THE ATLAS OF NEW LIBRARIANSHIP
THE ATLAS OF NEW LIBRARIANSHIP

R. David Lankes
This book is dedicated to Joanne Silverstein, who, from the time we were doctoral students together, has always been my intellectual traveling companion.
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I’ve always had a hard time figuring out the purpose of a preface. If it’s important stuff, why isn’t it just chapter 1? Well, here’s where I ended up on the topic and why you are now reading a preface. It is not about the content itself; it is more about the author’s intent and frame of mind. Ironically, it is written last and, although a bit self-indulgent, gives me a chance to reflect on the whole process.

The first thing I’d like to make clear before you read this is that I do not claim that everything in here has sprung like Athena from my head. There are some old ideas in here. In some cases, they are brilliant and radical ideas that have either become lost or so widely adopted that we have forgotten they were once radical.

There are also some current ideas culled from dedicated practitioners from around the globe. It may not seem like a large chunk of text is an interactive process (it is not—as I hammer on over and over again—it is an artifact), but the thinking behind the Atlas was very interactive. From the initial forums set up to comment on the first drafts of a white paper in 2006, to the hours of sometimes heated debate in an office, an airport, a conference center, or over good food in good cities, the Atlas may be my words, but it is the thoughts and experiences of hundreds.

This leads me to a personal note. The writing of the Atlas and the years of work that it took to develop these ideas have renewed my faith in librarianship. It is easy, in the daily grind, to see the worst of our profession. Often I am invited in to help fix outdated practices and ideas. It seems like conferences are just as much an opportunity to bemoan what is not happening as to learn about what is possible. What I have come to understand is that the complaints about the recalcitrant old school librarians that don’t “get it” have, in fact, increased because there are more folks who do “get it” to complain.

It’s like that scene in the West Wing when a liberal staffer is complaining about the National Rifle Association (NRA) and a conservative Republican points out that if everyone who wanted to ban assault rifles simply joined the NRA, they could vote the organization out of
existence. In other words, if people like me would simply stop yelling about the laggards and look around the room at everyone else who is complaining, we might realize that there are fewer and fewer folks left to complain about.

One last note; a plea really. This book is all about conversations. The Atlas is my latest contribution to that conversation, and it is really an invitation for you to join in. What do you agree with? What do you disagree with? What is offensive or supportive? What did I miss? What should I know? What do we need to change? Let’s talk.
I was in a meeting with Lewis Hyde, author of *The Gift*, where he talked about different narratives on intellectual property. One narrative, often used by large media companies, is that creativity and the creation of intellectual property are acts of individual genius: that an author or artist sits back, gets inspired, and makes something. The other narrative is that creativity and creation are an act of a community: that while you may paint something unique, you were able to do so from a lifetime's inspiration and input from those around you. I very much subscribe to the latter of these narratives.

The Atlas may be my work, but that is only useful in assigning blame. The good stuff in here comes from the brilliance of the library community. I have done my best to package their ideas and represent them together as they make sense to me. What I got wrong is my fault. What is right is most likely from them.

**CONTRIBUTORS**

This Atlas is the result of a large number of smart and generous people. They contributed everything from writing of Agreement Supplements, to editing, to providing feedback on the drafts. Where possible I have noted their contributions in the text, but I wanted to begin by thanking them here.

**ATLAS RESEARCH TEAM**

This is the crew that did the heavy lifting on the Atlas manuscript through editing, reviewing, arguing, and generally getting it done.

Todd Marshall, Angela Usha Ramnarine-Rieks, Heather Margaret Highfield, Jessica R. O’Toole, Nicole Dittrich, and Xiaoou Cheng. Special thanks to Julie Strong for her help.
 AGREEMENT RESEARCHERS

One of the advantages of being in an innovative school like Syracuse University’s iSchool is that every so often I get to make classes up. So I did. The students did a fantastic job of slogging through rough drafts of the threads and doing a lot of really amazing work on the agreements and discussion questions.

Jocelyn Clark, Amy Edick, Elizabeth Gall, Nancy Lara- Grimaldi, Michael Luther, Kelly Menzel, Andrea Phelps, Jennifer Recht, Sarah Schmidt, and William Zayac.

PARTICIPATORY NETWORKS WHITE PAPER

The work in this Atlas really began with the formation of participatory librarianship. That happened because Rick Weingarten and Carrie Lowe of the American Library Association’s Office for Information and Technology Policy (OITP) commissioned a white paper on social networking in libraries. Much of the foundational work on these concepts came from long hours of conversation between my co-authors, Joanne Silverstein and Scott Nicholson.

From the white paper on, OITP has been a great support in the work. I thank them and all the folks at ALA’s Washington Office: Emily Sheketoff, Rick Weingarten, Carrie McGuire, and Alan Inouye.

STARTER KIT SITES

Most of the examples and experiments throughout the Atlas come from a wide variety of library and information settings. The following folks were gracious enough to open their doors for me and share their insights.

Blane Dessy and the librarians of the Department of Justice Law Libraries.

Linda Johnson and Sandra Horrocks of the Free Library of Philadelphia Foundation, and Elliot Shelkrot, Joe McPeak, Kyle Smith, and all of the great librarians (past and present) of the Free Library.

Jeff Penka, Susan McGlamery, Paula Rumbaugh, and Tam Dalrymple of OCLC’s QuestionPoint service.

Robert Johnston and the librarians of LeMoyne College.

Elizabeth Stephens of the Glendale Library.

PARTICIPATORY LIBRARIANSHIP RESEARCH GROUP

After the white paper was out, a group of talented faculty and doctoral and master’s students worked with me to further refine the ideas now in this Atlas: Todd Marshall, Angela Usha Ramnarine- Ricks, Joanne Silverstein, Jaime Snyder, Keisuke Inoue, David Pimentel, Gabrielle Gosselin, Agnes Imecs, and Sarah Webb.

Special thanks to Meg Backus for her ideas on innovation.

MIT PRESS

Marguerite Avery, Senior Acquisitions Editor, for giving the book a chance.

ACRL

Kathryn Deiss, for insisting that I had to publish with ACRL, and Mary Ellen Davis, who told me I was allowed to piss off anyone I needed to.

THE ILEADU TEAM, THE STATE LIBRARY OF ILLINOIS, AND IMLS

Thanks to Anne Craig, Gwen Harrison, and all the folks involved with the ILEADU Project for giving me a chance to try out some of these ideas.

THE JOHN D. AND CATHERINE T. MACARTHUR FOUNDATION

Thanks to Kathy Im and Elspeth Revere for supporting a study on the future of libraries and the development of the Reference Extract Idea. It is a rare treat to find funders who are great collaborators and ask the best questions. Also thanks to Connie Yowell for support on my credibility work.

Reference Extract is very much a product of brilliant collaborators like Jeff Penka, Mike Eisenberg, Eric Miller, and Uche Ogbuji.

IDEAS AND REACTIONS

I do practice what I preach. Most of my learning happens in conversations over lunch, coffee, and in hallways. What I love about the field of librarianship is that you are never at a loss for interesting company. I am going to miss a lot of people in making this list, but I wanted to give a shout out to some of the folks who had patience with me droning on about new librarianship.
Scott Nicholson, Joanne Silverstein, Meg Backus for the brilliant concepts on innovation versus entrepreneurship, Joe Janes, Eli Neiburger, Jill Hurst-Wahl, Mary Ghikas, George Needham, Chuck McClure, Michael Eisenberg, Joe Ryan, Megan Oakleaf, Blythe Bennett (who cemented the name for the Atlas), and Buffy Hamilton.

An apology to those I forgot.

GENERAL ACKNOWLEDGMENTS

Thanks to my family, who had to see a lot of my back while I was typing in my office. Riley, I marvel every day at the man you are becoming. Andrew, you are the epitome of infectious joy. Anna Maria, my wife and love of my life, you make me a better man and the world a better place.

Thanks to all of the audiences of my presentations. Your questions, comments, and challenges honed these ideas. What’s more, they demonstrated that the best days of librarianship are ahead of us.

Thanks to the University of North Carolina, Greensboro, for the time to write this book.

Thanks to the Free Library of Fayetteville for the place to write. I can’t tell you the number of tough fixes I worked through on the Stickley furniture.

To Ray von Dran, who taught me true mentorship. He gave me my first real job, his trust, and faith. His time on Earth was too short, but his impact was great.

To my dad, who taught me that everything is retail. Whether you’re selling ink or ideas, you still have to sell. I miss him every day.

To my mom, who has every one of my books and may well be the only one to have read them all (including me).

To Michael Eisenberg, my one-time advisor, but always mentor and friend.

To Chuck McClure, who has shown me that staying on the top of your game throughout your career is possible.

To Joan Laskowski, my real boss.

To Lisa Pawlewicz for all her hard work in helping me play with technology.

To Marie Radford, who covered for my Atlas obsession on that other book.

Thanks to the creators of Galcon who gave me the perfect activity to think things through (well technically, take a break from thinking things through). And damn you Plants vs. Zombies for that lost week!

LIBRARIANS WHO HAVE AND CONTINUE TO INSPIRE ME

Abby Kasowitz-Scheer, Blythe Bennett, Joann Wasik, Pauline Shostack, Holly Sammons, Rivkah Sass, Sari Feldman, Stewart Bodner, Stephen Bell, Stephen Franoeur, Donna Dinberg (who is no doubt whipping Heaven’s reference desk into shape as we speak), Franceen Gaudet, Joe Janes, Nicolette Sosulsiki (a one-woman reference SWAT team), Jenny Levine, Karen Schneider, Joan Stahl, John Collins, Linda Arret, Nancy Morgan, Melanie Gardner, Joe Thompson, Buff Hirko, Caleb Tucker-Raymond, Nancy Huling, Jane Janis, Joyce Ray, Bob Martin, Tasha Cooper, Mary Chute, Keith Stubbs (although you may not have the degree, you have the brain, heart, and soul of a librarian), Joe Ryan (the first and second), Linda Smith, Pauline Nicholas, Kathleen Kerns, Meg Backus, Mary Fran Floreck, Kate McCaffrey, and Lorri Mon.
INTRODUCTION TO THE ATLAS

atlas |ˈætləs|
noun
1 (pl. atlases) a book of maps or charts: I looked in the atlas to find a map of Italy | a road atlas.

• a book of illustrations or diagrams on any subject: Atlas of Surgical Operations.

This atlas is written for you. It seeks to bolster the defiant who stand bravely before the crushing weight of the status quo and seeks to give hope to those silenced by the chorus of the mediocre and resistant to change. It seeks to show the way forward for librarians in a time of great challenge, change, and opportunity. It is also a statement that you are not alone, you are not crazy, you are right: It is not about cataloging, or books, or buildings, or committees—it is about learning, knowledge, and social action.

But being right is irrelevant if it is not followed by real action and change. As I said at the 2002 Virtual Reference Desk conference, we must be brave and bold in addition to being right. We must be brave and stand up to the inertia of colleagues unwilling to change and an antiquated stereotype of librarians within our communities. We must be bold, in that this is no time for small ideas or limited action. A committee on innovation and a few brown bag talks about change are not going to help the world.

