Memorabilia, was so fiercely in opposition to Ranganathan's first law, books are for use, that he was removed from the company of a researcher after making rude remarks and accusations. Also, HAL 9000 had the potential to be an excellent librarian and library, but failed due to programming error, a human mistake.

Libraries that follow the laws are successful. In *Snow Crash*, characters got information when and where they needed it; everyone was connected to some media at all times, or close to a place where access was available. The electronic librarian was extremely helpful, anticipating Hiro's needs and supplying one-on-one reference service with the world's resources at its disposal. In *Neuromancer*, getting information was easy and fast if the equipment was available; billions used the matrix daily. If a person wanted special library services, a cowboy could be hired for a fee to attempt to find any information or hack into a private computer system.

Although the books in this study are in no way indicative of young adult science fiction in general, it is fair to conclude that the vision of future libraries conjured by many science fiction writers is not positive. "Orwellian" instantly conjures an image of totalitarianism, and *1984* and *Animal Farm* are two commonly read books in middle and high schools. In *A Canticle for Leibowitz*, Man cannot stop blowing himself up with nuclear weapons; in *Fahrenheit 451*, *The Giver*, and *Anthem*, books have been outlawed; in *The Last Book in the Universe* and *Foundation and Empire*, reading and scholarship have atrophied; in *2001: A Space Odyssey*, the library/librarian murders most of the crew. Futuristic writers have thought of many ways to worsen the human condition.

Conversely, *Snow Crash*'s slightly anarchic but distinctly capitalist society lends itself well to the handling of information in the future. Stephenson provides his libraries the best motivation for being current and accommodating: profit. Librarians today normally take a course in library administration, but business courses are not required; this is an oversight that should be corrected. Libraries are businesses—sometimes small, like those in schools, small communities, small businesses; and sometimes large, like national libraries and those in large cities and universities. Many librarians have budgets, buy library materials, sign contracts, fill out purchase orders, all without any training. A course in the business end of running a library would be a boon to many librarians without any business experience.

Current Relevance of the Five Laws

Throughout this study, the five laws have been an excellent lens through which the filter of the content analysis format has highlighted the more positive and negative features of the libraries and information systems examined. Application of the laws also offered significant insight into the societies in the different novels. For example, on the surface, the monks in *A Canticle for Leibowitz* are doing the best they can to stave off an eternal dark age of Man; however, after seeing the novel's failure of all but the first law, it becomes more apparent that the problems in that society concern not information access, but its judicious use. The Leibowitz monks would have been better off if they had chosen to be teachers instead of bookleggers; merely saving the information was futile. Librarians must remember that providing information is not always the best way to respond to a student's question, even though it may be the easiest. Skills must take

precedence over answers. A patron with only answers and no solutions is not prepared for success.

Despite its overall adherence to the spirit of the five laws, *Neuromancer*'s failure to meet law three, every book its reader, illustrates the danger of not employing and supporting librarians: in Case's world, specialized information must be paid for.

Librarians have a responsibility to place the right books in readers' hands; societies with data but without libraries and librarians do not promote learning and value freedom of information. The anarchy that reigns in the novel supports that void of values.

Conversely, *Snow Crash* contains fee-based libraries, but the package includes a personal electronic librarian, and information is available at Hiro's fingertips anywhere he has a connection to his computer. He is a much more satisfied library patron than Case. In his acknowledgments Stephenson made sure to thank the information experts who helped him with research, recognizing that he could not have completed the project without their help. Information needs limits and foci to be intelligible, and librarians need to continue to provide that service or the skill will atrophy.

Ranganathan's five laws are not only applicable to librarianship; the principles and philosophy are a sound basis for business relationships. Business-to-customer could be improved by incorporating the five laws into standard business practices. Books like *Jesus CEO: Using Ancient Wisdom for Visionary Leadership* and *Leadership Secrets of Attila the Hun* demonstrate the commonplace practice of applying business principles to seemingly incompatible philosophies; the five laws also have many current, insightful applications. In a customer-driven business, the word "books" could be replaced with "customers":

- Customers are for selling (as opposed to browsing or shopping);
- Every customer his sale (employees must do their best to sell the customer what he wants and what the store wants to sell);
- Every sale its customer (employees must reach out to the right customers at the times they are most inclined to buy or at the most profitable times);
- Save the time of the customer (build loyalty with a more efficient and pleasant shopping experience, thereby making the customer more likely to return)
- The relationship between the company and the customer is a growing organism (the company must change with the customer and continue to meet his needs in as many ways as possible).

The same concept could be applied to company management by replacing “customers” with “employees” and adapting the other words accordingly.