The work in the Atlas is founded on the simple precept that the very definition of our field, its perception, and its ultimate effect are in the hands of librarians—our hands. Thousands of years of tradition serve as inspiration for our future, not as a set of shackles binding us.
As Israel Zangwill, the English writer, once wrote:

*The Past: Our cradle, not our prison; there is danger as well as appeal in its glamour. The past is for inspiration, not imitation, for continuation, not repetition.*

The ultimate goal of this book is to enumerate and express the inexpressible: that stripped of your collections and policies and organizations, you still stand noble. Your nobility comes from a mission no less than the preservation and improvement of society. Our nobility is not found in collections, or walls, or organizational structures, or even in our history—it is found in our action. The nobility of librarianship is earned every day by the dedicated action of thousands of individuals around the globe. That nobility is found in inspiring someone to read, in helping someone find a job, in connecting an abused wife to social services to save her life, and in a Philadelphia café at the central library staffed by dedicated personnel in transition from homelessness to work.

The nobility of librarianship is found in schools where library media specialists prepare our future in the children they teach. It is in the government librarian who preserves freedom in the halls of political power. The nobility of librarians can be seen in the corporate offices, hospitals, law firms, departments of transportation, and colleges throughout the world. Although it has been cloaked in an air of service and hidden away behind quaint and romantic stereotypes, it is time for that nobility to shine and to be brought into clear focus for our communities.

**NAVIGATING THE FUTURE**

There is a theme that pervades this atlas. It is navigation. This is not merely a convenient metaphor or simple literary conceit. Rather, it emerges from the dynamic nature of the topic. Librarians are on a journey that started literally millennia ago and continues to this day. It is a journey that will continue for centuries to come—so long as we don't lose our way. In any journey, there are milestones—key moments that allow us to stop and review our course. As the web explodes, the world economy stumbles, the newspaper industry implodes, the media landscape fragments, and societies around the world face social unrest, librarians have not only an opportunity but an obligation to find their center and the means to continue a centuries-long mission to use knowledge to better understand the past, make a better today, and invent an ideal future.

These are lofty goals, and it would be pure hubris to claim that the Atlas could accomplish all of this. Indeed, as is discussed at length, no artifact, however compelling, can accomplish anything. It is only people who make change. The highest hope I can have for this Atlas is to inspire positive change and to move forward a conversation on the role of librarians that has all too often become mired in an obsession with things, processes, and defining boundaries.

The Atlas is also an attempt to answer the most frequent and important question asked at all of those conferences where the preachers, prophets, and demagogues of librarianship speak: “Now what?” The work to recast librarianship to date has focused on core concepts and generating examples. It has lacked a set of marching orders and some key tools in reinvention. The Atlas seeks to be a tool. It is intended to be a textbook, conversation guide, platform for social networking, and inspirational sermon.

**THE FOUNDATIONS OF THE ATLAS**

The Atlas is the result of more than 100,000 miles of travel to 29 locations on three continents; input from hundreds of librarians and professors from 14 accredited library programs, 25 formal presentations to more than 50 conferences, and 14 publications. The foundational data for this book come from large organizations and small; national, public, academic, school, and special libraries; associations with local, regional, national, and international reach; doctoral and master’s students; librarians, lawyers, historians, programmers, venture capitalists, and teachers. The whole point of all of this effort was to discover and develop a new approach to librarianship from the ground up. This means good theory, good practice, and real examples.

The result of all this work was a concept called “participatory librarianship,” and it serves as the basis for the “new librarianship” detailed in this work. Simply put, new librarianship recasts librarianship and library practice using the fundamental concept that knowledge is created through conversation. Librarians are in the knowledge business; therefore, librarians are in the conversation business. New librarians approach their work as facilitators of conversation. Be it in practice, policies, programs, and/or tools, librarians seek to enrich, capture, store, and disseminate the conversations of their communities.

However, although you will read a great deal about participation, you will not see many specific references to “participatory librarianship.” This is intentional. Modifiers and titles are useful in gaining attention, but the ultimate success of any idea is the loss of a modifier.
“Virtual reference” becomes simply “reference” when the ideas put forth are widely incorporated throughout practice. “Digital libraries” are quickly becoming simply “libraries” as they become integrated into the larger organizations and collections of a library. So too must participatory librarianship, if it is to be successful, become part of the overall concept of librarianship.

The central concepts of participatory librarianship have not changed—that conversation and knowledge are core to all that librarians do. This central principle has been explored, expanded, and detailed over the years. It will continue to be refined after the initial release of the Atlas as well. The Atlas is incomplete, in the same way the field of librarianship is incomplete. New times, new ideas, and new needs within the community create a dynamic world for librarians. Librarians and their work must be equally dynamic.

**FINDING A CENTER IN THE DYNAMIC**

The Atlas is about reaffirming the roots of librarianship not in buildings and collections, but in knowledge, community, and advancing the human condition (not human documents). The approach outlined in the Atlas does not discount books, buildings, or ivy, but it does put these tools in their proper perspective... as tools. Remember, we are the future of libraries, not buildings, although they may stand for centuries still. We—you and I—are the future of libraries. Ivy may grow on the columns, coffee may well be served, and books may be shelved. But they shall be done so by our decision in response to the needs of our communities.

Some have attributed the dynamic nature of the librarian’s world to technology. The web, social networking, blogging, and so forth, they will say, have totally changed the world, and librarians must abandon old ways of thinking and embrace the new world of openness, participation, and so on. I would say that technology has indeed brought about revolutionary change and indeed requires librarians to adopt (and, I would argue, create) new tools. However, seeing technology as the sole driver for change is short-sighted in the extreme.

Here is the truth: The world is changing radically—just like it always has. It does no good to ignore that librarians and society as a whole have faced times of massive change in the past. Can anyone really argue that the scale of change offered by today’s digital ubiquity (in the so-called developed world) is of greater magnitude than the advent of movable type? Is the Internet a seismic shift of greater magnitude than, say, the advent of universal public education? Is today’s youth culture any more radical than the counterculture of the fabled 1960s—or the beatnik generation? Which is having a greater effect on society: the World Wide Web or the fact that over the past century life expectancy for U.S. citizens has gone from 47 to 77? Which is a greater challenge to credibility: the fact that I just cited Wikipedia or the fact that three candidates in the 2008 presidential race “indicat[ed] they did not subscribe to Charles Darwin’s theory of evolution?”

What is amazing is that, through all of these changes and even greater ones over the centuries (the Renaissance, the Enlightenment, indoor plumbing), the concept of the library has survived. To be more precise, the concept of libraries has been able to evolve to meet a changing world. This is an important difference because those who may be comforted that libraries survive should not be lulled into believing either that it has done so by being a fixed point in a world of change or that it has done so without wrenching and fierce debate as to its mission. Just as physicians, universities, and farmers have existed for millennia, they have done so by adapting.

Let me be clear: The world we live in is changing. It is not your imagination. The world of information is moving faster, new technologies are making it to market in less time, new markets are emerging as you are reading this, and, yes, the world we lived in just 5 years ago is now gone. You cannot ignore the change, and you cannot ignore the victories of the past in accommodating the change.

The Atlas before you is an attempt to follow Israel Zangwill’s advice and look to the history of the field for the core and constant while looking to even deeper theory of how people know to help shape the future.

**A NOTE ON RHETORIC**

The Atlas is a combination of topical map, scholarly theory, practical example, persuasive argument, textbook, and inspirational sermon. The rhetoric seeks to match. There are plenty of sections of the Atlas that do dwell on the scholarly and theoretical. They are not in here to make me sound smart; they are in here because the deeper our understanding, the better our decisions and the better our practice. I shall not, however, shy away from the personal by masking it behind

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the third-person passive voice. When I talk of passionate topics, I do so with passionate rhetoric.

Some may fault me for the use of inspirational and even over-the-top rhetoric. I feel this field is in need of some inspiration. All too often we seem to reserve passionate and inspiring rhetoric for our political speeches and action movies. Why? Why divorce the everyday struggles of a noble profession like librarians from soaring words? Are we not worthy of it? Why are the struggles of librarians less deserving of a sermon and some inspiration than the politician running for office or the football team seeking the next victory? It is time that those who seek to unlock the imagination and power of our society, the librarians, get a few supportive and overheated words themselves.

What can be more inspiring than knowledge and those who seek it out? Some in academia feel that knowledge is a cold thing, a dispassionate examination of facts and limitations. Yet knowledge is anything but cold and dispassionate. Scholarship is a passionate quest approached with dispassionate tools. The questions that push the quest forward come from deeply personal parts of us. We seek the truth from a faith that it exists, that it is discoverable, and that finding it will make things better.

Any attempt by librarians to wrap ourselves in the rhetoric and attitudes of some mythic, detached scholar misses the point of understanding. Look at the examples of the greatest minds that have moved the world—scholars who talk of epiphanies. The quest of truth is often described not as a methodical description of facts but of discovery. After all, Einstein unlocked the secrets of the atom and then was a tireless advocate for containing nuclear weapons. The top law schools don’t just teach the law; they go into court to defend civil liberties. MIT doesn’t simply teach mathematics, it builds software. Example after example shows that discovery of knowledge carries an equal obligation to fight ignorance and act. Scholarship is activism, truth is teaching, and librarianship is radical change. One must be both right and righteous. The rhetoric of the Atlas can be nothing less.
The Atlas is a topical map represented by a series of agreements in relation to one another organized into a series of threads. While many terms are discussed in detail throughout the Atlas, it is useful to at least provide a basic definition before we proceed:

- **Agreement**  An understanding about the field of librarianship that may include a skill area, a relevant theory, a practice, or an example. One might be tempted to think of these as facts that lack context—for example, the fact that Mt. Everest is 29,029 feet high. That fact is useful but not nearly as important as when teamed with the fact that your plane can only climb to 29,000 feet. Agreements are more like persuasive arguments that are related to each other. This teaming of agreements is context, and within the Atlas this is achieved through relationships.

- **Relationships**  True knowledge lies not in facts but in the relationships among them. Relationships provide context to agreements and sit between them. These are aggregated together for explanatory purposes into threads.

- **Threads**  Threads are intended to tell the story of key concepts in the Atlas. For example, one thread focuses on the conceptual foundations of the Atlas, whereas another focuses on the skills and values that librarians need. Taken together, the threads, relationships, and agreements are visually represented in the Map.

- **Map**  The Map is the visual representation that acts as an index to the entire Atlas. It is a snapshot that allows the reader to explore and navigate through an emerging, grounded understanding of the field of librarianship. It is the centerpiece of the Atlas.

- **Atlas**  The Atlas is the sum total of this work. It is the visual Map, as well as the detailed discussions of agreements and threads.

There is one other term used throughout the Atlas that must be clarified: “member.” While this is fully explored within the agreement
“Members Not Patrons or Users,” it is worth explaining its use here. What do you call the people whom librarians serve? In the aggregate, I’ll call them community, realizing that the community might be the faculty, staff, and students of a university; taxpayers in a city; or employees in a commercial firm. Individually I refer to them as members—as opposed to patrons, customers, or users. I picked up this term from Joan Frye Williams, the librarian and information technology consultant who solved the naming problem by doing something amazing—she asked folks in the library what they wanted to be called.

I like the term because it implies belonging, shared ownership, and shared responsibility. It is, frankly, a bit awkward to talk about membership in a work dedicated to an individual, the librarian (after all, can someone be a member of a librarian?), but I am willing to deal with the awkwardness to reinforce the idea of member as stakeholder. After all, a user connotes a consumer who takes without giving, and a customer implies a lopsided relationship where service is bought and paid for. Patron is fine but derives from the concept of patronage, which has always struck me as a bit paternalistic. So I use member. They are members of a community, a library, or a conversation (and often all three at the same time).

A NOTE ON VISUALIZATION

The shape of the Map—that is, how it is actually displayed—is arbitrary. The current “picture” in the Atlas was chosen as a compact design that is easy to navigate and aesthetically pleasing. The true map of agreements and relationships can be displayed in a nearly infinite number of ways. Indeed, the beginning of each thread and agreement changes the position of agreements to maximize clarity and space. For example, in the overall Map, the “Mission” thread has the shape seen in figure 1.

While in the discussion of this thread, it is represented more compactly as figure 2.

The relationships and agreements are the same; simply the position is different.

The Atlas as a whole can also be displayed in various ways. For example, it can be seen as a hyperbolic tree in figure 3.

This format is actually better for exploration and direct interaction but more difficult for static viewing and understanding the whole.

The Map could also be displayed simply as a sort of textual outline, say for a Wiki interface in figure 4. Although this format is efficient for navigating the agreements, it all but obscures the relationships between them, implying only a rigid hierarchy. After all, the Map is actually a mesh not a hierarchy.

One could imagine three-dimensional views of the Map or simple aesthetic changes in the colors. The point is not the actual picture but rather the agreements and relationships contained within it.

HOW TO NAVIGATE THE ATLAS

The Atlas is divided into three major components: “The Map,” “Threads,” and “Agreement Supplements.” If the Atlas is seen as a course, the Map is the syllabus, the Threads are the lectures, and the Agreement Supplements contain the accompanying readings and discussion materials. The Map shows agreement titles and their relations to one another. The bulk of information about these agreements and their relationships is explained under Threads. Agreements are expanded in entries within the Agreement Supplements.

It is suggested that the first time through the Atlas, you read the Threads in a linear way and then refer to the Agreement Supplements as needed to find more information on a given area or idea. As you become more familiar with the overall concepts of the Atlas, the Agreement Supplements become more useful in application. To help you explore concepts throughout the Threads, some headers will have a “*” next to them with an accompanying bolded footnote indicating that additional information beyond index data can be found in the Agreement Supplements.

The Map is read in a top-to-bottom manner. That means that the relationships expressed are phrased as coming from the top node to the bottom node. For example, take a look at figure 5.

This relationship is read as “Creating a new social compact” results in the ‘Evolution of that social compact.’ However, this is just the phrasing. The relationship in reading bottom to top is the same but would be phrased differently: “Evolution of the social compact” results from ‘Creating a new social compact.’ The relationship is still “resulting,” but the phrasing is slightly different. Ultimately, the choice of top to bottom, a sort of deductive presentation, is chosen to make explaining the whole Atlas easier.

The size differences between agreements represent their relative importance. As you can see, the emphasis in the preceding relationship is on the creation of a new social compact. The evolution of the compact is important but not as fully explored in the Atlas, or at least not as fully emphasized.
The Mission of Librarians is to Improve Society through Facilitating Knowledge Creation in their Communities.
The Mission of Librarians is to Improve Society through Facilitating Knowledge Creation in their Communities
The ATLAS

Knowledge is Created through Conversation

Conversants

Language

Agreements

Memory

Entailment

Facilitating Knowledge Creation in their Communities

Importance of Action and Activism

The Mission of Librarians is to Improve Society through Facilitating Knowledge Creation in their Communities

Pressure for Participation

Means of Facilitation

Core Skills

Importance of Action and Activism

Importance of a Worldview

Social Literacy

Gaming

Social Network Sites

Definition of Need for an Expanded Literacy

Ethics

the Community

Dissemination of Information

Members not Organization

Spaces

Shared

Library

Users

Means Shared Environment

Knowledge Ownership

Facilitation

Motivation

Access

True

User Systems

Service is not Invisibility

Evolution of the Compact

Core Values

Social Justice

Entrepreneurship

Innovation

Issues

versus

Creating a New Social System View

Conversation Theory

Florentine School of Architecture

Amnesia

Source

Massive Scale

Overshadowed and Openness by Technology

Policy

Democracy

Risks of Data

Intellectually Honest not Unbiased

Intellectual Safety

Freedom and

Evolution of Systems

User-Based Design

System View

Leadership

and Activism

Importance of Technical Skills

Professional

Essential for Ambiguity is Work

Reference

Extract

Limitations of Reference

Education

Need for an Expanded Literacy

Libraries are in the Knowledge Business therefore the Conversation Paradigm

Libraries are in the Knowledge Business therefore the Conversation Paradigm

Public versus Authority

Authoritative vs. Reliability

Authoritarian vs. Credibility

Entrepreneurium

Authority vs. Responsibility

Competency

Interviews

Repository

Information and Communication

Document

Reference

Facilitating Knowledge Creation in their Communities

Importance of Action and Activism
The Mission of Librarians is to Improve Society through Facilitating Knowledge Creation in their Communities

- Knowledge is Created through Conversation
  - Libraries are in the Knowledge Business therefore the Conversation Business
- Pressure for Participation
  - Boundary Issues
  - Different Communities Librarians Serve
    - Public
      - Free Library of Philadelphia
      - Entrepreneurium
    - Academic
    - Government
      - Department of Justice
    - Special
    - School
      - Growing Importance of Two Way Infrastructure
      - School Information Management Systems
    - Archives
    - Go to the Conversation
      - Embedded Librarians
      - Truly Distributed Digital Library
    - Digital Environments
    - Internet Model Example
      - User
        - Credibility
          - From Authority to Reliability
          - Authoritative vs Authoritarian
        - Information Services
          - Web 2.0
        - Application Builders
          - Open Source

Creating a New Social Compact

Evolution of the Social Compact

Figure 4

Figure 5
READERS OF THE ATLAS

This Atlas, although not an encyclopedia, tries to capture the whole of librarianship. As such, it is not an easy one sitting read. It also covers a lot of different topics that may have variable interest for different audiences.

The primary audience for the Atlas is practitioners; librarians in the field. Practitioners are the implied antecedent to pronouns like “you.” It is vital that current librarians act as thoughtful or reflective practitioners who seek to understand the why of service and not simply the how and what. Although a practitioner may want to jump right to the more applied parts of the Atlas (namely, the “Communities” and “Librarians” threads), they shouldn’t. All of the examples and specifics are derived from the mission, a deep understanding of knowledge, and the means of facilitation covered in the first three threads.

Another audience for the Atlas is Library and Information Science (LIS) scholars. Although the rhetoric of the threads is definitely and deliberately not “scholarly” in tone, the ideas are being put forth to the scholarly community for consideration and validation. There are plenty of studies implied here and assertions in need of testing. There is an overall challenge throughout the Atlas for scholars: Can we think bigger? Each agreement may well be a dissertation waiting to be written, but aren’t we as scholars also obliged to try and integrate our own valuable and detailed work into a larger whole? I think so. The Atlas is my attempt at this goal.

The last purposeful audience I have written for is the corps of LIS students. You are our future. Although we all have a role to play, you, as a student, right now, have a unique position that will never come again. You are new to the field. Even if you have worked in or around a library, you are now breaking through our dense crust of language and acronyms (which I apologize have not entirely disappeared in this work) to see what it is we do and why. Why is being new to something so special? As Michael Brooks observes in his book 13 Things That Don’t Make Sense: The Most Baffling Scientific Mysteries of Our Time:

Kuhn observed that his paradigm shift model means that major discoveries are only made by people who are either very young or very new to that particular scientific discipline.

That’s you. Don’t waste your precious gift of a fresh perspective by reading these words or listening to the voices of your faculty and assuming we are right. We are preparing you to be librarians not clones.

I also hope that members and communities beyond librarians find value in the Atlas. I think there is a lot of food for thought for board members, college presidents, principals, and elected officials who oversee libraries in these pages. However, I hope that is true for members of the general public as well. Within these pages is a call to engage our communities—you—in a new social compact. This social compact spells out the true value of the library and librarians, what is expected from them, and by them. You—as a parent, as a job seeker, as a reader, as a web surfer, as a gamer, as a child, as a student, as a business man—have a voice in the future of libraries. I hope this Atlas helps you find that voice.

LIMITATIONS OF THE ATLAS

The Atlas is formative. Although it contains examples, it doesn’t go into the specifics of all skills mentioned. Rather, it lays out a broad framework and a direction. This is important because I don’t intend to necessarily negate current understandings and work. However, in many places, it does call for reexamination of functions and assumptions. There is value in taking such a high-level perspective: It gives us all a chance to step back and reflect. Much of current practice has been encased in decades (centuries) of practice and evolution. This history, although certainly representing the aggregate efforts of best thoughts in the profession, can also serve as baggage weighing down needed reform. Any standard, policy, or practice results not only from true insight but also compromise, and it reflects the limitations of attitudes and technology of the time. So although we don’t want to throw the baby out with the bathwater, it is good to every so often ask whether the baby is clean enough.

Another limitation of the Atlas is that it reflects a decidedly North American perspective. This is obvious, for example, in the discussion of LIS education because bachelor’s-level librarianship degrees exist in many countries already. Although efforts were made to learn from and think about the librarian experience in other countries, the truth is that most of my time and energy have been spent around libraries in the United States and Canada. I certainly hope the Atlas can serve as a springboard for further conversations globally (preferably starting with in-person dialogs about librarianship in the South of France).

There are, no doubt, other limiting perspectives in this work, and it is your responsibility to point them out and my responsibility to listen and work with you to correct or at least account for them.

An important thing to remember as you read through the Threads is this: to question something is not to seek weakness but rather to

seek fitness. If an idea is good or an approach is valid, it should not only stand up to scrutiny, but it should welcome it. A major reason for the Atlas is to get the library community to ask hard questions so that we are fully ready for hard scrutiny from our members and beyond.

OK, let’s get started.
As detailed throughout this Atlas, knowledge is not simply a set of accumulated facts but rather a web of personal truths and their relationship to one another (the context). As such, this Atlas is not simply a list of definitions about librarianship but a set of agreements with relationships, with many agreements contextualizing any single agreement. Threads are a construct—a way of explaining the arrangement and logic that sit around the agreements. Threads are context and a means of understanding the full set of agreements and relationships.

The Threads of the Atlas are organized around the six major concepts in the mission of librarians, seen highlighted here:

*The mission of librarians is to improve society through facilitating knowledge creation in their communities.*

Rather than take each Thread in order, I present them in a building sequence. I first establish the case for a new mission and definition of librarianship in the “Mission” Thread, and I then lay the foundations of this new mission in the way knowledge is created. Upon this foundation, I lay the means of facilitating knowledge creation—the proposed role for librarians—and examine the concept of communities in today’s increasingly interconnected world. Finally, I show the importance of action and activism, and I discuss the particular skills, values, and preparation of new librarians.

In general, the Threads form a sort of funnel, starting with broad concepts (the conceptual foundations of new librarianship) and then moving to more narrowly conceived examples and aspects. Each thread builds on the previous. So that an example in the “Communities” Thread is an expression of how people create knowledge outlined in the “Knowledge” Thread, which helps reinforce a worldview first put forth in the “Mission” Thread.
The Mission of Librarians is to Improve Society through Facilitating Knowledge Creation in their Communities

Importance of a Worldview

Creating a New Social Compact

Evolution of the Social Compact

Importance of Theory and Deep Concepts

Conversation Theory

Dialectic Theories

Post-modernism

Sense-Making

Motivation Theories

Learning Theory

Constructivism

Motivation

Figure 6
MISSION

The library is not a shrine for the worship of books. It is not a temple where literary incense must be burned or where one’s devotion to the bound book is expressed in ritual. A library, to modify the famous metaphor of Socrates, should be the delivery room for the birth of ideas.