More libraries need to be incorporate Ranganathan’s teachings into their policies and procedures. The five laws provide a solid foundation on which to build a superior library, and there are many ways that Ranganathan’s philosophy could be applied to current practices:

- provide a website that offers the library catalog and online databases for research (law four);
- check collections to make sure that the community is well represented in content, language, and theme, and weed/buy as needed (law two);
- train librarians in current technology, procedures, and fulfilling the library’s vision (laws three and five);

- confirm provisions for disabled and special users including literacy programs, large print books, Braille, and computer classes (law two);
- provide computers with popular office software and gaming hardware in the library for patron use (law one);
- circulate CD books, CD-ROMs, and video games (law three);
- maximize marketing efforts to capture the attention of the patrons and try to meet the unstated needs of the reader (law four);
- train all library staff to make communication their number one priority, thereby maximizing interactions with patrons and each other (laws three and four);
- weed infrequently used books to maximize shelf space for current materials (laws one and five);
- create and maintain a pleasing, inviting library environment (law five);
- advocate open access in all areas of the library, including removal of any Internet filtering software or other forms of library-enforced censorship (laws one and five).

Recommendations for Further Study

A survey of business skills among librarians would be a valuable method to determine if specific classes were needed in MLS programs. Librarians in the field could be asked how well their certification program prepared them for the business end of their jobs, and specify areas like contracts, human resources, purchasing, money management, accounting principles, business letters, meeting with product representatives, and employee management to identify any areas that need attention and training.

Also, Dr. Ranganathan's writings are the founding principles of modern library science and need to be further incorporated into current research. Michael Gorman has seemingly led a crusade to bring the five laws and other Ranganathan-related philosophy to the forefront of library science, but more needs to be done. The five laws are an excellent standard that have not in any way diminished in importance as technology has invaded and conquered library media. Great philosophical tenets do not lessen in intensity or usability over time: Aristotle's rules for a tragedy still apply to many tragedies today; the Bill of Rights is just as valid in this political climate as it was in 1790; Bloom's taxonomy is just as helpful a tool in educational theory, and still as fundamental a part of any educational theory or philosophy course, as it was when it was published in 1956. Ranganathan's works need to be used and taught in library science classes. His ideal is totally consistent with that of the American Library Association; Ranganathan praised the ALA in his writings as a worthy organization that has fought for open access and libraries for all citizens, his two most important rallying cries.

Finally, science fiction continues to grow as a valid young adult genre, and libraries, especially those in schools and small communities, need to continue to stock new releases. Novels like *The Giver* and *The Last Book in the Universe* serve an important role as recreational and thought-provoking reading. Just as Asimov, Heinlein, Campbell, etc. started a science fiction revolution in the 1930s and 1940s, J. K. Rowling's *Harry Potter* series breathed new life into the fantasy market, presenting it, with science fiction on its coattails, to a new generation of readers. Surveys could be composed and sent to determine what titles were being carried, and online catalogs could also be examined to determine what science fiction is making it on to shelves.

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Appendix A: Book List

Reading selections are based on meeting one or more of the following criteria: discussion in the most widely accepted young adult book guide, *Literature for Today's Young Adults* (Donelson and Nilsen, 1997); novels' status as winners of either the Hugo or the Newbery awards, or other significant awards such as ALA Best Book for Young Adults or Nebula awards; exceptional achievement by the author in young adult literature or science fiction; and/or the novels' frequent appearance on middle or high school reading lists.

Foundation and Empire by Isaac Asimov—special Hugo Award for the best all time science fiction series; defies Griffen's four categories.

Fahrenheit 451 by Ray Bradbury—acknowledged leader on H.S. Reading Lists and seminal work on censorship; *Fahrenheit 451* was chosen as the first book to be read as part of the "One Book, One City L.A." program (Business Wire, 17 Apr. 2002) and became a *Los Angeles Times* bestseller fifty years after its publication. Bradbury is the winner of O. Henry Memorial Award, the Benjamin Franklin Award, the World Fantasy Award for Lifetime Achievement, and the Grand Master Award from the Science Fiction Writers of America.

2001: A Space Odyssey by Arthur C. Clarke—acknowledged classic; Sir Clarke has won every major award in his field including the Grand Master Award from the Science Fiction Writers of America.

This book practically defines the future-shocked lost generation of the late 1960s and the foreboding feeling that technology would not always be friendly while war continued in Vietnam.

Neuromancer by William Gibson—Hugo Award; seminal cyberpunk novel—cited in *Newsweek* magazine along with *Snow Crash* as a novel that “. . . popularized cyberspace and the hacker as hero. . .” (Gordon, 2003); and different than Griffen’s 4 categories.

The Giver by Lois Lowry—Newbery Award

A Canticle for Leibowitz by Walter M. Miller, Jr.—Hugo Award

Nineteen Eighty-four by George Orwell—many high schoolers read this dystopia before they graduate—has added more words to the world’s vocabulary; i.e. doublethink, Big Brother, Orwellian, than any other book in its genre.

Anthem by Ayn Rand—Important and widely read young adult work due to its imaginative and concise presentation of Rand’s conservative philosophy Objectivism.

Snow Crash by Neal Stephenson—next book *The Diamond Age* won a Hugo Award; widely acknowledged modern cyberpunk classic. Mentioned in *Newsweek* article as a primary influence to the Wachowski brothers, creators of science fiction franchise *The Matrix* (Gordon, 2003).

The Last Book in the Universe by Rodman Philbrick—ALA Best Book for Young Adults; accomplished author of young adult novels *Freak the Mighty* and *REM World*.