—Norman Cousins

THE MISSION OF LIBRARIANS IS TO IMPROVE SOCIETY THROUGH FACILITATING KNOWLEDGE CREATION IN THEIR COMMUNITIES

The mission of librarians is to improve society through facilitating knowledge creation in their communities. There are some important things to note about this mission statement. First, it is not the mission of a library or an organization; it is the mission of a librarian. It focuses the field on information professionals, but it also makes the responsibility personal to an individual. It doesn’t matter whether a librarian works in a library or hospital, a law firm, a search engine company, or out of his or her own home; the mission still stands.

Although other threads in the Atlas unpack some of the key phrases in the mission statement, one must first answer the most basic question: Why bother having a field-wide mission statement anyway?

A mission, vision, or goal provides a yardstick by which to gauge efforts and judge options. When librarians are faced with decisions, as they increasingly are in times of tight budgets, they must have some means of making the decision. Should a public librarian spend precious resources on popular materials? Databases? Longer hours? Without a common and deeply held mission, these decisions come down to personal or political choice often based on unquestioned assumptions.

For example, I was on the board of a public library. The board had made a goal before I joined of constantly increasing the materials budget by 10%. When hard times hit, the goal remained, and so come budget time, the initial proposal to the board was to increase the collection budget and lay off staff. After a quick discussion about how having books that could not be found, shelved, or even circulated didn’t make much sense, it was decided to cut the materials budget and retain the staff.

This might seem like an easy choice to the librarians reading this (even a victory), but that is not the point. Why was the initial proposal put forth in the first place? The answer comes down to the worldview that the mission of the library is situated within it. If you see the library’s primary value being the maintenance of a collection—that is, the mission of a library is the collection and provision of materials—then it makes a lot of sense to increase the materials budget. In contrast, if you see the main asset of a library as the professional or, even better, the potential positive effect librarians can have on a community, then it makes no sense at all.

IMPORTANCE OF WORLDVIEW*

In many ways, this entire Atlas is intended to make clear a worldview of librarianship not founded on materials, but outcomes and learning. Once again, this may seem like an easy or even obvious approach. However, look at the budgets that most libraries spend on materials and the activities surrounding them. Between buying, licensing, cataloging, shelving, housing, and circulating things, what is left? If you have a hard time answering that question beyond “reference,” you are not alone. The worldview of librarians has become so fixated on artifacts (books, CDs, etc.) that they have a hard time separating out their goals from the tools they use to achieve them. Allow me to illustrate with a story.

A foundation was working with a large urban library to design a physical space for youth to explore new modes of learning. The library had identified an underutilized storage space and turned it over to researchers funded by the foundation. The researchers went about designing the space to be open, collaborative, and infused with technology. All seemed to be going well until architectural plans for the new space came in and the librarians asked, “Where are we going to put the books?” The researchers were dumbfounded. The library didn’t need the space for collections, and the researchers felt that a lot of shelving would deaden the space they envisioned. In a state of confusion, they asked me what was going on.

My short answer was that the foundation researchers had run smack into a materials-centered librarian worldview. In essence, the librarians were trying to identify their own contributions and value in the new space. Without collections, they felt they had no value. Ironically, the researchers saw great value in the librarians as moderators and facilitators. Youth were going to be entering new spaces and would need help and guidance. In fact, one of the reasons the

*See Agreement Supplement for an annotated bibliography of worldviews in librarianship.
... a network of learning that included schools, museums, and homes.

Ask yourself, how artifact-centric is your worldview? Assume for a moment “they” are right...you know, them: The ones who say that the Internet/Mass Digitization/Search Engines/Wikipedia/Document Right Management/whatever is going to put libraries out of business. Assume that the stacks are bare, the coffee bars are empty, and the ivy is left to run riot over the columns. Is there still a library? If that strikes you as an odd question, let me ask you another one. Is the future of the library a question of stacks, coffee bars, or ivy?

I have long contended that a room full of books is simply a closet but that an empty room with a librarian in it is a library. Will that librarian build a collection of artifacts over time to help in his or her mission of facilitating knowledge? Probably. If that empty room has an Internet connection, there is a good chance that the room will soon also serve out a web page full of links. Over time, the room may fill with magazines, computers, or (hopefully) whiteboards and meeting spaces. However, these things come from the librarians doing their jobs; they are not the job itself.

Librarianship is not the only profession currently dealing with a worldview that has too closely co-mingled a mission with the tools of the trade. Take the current media obsession with the death of newspapers. Around the nation, newspapers are folding or facing tremendous financial difficulties. Many have said this signals the death of journalism. However, reporters at local, national, and cable television news outlets might disagree. What is dying is a medium of delivery and a business model for print. Journalism—and its methods of credibility, ethics, and even overarching mission of telling truth—is still very needed and alive.

What we must develop, and what this Atlas puts forth as a first effort, is a new worldview of librarianship that transcends tools, and even former missions like information organization (a means to an end), and maintaining recorded knowledge (an oxymoron that is discussed later). It is vital to do so not simply to survive the current times but to open up a world of possibilities.

LONGITUDE EXAMPLE

It might seem a bit grand to think that something as abstract as a worldview can “open up a world of possibilities,” but that is precisely what happened in eighteenth-century England. At the time, commerce and the wealth of nations was very much centered on a nation’s sea fleet and its ability to navigate the world. Since ancient times, seagoing vessels have plied the waters of Europe and the Mediterranean for trading purposes. Since ancient times, this type of navigation was based on the concepts of latitude and landmarks.

Longitude is the measure of one’s relative position north and south on the Earth. In modern times, it is defined by how far you are from the equator. Early sailors determined their latitude by the use of landmarks. Seeing a certain cliff wall or a certain lighthouse on the shore would determine their location along the coast. Later sailors could use the stars and star charts to determine their north and south location.

However, sailors had to stay close to the shore because they had no way of determining how far east or west they were (a measure we now call longitude). If a crew lost sight of land, they would have no way of determining their true location and might as well have fallen off the edge of a flat Earth. Even when it was widely known that the Earth was round (long before Columbus sailed the ocean blue starting as far back as Aristotle), making use of that information was difficult and treacherous. Massive fleets and treasure were lost trying to go beyond the sight of land.

Huge amounts of money were spent trying to figure out a method of determining longitude by the position of the moon and stars. Proposals were even put forth to build a system of cannons across the ocean that would fire at precise times each day to set up shipping lanes. Finally, in an early version of crowdsourcing, governments put up huge rewards for the person who could figure out a method of determining longitude accurately and effectively.¹

The winner, it turns out, was a man named John Harrison who invented an extremely accurate clock. With an accurate clock, you can determine what time it is at some fixed point of longitude (today we use a line that goes right through Greenwich, England), say noon. You can then determine noon at your current location (when the sun is at its highest point). By using the difference in the two times and a little math, you can accurately determine your location east/west.

Using these two concepts, longitude and latitude, you can now chart the globe. You no doubt have seen a map like the one in figure 7. The lines on the map, latitude running from top to bottom and longitude left to right, don’t actually exist in nature. They are a purely human construct. Yet with this construct—quite literally a

Figure 7

Physical Map of the World, June 2009
worldview—one can understand not only where you are but where everything else is and how to get there. It is such a powerful worldview that it is still used today, although the stars and moon have been replaced by satellites and Harrison’s clock replaced by digital clocks in our global positioning system (GPS) units.

It should be noted that even this map represents a view of the world that is far from universal. After all, this is a flat map of a sphere. In fact, throughout the twentieth century, many cartographers advocated for the use of the “Gall-Peters Projection” (as seen in figure 8) that some felt better represented the distribution of land on the globe.

This is a different view than the maps based on the “Mercator Projection” most of us grew up with, where Greenland and Africa appear to be about the same size even though Africa is 14 times larger. Some maps in Australia actually put South at the top of the map (who says North has to be “up”). The bottom line is this: How we envision the world influences our navigation through it and the decisions we make.

Throughout this Atlas, I attempt to articulate a worldview so that we cannot only determine where we are but what our options are and where we can go next. Further, this worldview must be independent of any given set of tools and/or technologies because we know they change rapidly. The worldview must be based on theory and deep concepts. Allow me to illustrate the point with a joke.

**IMPORTANCE OF THEORY AND DEEP CONCEPTS**

So Albert Einstein goes to a party. The host is keen to show off the world-famous physicist to his mostly blue-collar friends, so he escorts Einstein around, introducing him.

The first guest asks Einstein, “So what is it you do, Albert?” Einstein replies, “I seek to understand time.”

“Wow,” says the guest, “We’re in the same business. I sell watches.”

The host introduces him to the second guest, who asks, “So Albert, what is it you do?”

Einstein, trying to impress, replies, “I seek to understand how all the planets and stars in heaven move about the universe.”

“Wow,” says the second guest, “We’re in the same line of work. I build telescopes.”

A third guest asks Einstein, “What is it you do?” Einstein replies, “I have discovered how light, magnetism, and electricity are connected.”

“Wow,” says the third guest, “We’re in the same business. I repair TVs!”

The host takes a now depressed and exasperated Einstein to meet a fourth guest.

“What is it you do, Albert?” asks the fourth guest.

Now completely deflated, Einstein says, “Nothing. I don’t sell anything. I don’t build anything. I can’t even repair anything. I’m useless.”

“Wow,” says the fourth guest, “I’m a tenured professor too!” Few would actually see a watch salesman, a telescope builder, and a TV repairman as in the same business as Einstein, but the joke illustrates an important point: Functional definitions of professions in general, and of librarianship in particular, do not work. That is, if you seek to define the worldview of librarians by the functions they do, you will run into all sorts of problems—problems we have all seen played out at conferences and on blog posts.

Let us recast the joke. This time it is a librarian being introduced around instead of Albert Einstein (feel free to put a snide comment here).

“What do you do?” asks the first guest.

“I help people find information,” says the librarian.

“Wow,” says the guest, “We’re in the same business. I work at Google [or Bing, or Yahoo].”

*See Agreement Supplement for an annotated bibliography on theory in libraries.*
To the second guest, the librarian answers, “I provide access to books, CDs, and all types of materials.”

“Wow,” says the second guest, “We’re in the same business. I work at Amazon.”

To the third guest, the librarian replies, “I answer people’s questions when they ask.”

“Wow,” says the third guest, “We’re in the same business. I work at the Sears Helpdesk.”

I’ll let you fill in the punch line (although I think it should either involve a belly dancer or a politician). The point remains the same. If you define the whole of librarianship as a set of tasks or functions, you end up with a lot of confusion and understandable concern about the future. This, by the way, I see as the major shortcoming of ALA’s “Core Competencies of Librarianship.” It is a document that lists functions with no explicit declaration of worldview (although it is clearly based on one that is strongly artifact-centric).

The keen reader is quick to point out that, although the worldview behind the functions may be different, the average users of these functions may not be able to tell the difference. If there is no functional difference, then why does worldview matter (or at least a worldview that seeks to go beyond following the landmarks of the search engines and such)?

The short answer is time. As is obvious to anyone in librarianship, the world is changing. It is dynamic. It is changing not just in the technology it produces and uses but also in other more profound ways. I’ve already mentioned that over the past century, life expectancy for U.S. citizens has gone from 47 to 77 years. Profound changes in technology, demographics, connectivity, and more mean that functions are also changing, and it is the ability to change in the direction of current and future service that will spell success or disaster (or an uncomfortable stasis). That ability to change and anticipate is a product of a worldview.

Let me walk you through three examples to show you what I mean. The first is silly and is only presented to make the point obvious. Imagine I gave you a task: pick an animal to run a land race and win. You might pick a cheetah, the world’s fastest animal. You could also pick a dog (let’s say a greyhound). Functionally, both could run a race. However, given that the task is to win, the cheetah might seem the obvious choice. What is missing, and what becomes obvious over

time, is that the real variable you need to consider is mentioned nowhere in the task...the length of the race.

You see, while the cheetah is very fast, it is not very fast for very long. Its explosive speed is short-lived and helps it hunt. After a quick burst of speed, most of the cat’s energy is used up, and it requires a very long nap to restore its energy. Dogs, on the other hand, while not as fast, can maintain their top speed for a long time. So if the race is a 100-yard dash, the cheetah would win. If it is a marathon, the dog is the best bet (see figure 9).

You may think this is cheating, holding out a key aspect of the task. Yet that is exactly what happens in the real world. As the parameters of the environment change, an important aspect of a task, organization, or worldview may not become apparent at any given moment. It is only over time that one approach wins out over the other. Let me move off the simple example of a race to one in the real world.

Take Wikipedia and Encarta in 2004. Both were online encyclopedias. Both had freely available content. Both had a wide range of topics. Yet something interesting happened over the next two years. As the graph in figure 10 shows, Wikipedia exploded while Encarta imploded.

In retrospect, we can say the fact that users could add their own content made the big difference, and that a “2.0” approach was the
obvious winner. However, put yourself back in 2004. Microsoft funded Encarta. Encarta had a huge number of existing users through its CD-ROM products (particularly in the K–12 domain) and was professionally edited and designed. Wikipedia had no advertising budget, no expert editors, and no real organizational backing. What Wikipedia did have was a different worldview—that of radical openness. Over time, as the web changed, that worldview proved more successful (Encarta eventually closed shop). Simply saying that Encarta and Wikipedia were functionally similar misses the whole point.

Take, as another example, MySpace and GeoCities. Functionally they provided the same basic function: a personal space on the web. Both were situated as social in nature. But as time moved forward, the more restricted nature of GeoCities and its limited ability for customization changed their adoption as shown in figure 11.

We could continue with examples that range from web search (with Alta Vista looking at the web as a set of documents and Google seeing it as a set of connections) to nondigital examples, such as how Dewey’s classification system took off while other systems, such as Ranganathan’s facetted classification, did not. However, the point is clear: Over time, functional views don’t and can’t capture the dynamic nature of the world. What’s more, they tend to lead to stagnation and an inability to adapt.

Figure 11
If, on the other hand, we build a worldview on theory and deep conceptual foundations (such as latitude and longitude), we should be able to build a more robust mission statement, allow functions to change as the environment changes, and still retain a core identity as librarians. So when the public library in Gilbert, Arizona, drops Dewey, we don’t have to ask, “Is it still a library?” Although the tools have changed, the core mission of knowledge creation and societal improvement remains. Their identities as librarians are not predicated on whether they catalog but by how they see the world (worldview) and determine whether they should or shouldn’t catalog (a function). The reasoning behind the decision is much more important over time than the decision itself.

The worldview of new librarianship put forth in this Atlas is founded on a theory of how people learn called Conversation Theory. It is also informed by other key theories and concepts such as Motivation Theory, Sense-Making, and Postmodernism. All of these combined approaches call out for a new social compact among librarians and those they seek to serve.

Libraries and Theory

Before we proceed into the theories and conceptual frameworks that lie at the base of new librarianship, it is worth exploring a bit on why theories on learning and conversation are being used over library-specific theories.

There are two answers: Library science as currently constituted is not rich in strong theory, and what theory there is revolves around functional approaches. The field of library science as seen in journals and books is overwhelmingly about empirical explorations and system building. So there are ample data on how members feel about a given function (surveys on catalog usage, behavioral studies on web-based information seeking, content analysis of digital reference questions) but little attempt to answer why the results turn out the way they do. There are, of course, some exceptions. McGrath,4 for example, has tried to determine a grand theory of library science. However, on the whole, few have put forth library-specific theories, and what there is more like theories of cataloging, reference, and so on.

Some have taken this lack of theoretical work to claim that library science is an atheoretical field. However, this notion is not true. Take a run through the reference literature. You have Brenda Dervin’s development of neutral questioning5 to Marie Radford’s work on reference encountering.6 However, here the use of theory is not about the library per se but about the action that is taken in a library (namely, asking and answering questions).

When you think about it, this makes sense. Theories and science are all about explaining and exploring natural or organic things. Social scientists use theories and methods to explore how humans make their way through the world. Theories from the natural sciences study how the physical world reacts. Even in areas where the study is explicitly about organizations, such as economics, management, or systems theory, the emphasis is on general behaviors, not tied to a specific type of organization.

Science always looks for the general. Having a theory of libraries is like having a theory about General Motors or the grand unified theory of McDonald’s. Because libraries are artificial creations of people (societies, communities), one must look to the underlying drivers that lead to the act of creation.

In other words, to learn about why organizations are shaped the way they are, we try to understand what drives people to organize. Likewise, to improve libraries, we don’t look to theories of buildings but to theories that drive the goals that librarians seek to accomplish.

For decades, those have been presumed to be theories of information. From Shannon and Weaver’s Theory of Information7 to the more specific information-seeking world, to the human–computer interaction world that seeks to understand how people interact with information systems. To be sure, these theories have been of great utility and shall continue to be useful. However, in terms of setting a worldview and grounding a mission, they fall short. After all, how does a library mission of “informing” help us determine what to do next? “Keep informing” is not a satisfying answer.

Setting aside the inability of the library and information science field to develop a universally satisfying definition of information (Is it in our heads or what is transmitted? What is the difference between data and information and knowledge anyway? What is the unit of

The fundamental shift is from things to human knowledge. It changes the focus of the work of librarians from artifacts and the products of learning (like books, web pages, and DVDs) to the learning process. Rather than being concerned with some externalized concept such as information (or, worse, “recorded knowledge”), it places the focus of librarianship squarely on behavior and the effects of services on the individual. In essence, the value of a book, or librarian for that matter, is evaluated against the need of the library member’s ability to learn. Even the need for a library to collect artifacts (materials) is determined by the learning needs of the member or the aggregated needs of the community. So a library where people are learning and building their knowledge may have no books, no computers, no DVDs, and no building. What it will have is a librarian facilitating the process. This may seem odd, if not outright wrong. Allow me to present you two scenarios of a library with no books: the first historical, and the second proposed.

Many people trace the history of libraries back to the Library of Alexandria in ancient Egypt. Most talk about its enormous collection of scrolls and documents from around the known world. One of my favorite aspects of the library was that any ship entering into Alexandria, a major trading port, would have all of its documents confiscated. The library would then copy the documents and return the copies to the ship.

What many people don’t recall in this history was that the library was not actually one big building. It was more of a campus. The documents were stored in several buildings, including a structure dedicated to the Muses called the Museion—the origin of the term “museum.” The campus was a dormitory and working space for scholars. Scholars and thinkers were paid to take up residence in Alexandria, and the buildings were designed with colonnades to maximize their interaction. If these scholars had some great thought or wrote down some new insight, the artifact was then retained. The library was much more a precursor to today’s university systems or even to economic incubators. The library existed for the scholars’ interactions, and the librarian of Alexandria was seen not as a caretaker but an advisor to the rulers of the city-state.

11. *See Agreement Supplement for an overview of conversation theory and more links to the literature.*
Just a quick note on worldview before I move on to the next example. Many have heard of the Library of Alexandria, but few have heard about the campus and the use of the library beyond the collection. History is often a narrative that reinforces worldviews rather than challenging them. In this case, the worldview is that libraries are storehouses for materials.

Now let us think about a modern library that would not carry books. You might expect a discussion of digital libraries or web spaces, but in truth these can be seen as store houses of artifacts where the artifacts are web pages and digital files. What we want is a library of behaviors and learning.

Let us first set up a few concepts. There are plenty of things that cannot be well taught through text or even video; they must be learned by doing. There are also people who learn much better through hands-on experience. So what if we wanted to set up a library of manufacturing? We want to build a space that facilitates knowledge of building things. Our first instinct might be to go and collect materials on how-tos, industry reports, and the like. While in reality we might well do this, let’s stick to the task: a library without traditional information artifacts.

Why not fill the space with manufacturing equipment? What’s more, we need to fill the space with experts who can teach folks how to use this equipment. Members of our manufacturing library might come into the space with their own building projects, work with experts to learn the equipment, and build. We might have apprenticeship programs where members get certified. We might even have spaces filled with Legos, building blocks, and Tinker Toys for kids to learn the basics of structure and construction.

Why is this a library and not a trade school or vocational academy? The answer is because it is brought together and managed by a librarian. Not just in title but in what the librarian brings to the space. The role of the librarian in this space will not seem so different from what you might do today. The librarian must know the community and its needs. He or she might conduct surveys or have focus groups to identify the most useful manufacturing equipment. The librarian must also build a collection. Rather than this being a collection of documents, it would be a collection of expertise and processes. The librarian would organize programs, answer reference questions, and even complete an inventory of projects through some form of cataloging. The manufacturing library is a library not because of these functions, however, but because a librarian brought his or her worldview of knowledge and learning to a community (including his or her values, which we review in the “Improve Society” Thread).

Conversation Theory shapes our mission. It focuses us on learning and, as I detail elsewhere, shapes the means of facilitation into a unique profession. Our worldview and our mission must accommodate learning theories and focus on individual learning and responsibilities. Conversation Theory also provides insight into one of the greatest assets a librarian has: credibility.

Credibility

The prime value of librarians is not their skill set or their credentials. These things will change. The enduring value of librarians on which everything flows is their credibility. Building and holding the trust of the community is the scaffolding on which all facilitation is built. The reason that credibility is discussed in conjunction with Conversation Theory is that the predominant means of determining credibility of a source is shifting. In an increasingly networked world, credibility determinations have shifted from a basis of authority—the abdication of personal credibility judgments to another source (the authority)—to one of reliability—polling a number of sources for commonalities.

The effect of this on the mission of librarians is at least two fold: Librarians must understand that they are only one source among many for a community, and librarians must be at least aware of the views of many sources on topics. This is not new by any means. One could argue that this is exactly how librarians have become seen as honest and credible agents. Not by seeking to be the authority on a source but rather by openly and transparently guiding members through multiple sources seeking consistency. This would indicate that as librarians move forward, they must be willing to move beyond any one class of resources (such as artifacts over experts).

OTHER INFORMATIVE CONCEPTS AND THEORIES

Before we proceed, it is worth a quick revisit to theory. Don’t worry; this is not a textbook on theory and theory development. It is just important to understand what I mean by theory and how several theories can relate to a new librarianship. It is also important that as a librarian, you understand and appreciate theory—it is a fundamental difference between a job position and a profession. If you are uncomfortable with theory or you question its importance to practice, you are not alone—it is an unfortunate side effect of the field and LIS education’s myopic focus on process and functions. Part of being a librarian in the new librarianship worldview is to be aware of theory and, therefore, be a reflective practitioner.
The term “theory” has a lot of possible meanings depending on your background and the situation. Some use theory to mean “educated guess.” On the other end of the spectrum is the use of theory by physicists to describe a strong and well-vetted explanation of a given set of evidence. Certainly, Gordon Pask, the originator of Conversation Theory, would say that Conversation Theory is not a guess but rather a thorough and tested explanation of how people learn.

In the social sciences, there is even an informal distinction between “big T” Theory and “little t” theory, where Theories spelled with a big “T” are broad in their applicability and more basic in nature (think the Theory of Evolution, Complexity Theory, the Theory of Relativity). Little “t” theories, in contrast, are specific. LIS is rife with these examples, from theories of information retrieval to theories of virtual reference. I would consider Conversation Theory a big “T” Theory because it seeks to understand broadly and fundamentally how people learn—that is, how they learn in libraries, schools, their homes, anywhere.

The reason for giving you a primer in theories is that often theories can be combined or at least used together. For example, in the Atlas, Conversation Theory really serves as the basic theory informing worldview and indeed most aspects of what new librarianship is. Yet it is broad and a bit dated. Many of the concepts that Pask labored to explain are now more commonly held and better understood. These more recent refinements don't refute, but rather add to, Pask's work.

For example, in his book on Conversation Theory,13 Pask devoted nearly a whole chapter to the idea that it is impossible to separate out the conditions of an experiment from the results of the experiment. So, for example, when you ask a student to come into a laboratory and perform some test, the fact that the student is in a laboratory (instead of, say, his own room) will have an impact on the results of the test. The ideas of researcher bias, limitations of controlled experiments, and the fact that context can affect performance are now well understood and accounted for. If Pask were writing today, he would have just cited this or even assumed the reader understood that.

Conversation Theory defines the basic theoretical underpinnings of the Atlas but is also informed by numerous other approaches. An informing theory is one where I gain insight from it but don't worry about how the outcome of my work refines (or redefines) that theory. For example, you do mathematics every day by being informed by number theory, but you don't spend too much time trying to discover how to change the basics of addition.

There are a host of these theories and concepts that inform new librarianship. The following sections outline key bodies of work to consider. These sections are not much more than glorified pointers here. There are more details in the associated agreements.

**Dialectic Theories**

Conversation Theory belongs to a larger class of complementary theoretical constructs called dialectic theories. These theories, while emphasizing different facets such as human cognition, learning, concept acquisition, sociology, or interpersonal communications, all address the acquisition of knowledge through iterative messages—roughly conversation.

Many of these theories and their applied methods compliment the more holistic Conversation Theory and help bring Pask's concepts up to date, filling in aspects of conversation beyond Pask's more system-oriented thinking. Theories such as Speech Act Theory and methodologies such as discourse analysis have been important in advancing and refining the worldview of new librarianship presented in the Atlas.

**Sense-Making**

Sense-making is a set of concepts and methods for determining how individuals understand the ideas and tasks they encounter and how they communicate those ideas and tasks. As Marshall14 wrote:

Dervin's Sense-Making focuses on the individual as he or she moves through time and space. As this happens, gaps are encountered where the individual must “make sense” of the situation to move, physically or cognitively, across the gap. The key components in this process are the situation, gap, and uses. The situation is the context of the user, the gap is that which prevents movement, and the use is the application of the sense which is constructed. (Dervin, 199915)

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It is an approach that seeks to focus on individuals and their cognitive processes. It is closely aligned to Sensemaking (look, Ma, no dash), in which Weick seeks to understand how organizations understand their environment.16

These approaches to how people and organizations move through an uncertain world help enrich our worldview and mission. Dervin,17 Dewdney, and Nilan’s18 work, for example, provides numerous methods for determining how library members perceive problems. Many of Dervin’s ideas already lie at the heart of the reference interview with concepts such as neutral questioning.19

Motivation Theories

As with dialectic theories, the Motivation Theories agreement represents a number of conceptual approaches to the question of what leads a person to action. These theories include Attribution Theory,20 Expectancy Theory,21 Goal-Setting Theory,22 and Self-Determination Theory.23 In essence, what cognitive processes and/or reward systems are in play when a person decides to learn, adopt, or act on something? There is a great deal of work around the concept of motivation in the field of education, where the driving question is, “What engages learners?” or, more broadly, “What drives someone to learn?”

Some theories of motivation focus on fulfilling fundamental needs. Abraham Maslow proposed a “hierarchy of needs,”24 in which human needs are arranged in a sort of pyramid where basic physiological needs (need for food, warmth, etc.) must be satisfied before safety needs (the need to feel protected), before social needs (the need for friendship), before esteem needs (the need to feel good about oneself), and before self-actualization (the need to learn and grow). One must satisfy the basic needs before preparing for greater motivations.

This set of theories is tremendously helpful in the areas of outreach and public service by librarians. How can we expect the homeless to learn new skills or find new occupations if their basic needs for food and shelter are not met? Ideas of motivation are also useful when talking about how to facilitate knowledge.

For the purposes of the Atlas, motivations are seen as a combination of extrinsic rewards (where the reward for accomplishment comes from another person or outside source), intrinsic rewards (where the reward for accomplishment comes from within the individual), and a series of other factors such as perceived ability or competency (the likelihood of success).

Motivation*

Let me pause here for a moment to show how understanding theory directly affects practice. Even those who already see the library as a learning place, or part of a larger network of learning, tend to assume a particular kind of motivation: intrinsic. That is, much of how libraries are set up now assumes that the people who use them do so voluntarily. Even when presenting library service as essential, it is often couched in terms of the motivation for use coming from outside of the library. So the student using an academic library to work on a paper is impelled to do so from a professor. A child attending story hour either does so of his or her own volition or is impelled to do so by a parent or guardian.

There is a danger to this view. It implies that library use is driven solely by external forces, and it also implies that the library is somehow passive (it is unable to compel use on its own). One clear departure from this approach can be seen in the rise of teaching information literacy skills in primary and secondary education. Here school library media specialists have their own goals, curricula, and place in the school. They become an extrinsic motivational force to move students along a path. This sets up a different relationship not only with library members (in this case students) but also with other school personnel.

17. http://communication.sbs.ohio-state.edu/sense-making/default.html is a great starting place for learning more on sense-making.

* See Agreement Supplement for more on motivation.
In terms of developing a mission for new librarians, it is crucial that librarians have a better understanding of motivation. By having a better understanding of why members use the service (and why non-members don’t), librarians can begin to, with some fidelity and craft, compel use where it makes sense and be much more proactive in the knowledge life of their members. We revisit this idea in the “Facilitating” Thread.

Learning Theory*

Learning theories constitute a broad range of conceptual frameworks devoted to the hows and whys of learning. This includes things such as Motivation Theory and Conversation Theory. It also involves cognitive and behavioral theories. Perhaps the most notable thing about learning theories in relation to librarianship is their startling absence from librarian preparation outside of some school media programs.

How can you as a librarian hope to design effective services and systems to help people learn if you don’t have a basic understanding of the process and variables involved (e.g., learning styles and modalities for the catalog)? What learning theory adds to librarianship and our worldview is an understanding that simply providing access to a concept is insufficient to learn that concept. One theory that speaks more to worldview and the conceptual underpinnings of new librarianship is constructivism.

Constructivism*

One of the distinguishing characteristics of learning theories from many other bodies of theory has to do with the underlying philosophies that shape these concepts. Beyond the neurological and basic cognitive studies, there is a great deal of debate in education in terms of the role of the learner and that of the teacher. For example, structural approaches believe that, particularly for novice learners, guiding a student through a topic is the most effective means of learning. Such approaches range from university lectures to so-called “drill-and-kill” pedagogies that emphasize memorization and the role of the teacher.

An alternative approach is constructivism.25 Here the emphasis is on active learning, where students learn by doing, and the ultimate meaning they derive from learning is individual. At the heart of a constructivist approach is the belief that someone can create conditions for learning, but it is impossible to impose knowledge or learning on someone. This approach is evident throughout the Atlas.

Note, for example, the wording of the mission: “facilitate knowledge creation.” It is not about transferring knowledge or teaching a community. Rather, the role of the librarian is as facilitator, and the knowledge created of concern is resident within the learner at the end of the facilitation process. It is also the reason that librarians are not referred to as teachers. Teaching is a profession with its own norms and boundaries, and a teacher is someone who can make learning happen.26 Librarians don’t make learning happen; rather they both create the conditions for learning and fulfill the need for learning on the part of the member. Constructivism and motivation are very much about a member-centric view. The effect of librarians is seen in the member. The power is ultimately resident in the member.

This, by the way, in no way contradicts the idea that librarians must be active and strong partners in a conversation. After all, although a customer ultimately gets to decide whether he or she likes the food in a restaurant, the cook still has to make the dish.

Postmodernism*

Talking about postmodernism27 is somewhat akin to tap dancing in a minefield. Because the entire movement is one based on interpretation and criticism, postmodernist debates are often debates about the character of the one who is doing the interpreting. I had one student who groaned when I mentioned it because she had fled an English program for librarianship to avoid heated postmodernist debates.

Postmodernism is brought up in this context as a way of emphasizing individual action and interpretation in the work of librarianship. In essence, the collections that librarians currently work with are artifacts that prompt conversations that lead to knowledge. The collections by themselves are not knowledge. When someone reads a book, he or she is engaged in a conversation—not with the author but with him or herself about how to interpret and use the ideas generated in reading. This is why books, CDs, and web pages are referred to

*See Agreement Supplements for a deeper discussion of learning theories.
*See Agreements Supplement for a much more thorough discussion of constructivism, include links to the relevant literature.
26. To be fair, there are many teachers and education scholars who don’t believe that teachers can make anything happen if the learner does not want to engage.
*See Agreement Supplement for more on postmodernism.
throughout the Atlas as artifacts as opposed to “recorded knowledge.”
You can’t record knowledge; it is an inherently human thing. All you
can do is promote and hope to shape conversations.

CREATING A NEW SOCIAL COMPACT*

So where are we? We started talking about missions, grounded the
statement in a worldview, and just tripped quickly through a load of
theories. Are we done yet? Not quite. Although I have attempted to
show you the importance of having a mission, and how the particular
mission of improving society through facilitating knowledge creation
in our communities is grounded in deep concepts and worldviews,
this is still only half of what we need to succeed. Just as knowledge
comes from a conversation between at least two parties, a mission to
improve society is only effective if it is mutually agreed on by two par-
ties: the party doing the improving and the party being improved or,
more accurately, the two parties that must work together to improve.

As an example, I work in Syracuse, New York. The city has the
same problems that trouble most urban centers: violence, poverty, ra-
cial tensions, and so on. For years the University would send research-
ers and students into the city to “help” the community. I put help in
quotes because, after a while, city residents made it clear that certain
departments of the University were no longer welcome. While the
University felt it was bringing needed assistance to the community
as part of a mission, the community felt like it was always being told
how it was broken. Community residents became tired and angry
with being an experiment to a distant university community on the
hill. This feeling is hardly unique to Syracuse. The “town and gown”
divide exists all over the United States.

My point is that having a mission is important, but if it is not
supported by the larger community served, it is useless. There must
be a social compact between the community and the librarians. This
is ultimately the most important conversation that librarians can have
with the community and not just when budgets are on the line. In
many ways, this Atlas is in response to a current social compact that is
fraying, with librarians seeking to either reify the old or push the new,
and a community that is all too often unaware of the debate.

These social compacts can happen gradually, such as in
service use agreements in social networks like Facebook. In all cases,
they never happen unnoticed. Whether brought on by crisis—such as
the unfolding reformation of the regulatory apparatus in the finan-
cial markets brought on by the worldwide economic downturn—or
by opportunity—such as the expectation of technological advances
and planned obsolesce in the technology sector—there is debate and
agreement between stakeholders in the compact.

It is one thing to say that librarians are now central and that
their role is in learning not collections or books. It is quite another
to have academies, municipalities, schools, corporations, and govern-
ments agree. In some cases, it is simply bringing stakeholders up to
speed with a new situation and reality. In some cases, it is a true clash
of value systems.

I would argue that the ideas presented within this Atlas, although
not ubiquitous, are present in many forms throughout librarianship
now. Some vary in form or extent—there will certainly be disagree-
ments over parts of the whole picture—but there is a growing un-
derstanding that libraries have gone from quiet buildings with loud
rooms to loud buildings with quiet rooms. Libraries have gone from
a place to gather knowledge to a place to create and transmit knowl-
edge. They have long ago gone beyond books—first to other media,
but now to ideas, experts, and services with no resource element. Yet
librarians all too often have strived to do so quietly or in a way that
has avoided potentially rancorous debate between other librarians and
the community served.

Yet look at what has happened when librarians were not quiet
and passive in their ideals. Look at issues of free speech, access, and
member privacy. Here librarians were far from quiet and got into
fights. Rather than damaging the community, I would argue that, in
these areas, we have earned respect.

I was presenting some of these ideas at a conference some years
ago. During the questions, someone asked that if librarians are aggres-
sive in their new mission, wouldn’t they be inviting increased scrutiny,
particularly by policymakers? My response was simple: If you want
the illumination of the spotlight, you must be prepared for the heat.

If we expect support from our communities in the form of taxes,
budget lines, or endowments, we must not shy away from negotiat-

*See Agreement Supplement for readings on social compacts and higher education.

28. A few places to start looking include ALA’s Office for Intellectual Freedom
www.nytimes.com/2003/09/28/magazine/WLN104134.html], and the WIRED arti-
news/2004/09/64945].
ing the terms on which we are supported. If we allow the funding to continue based on old perceptions of quiet book repositories, we will soon find that funding going away. People will say that they don’t need book warehouses and cut us. Then it will be too late for us to show what we have really been up to: knowledge and empowerment.

To establish a new social compact, we must do so loudly, with transparency, and we must actively shape the conversation. We don’t market innovation or find our future in surveys. We dream, plan, and execute in an open way.

Evolution of the Social Compact*

It is clear from the preceding discussion that social compacts evolve. They often begin simply and grow more complex over time. Understandings, like standing contracts, are amended and refined. What begins as a simple agreement evolves into standards, policies, and cooperatives. Sometimes the origins of the original intent are lost. In the cases where social compacts become either irrelevant (the ethical code of the scrivener) or so burdened with specificity that they become inflexible, it is time to start fresh.

In effect, the current compact on libraries (as opposed to librarians) has been encased in a growing crust of praxis, policies, standards, cooperatives, curricula, and risk aversion that has frozen the profession when it is so desperately in need of agility. This is a moment, a moment of our choosing and creation, to scour the old compact for original intent, best practices, and effective services and to mix these with opportunities, current realities, and visions of a new ideal future to forge a new social compact. A compact that builds on the work of people like Andrew Carnegie, who said29:

> There is not such a cradle of democracy upon the earth as the Free Public Library, this republic of letters, where neither rank, office, nor wealth receives the slightest consideration.

Where 100 years ago Andrew Carnegie built libraries to further democracy, we must now build librarians to further a knowledge-based society.

**THREAD CONCLUSION**

The greatest asset any library has is a librarian. Librarians go well beyond a collection of skills and tasks. They are on a mission to improve society through facilitating knowledge creation in their communities. Of course a mission statement is just words. It must be grounded in an overarching worldview and deep conceptual foundations. Only through these can the field of librarianship evolve to meet new challenges.

At the heart of the mission are knowledge and innovation (as is explored in other Threads). A librarian must understand that knowledge is not some artifact or item, but rather a uniquely human resource arrived at through active conversation. In other Threads, the mission is further refined, but the themes of innovation and knowledge remain constants.

It is this mission and associated worldview that truly define librarians. It is also our mission and worldview that we must actively bring to our communities to forge a new social compact where libraries are rewarded and held accountable not for the items we maintain but for the real improvements we facilitate.

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*See Agreement Supplement for a deeper discussion of evolving social compacts.

The Mission of Librarians is to Improve Society through Facilitating Knowledge Creation in their Communities.

Libraries are in the Knowledge Business therefore the Conversation Business.

Knowledge

Invest in Tools of Creation over Collection of Artifacts

Source Amnesia

Cataloging Relationships

Death of Documents

Entailment Mesh

Language

Conversants

System View

Reference Extract

User-Based Design

User Systems

Social Network Sites

Evolution of Systems

Knowledge is Created through Conversation

Agreements

Memory Scapes

Artifacts

The nature means susceptible to influenced by will influence can be represented in to from to

Service is not Invisibility

Example

The Mission of Librarians is to Improve Society through Facilitating Knowledge Creation in their Communities

Figure 12
To talk about librarianship in this day and age requires a great deal of citing the web and Internet-accessible resources. This of course poses a challenge to librarians and scholars alike as we seek to accurately (or at least credibly) preserve memory and help create new knowledge. To that end, I present table 1 as one means of battling the link rot so rampant in today’s conversations.

The list is a simple column of the original footnote number and an archival version of that page archived at WebCite (http://www.webcitation.org/), a service of a consortium of publishers seeking to bring some permanence to web citations. Please note that not all pages are equally well archived, and some URLs in the Atlas were not archived at all (due to limitations set by the page authors). A lot of the archived pages retain the original content but definitely miss the look and feel of the original. Still, it is a start and a nice challenge to librarians to do better. Why not just put the archived URL in the footnotes? I think the original URL contains a lot of information folks use to make credibility decisions, and so the originals are retained for readability.
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Every agreement of the Map was covered at some level in the Threads section of the Atlas. However, for the purposes of space and creating a narrative flow, information on some agreements was left out. This is also due to the fractal nature of knowledge first raised as part of the “Ability to Work in Interdisciplinary Teams” agreement in the “Librarians” Thread, where any agreement could be explored to an almost infinite depth. The end result is this set of supplements, where additional information, citations, thoughts, and/or examples are given.

These supplements serve three purposes. The first is as an index for the Atlas. Looking up each agreement, you can find out where it is on the Map, as well as where it is discussed in the Threads. The second purpose is as appendices to the Threads, with additional ideas, citations, examples, and, in some cases, whole essays related to some agreements. The third purpose, and perhaps the most important in the long term, is as a conversation starting point. As new ideas, studies, examples, questions, and answers are developed throughout the life of the Atlas, they can initially be added to the Agreement Supplements and later, if appropriate, into the Threads.

Not all agreements in the Threads or this supplement are equally fleshed out or of equal weight. I’ll remind you that the Atlas is not an encyclopedia of librarianship. If anything, the supplements are more like Wikipedia—stub records waiting for further discussion and elaboration.

These agreements are not written to be read in a linear way. There is no attempt to have one agreement flow into one another—that is accomplished through Threads. In fact, I have organized agreements alphabetically specifically to avoid the resemblance to some sort of hierarchical classification system. You could, and should, take these agreements and organize them in your own system (technically an entailment mesh) and even swap out my agreements with your own. This structure also allows me (or you) to add new agreements or refined agreements as this new view of librarianship evolves.
Each agreement supplement will have:

- **Title**  The agreement title used in the Map and the Threads.
- **Map Location** Coordinates to the agreement on the Map.
- **Thread Location** Page numbers that point to a discussion of the agreement in the threads.
- **Scape** A graphical representation of the context of the agreement. Related agreements are shown centered on the current agreement.

In addition, some supplements will contain more information such as:

- **Author/Contributor** The author of a supplement or the person who provided the bulk of the content for the agreement. If there is no one listed, I am to blame for the content.
- **Agreement Description** A narrative discussion of the agreement.
- **Conversation Starters** Questions to consider related to the agreement.
- **Related Artifacts** Articles, books, presentations, data-collection instruments, and other materials that relate to the agreement or can deepen the understanding of the agreement. *Take special note that not all resources cited agree with positions in the Atlas.* They are provided as general background.

So the best way to proceed from this point is to read through the Threads if you haven’t already. When you hit an idea in the Thread that either doesn’t make sense or needs a more thorough discussion, look it up in these agreements. Within the Threads, you’ll have a sense of what is waiting for you here by looking for the symbol “*” and the accompanying **bolded footnote**.
This Atlas centers on librarians and the organizations they build and support. As such, it focuses on what librarians can and should do. This focus might leave the reader with the impression that the role of librarians is the only necessary role to build knowledge in communities. This is far from the truth. Improving decision making, building knowledge, and improving communities are complex tasks. They require a multitude of perspectives and skills and individuals. Librarians must be ready to not only work with other problem solvers, but to step in and coordinate these people.

Why leave it to librarians to facilitate multiskilled teams? It fits their core skills and values. Librarians are facilitators and are therefore prepared to aggressively put forth both their principles and their voice while still being able to put their own agenda aside for the good of the community and their problems.

Learning theory, policy, legal issues, technology, and information organization—these are just some of the skills outlined within the Atlas. To advocate that one person (with one type of degree) could be a master of all of these skills is ludicrous. While a librarian should be aware of these areas (and master some), the ultimate answer to bringing an expanded, participatory skill base to the library is a team approach. Librarians must work with lawyers, technologists, educators, and content experts to choreograph the necessary facilitation within their communities. By working in functional teams, a librarian can bring necessary resources to a community beyond simple artifacts and materials.

Often when the idea of an interdisciplinary team approach is proposed, several obstacles are quickly identified. Almost all of these are based on the assumption that the whole team is organizationally and physically located within the library. Certainly there have been issues with nonlibrarians (e.g., technologists) feeling like second-class citizens or lacking a peer group. Libraries often complain about a lack of resources to attract highly qualified specialists or point out how salary...
discrepancies caused by a competitive marketplace can alienate librarians. These are real concerns.

However, nothing says that all team members must be under theegis of the library. Crossing administrative lines is possible. In fact, there is an advantage to pulling teams from across these boundaries, such as leveraging resources, gaining advocates in other organizations, and more.

There is, however, one essential factor in effective teams: clear respect and identification of the value of team members. Effective teams require a team member to feel valued and to value their team members. All too often in the library profession, facilitation is seen as a primarily passive and often invisible task. The goal seems to be to interject as little of the librarian’s voice as possible to avoid bias.

This realization—that facilitation is a proactive shaping activity—also provides a foundation for a team approach to service and for technological innovation. Teamwork requires a strong sense of identity.

Without a strong sense of purpose, method, and underlying conceptual frame, librarians can have great difficulty working in teams. It is, in essence, a form of professional insecurity that often sees other skill sets and conversants as competition. This realization points out the dangers of using technological landmarks outside of the library profession as a pointer to some preferred future. It leads to a sort of schizophrenia whereby members of the profession are looking externally for innovation and, when they find it, see the innovators as competition and a threat.

This situation was apparent in much of the discussion of the library in relation to Google, Yahoo!, and Amazon over the past decade. It was not unusual to go to conferences where Google was described as a great threat to libraries in an era of “good enough” information (“Google will put us out of business because people would rather have it quick than right”) and in the next session a discussion of using a simple single search box to search library Web sites, catalogs, and databases (“All library search has to look like Google because that is what they expect”). Before Google “forced” libraries to adopt simple search boxes, Yahoo! forced us to fit all of our services and resources into 13 categories on a homepage. The truth is that if libraries continue to try and be a better Google, a better Yahoo, or a better Amazon, the best they can ever achieve is coming in second. Adopting innovation without a matching mission is a follower’s game.

Instead of competition, librarians must see other expertise (and other organizations) as resource pools—see creating teams of expertise as a new form of collection development. Librarians need to have strong relationships, both professional and interpersonal, with folks from other fields. This way they can quickly call on these resources to solve a given problem. Rather than seeking to build a large centralized scheme for gathering experts, librarians need to facilitate flexible and permeable groups. Because facilitation is a core skill of librarians, it makes sense for them to take the lead in this process.

A SPECIAL NOTE ON DIVERSITY

This agreement is clearly about the power of diverse skill sets brought together to solve problems. There are all kinds of diversities beyond professional competencies. These include religious, social, ethnic, and so on. There is a great body of literature on the importance of all of these types of diversities, and I do not seek to repeat it here. Rather I would emphasize that the more diverse the team, on all levels, the greater its ability to respond and solve problems.

AN EXAMPLE

An example of the facilitating role that librarians can play in interdisci-plinary teams is currently under study at Syracuse University. The National Science Foundation has funded the development of a curriculum for Cyber-Infrastructure Facilitators (CI Facilitators). The curriculum is being developed in response to the growth of e-science or the use of networked technologies in the so-called STEM1 disciplines. As physicists are crunching terabyte datasets from particle collisions on another continent, as astronomers are using telescopes thousands of miles away, and as meteorologists are simulating weather patterns on shared terascale grid computing platforms, it is becoming increasingly difficult for scientists to understand both their field of expertise and the increasingly sophisticated technology infrastructure.

CI Facilitators are envisioned as individuals who do not master all the technology but who coordinate teams of scientists and technolo-gists. Much of the curriculum being developed draws on traditions in library science and is based on cases where librarians have become part of labs and research teams and increased efficiency and funding.

One can also see the increasingly powerful roles that librarians are playing as part of legal teams in the discussion of the Department of Justice (see Department of Justice).

CONCLUSION

There is power in librarianship. Yet this power, as it is called on in wider and wider contexts, can become diffuse. The solution is not to avoid such contexts but rather to armor ourselves with the company of experts. By working with the scientist, the writer, the technologist, and the community leader, we amplify our effect and help forward the mission. Further, by engaging and valuing our brothers in the common good, we better serve our members. To stand in this company of experts, we must have a firm belief in our own value.

CONVERSATION STARTERS

1. Librarians need to be able to work in interdisciplinary teams because the community problems they are seeking to solve are increasingly complex and multifaceted.
2. Librarians can play the key role of facilitators in these teams because of their focus on core skills and values.

RELATED ARTIFACTS

Documents


Presentations


Abstract: This paper introduces the concept of a CI Facilitator defined as a vital member of the research enterprise who works closely with researchers to identify extant tools, datasets, and other resources that can be integrated into the process of pursuing a research objective. To prepare CI Facilitators to evolve with e-Research endeavors, they must be grounded in deep conceptual frameworks that do not go out of date as quickly as any given cyberinfrastructure technology. One such framework, that of participatory librarianship, is presented here and explored in terms of tackling the issue of massive-scale data in research. Participatory librarianship is grounded in conversation theory and seeks to organize information as a knowledge process rather than as discreet objects in some taxonomy.

Audio: http://quartz.syr.edu/rdlankes/pod/2008/Oxford.mp3
Video: http://ptbed.org/downloads/Oxford-Record.mp4

Academic libraries have been steadily migrating from warehousing artifacts to being more directly integrated into the educational missions of colleges and universities. This can be seen in the push of services to the desktop of students and faculty. This began with a massive increase in the expenditures on full-text databases. This made the artifacts of the library more accessible outside of the physical facility. This was later matched by the wide availability of digital reference services to make the librarians also accessible from the academies’ desktops (and laptops and increasingly mobile phones).

Academic libraries are also working hard to retask their physical spaces. They are moving collections offsite in favor of more meeting and commons space. This transition has been met by quite a bit of resistance from some faculty and academic disciplines, most notably the humanities.
Academic libraries are, however, well situated for their next step of evolution to conversations and new librarianship. The ideas of knowledge, conversation, and learning are far from new in this arena. Joan Bechtel said:

That these are challenging, often difficult, times for academic libraries is no news to anyone in the library world. Concern for professionalism, with its attention to accountability and responsibility, abounds. Unprecedented growth in technology provides vast new opportunities for communication, and the availability of information far outstrips most people’s capacity to digest it all. In the face of this information explosion, it is ironic that academic librarians are casting about for an appropriate myth or model for library service. . . . While critics charge that academic libraries are not sufficiently integrated into the central concerns of the college or university and that librarians have their own, independent agendas, librarians responsible for present services as well as plans for the future are uneasy.

Perhaps it is an overstatement to say that academic librarians are drifting in a vast sea of information and technological advances, searching for an appropriate course of action. Nevertheless, we appear to have lost the stabilizing rudder of confidence in who we are and what we are to do.

As a more powerful alternative to the images of librarianship already available or proposed, I suggest that we begin to think of libraries as centers for conversation and of ourselves as mediators of and participants in the conversations of the world.

This quote always startles me when I look at the date, 1986, because it feels amazingly contemporary.

The academic library used to be seen as the heart of the campus. Unfortunately, too many academics are starting to see it more like the spleen (somewhat hard to find, and they could probably get along without it). I think that the college library needs to move from the heart of the campus to the circulatory system, moving vital ideas around the different schools and departments.

Think about how well the library is situated in these days of multidisciplinary initiatives. What other part of the academy is better able to engage and interconnect the intellectual work of the faculty than the library? Imagine engaging with faculty (and students, administration, and staff) to not only provide services to their intellectual endeavors but to also connect them with other academics working on related issues. Rather than trying to simply capture and archive the intellectual output of the academy (see Issues of Institutional Repositories on page 103 and the corresponding agreement supplement), librarians need to be knitting it together—knitting it together not simply through classification or pathfinders but mediating an interdisciplinary meeting of the minds and ongoing conversations on intellectual efforts.

One example might be arranging for interdisciplinary symposia or summits between faculties. Take topics identified of mutual interest, link them to like conversations happening in the wider world (through identifying resources, conversants, etc.), and then moderate the symposia, seeking out next steps and new initiatives. The librarian acts as honest broker, a neutral ground of intellectual camps, seeking new conversations.

This will only happen if the library is constantly engaged with faculty. This can be done through becoming involved in tenure support services, attending faculty meetings, and/or being embedded in the schools. The bottom line is that, rather than trying to capture the output of research and teaching, make yourself indispensable in terms of outcomes and the process of discovery.

**RELATED ARTIFACTS**

**Documents**


**Presentations**


Abstract: A discussion of the intellectual contributions libraries make to the academy.

Slides: http://quartz.syr.edu/rdlankes/Presentations/2008/Cornell.pdf

Audio: http://quartz.syr.edu/rdlankes/pod/2008/Cornell.mp3

Video: http://ptbed.org/downloads/Cornell.mp4

**Instruments and Data**

**ACCESS**

**MAP LOCATION**
D, 3

**THREAD LOCATION**
Page 67

**SCAPE**

![Diagram of Means of Facilitation](image)

**ADMINISTRATION**

**MAP LOCATION**
E, 7

**THREAD LOCATION**
Page 160

**SCAPE**

![Diagram of Transition of Traditional Skills](image)
AGREEMENTS

MAP LOCATION
E, 2

THREAD LOCATION
Page 39

SCAPE

AGREEMENT DESCRIPTION
See Conversation Theory Agreement Supplement

Figure 88
AMBIGUITY IS ESSENTIAL FOR PROFESSIONAL WORK

MAP LOCATION
C, 9

THREAD LOCATION
Page 168

SCAPE

![Diagram showing Core Skills and Ambiguity is Essential for Professional Work connected by an arrow labeled 'Includes'.]
ANNOTATIONS

MAP LOCATION
F, G, 2

THREAD LOCATION
Page 49

SCAPE

AUTHOR
Nancy Lara-Grimaldi
AGREEMENT DESCRIPTION

Annotations are a mechanism whereby users can document their contexts (relationships and agreements). This is an important function that began back in the dark ages with glossing text and continues to this day with lists and tagging.

An annotation is a summary of the contents of a particular book, article, or other document and is traditionally created by the author or publisher of the work. Library catalog records include concise summaries, or abstracts, of library holdings and system resources, which aid in locating appropriate resources. These metadata describe the contents of a particular item, whereas annotations may cover a wide range of notations. Annotations allow users to put documents into context relevant to their topic or subject area. Annotations may include personal observations, reactions, insights, interpretations, or any other type of notation for that matter. Similarly, wikis and blogs provide a means for users to add individual annotations to documents created by others.

If libraries developed a client-side tool for members to create and share annotations, whose responsibility would it be to monitor it? Will this information be stored on library servers, and what policies must be developed for access and privacy? In her article, “Unlocking the Museum: A Manifesto,” Corinne Jorgenson proposes a new concept in the creation and distribution of annotated contents to allow “information consumers to become information producers.” She notes that a “revolutionary reconceptualization of practice which provides flexibility in the concept of the locus of authority in the description of documents could not only offer hope for tangible solutions to these problems of descriptions, but could facilitate the creation of new knowledge.”

CONVERSATION STARTERS

1. How can the use of annotation facilitate knowledge creation?
2. Would users find value in creating, sharing, and reading annotations with friends, individuals, or groups of people?
3. What are the implications for libraries in providing this service to their members?
4. How can degrees of annotations at L0 and L1 benefit different users?
5. How do you organize the many different levels of annotation into a single, searchable format?

RELATED ARTIFACTS


APPLICATI ON BUILDERS

MAP LOCATION
E, 6

THREAD LOCATION
Page 87

SCAPE

AUTHOR
R. David Lankes

AGREEMENT DESCRIPTION

Application builders are the agents devoted to software development on the Internet. An application produces software that uses the infrastructure to produce, provide, capture, and organize information on the Internet.

Software, for the purpose of this agreement, is considered content free. That is not to say that this software does not provide information to the user. Rather, the information provided does not directly match the information needs of the member. The member utilizes these applications as a means to access other information. Applications created by application builders are a means to an end. For example, when someone uses the Firefox web browser to access a weather report, he or she is interested in the weather not the Firefox software.

Not all the software created by these agents, however, is visible to the member. Software used to provide and organize information within organizations is also included in this category. Servers, for example, are vital to the client/server paradigm used in today’s Internet information services. It is the server’s ability to remain invisible to the member that makes the client/server model so powerful.

See also Internet Model Example Agreement Supplement

RELATED ARTIFACTS

different communities librarians serve archives is related to memory

CONTRIBUTOR
Michael Luther

RELATED ARTIFACTS


Annotation: This article gets at the issue of memory as a feature of archives.


Annotation: Also dealing with memory, this article takes the issue one step further: the power to be had by influencing memory through collection practices.


Annotation: I felt this article touched nicely on matters of memory, community, sense making and conversation in terms of archives.
CONVERSATION STARTERS

1. What is the role of the library in preserving cultural heritage?
2. To what extent do different library types (public, academic, corporate, etc.) have a preservation responsibility?

RELATED ARTIFACTS


Annotation: Bee reminds us that the artifact—let’s say a book—carries a lot more information than can be contained within the textual content between its covers. Artifacts provide insight into their own construction, their creators, and the time and place from which they come. As librarians use their precious space less for artifact storage and more for interaction, it might be wise to consider the potential costs to a reliance on digital or otherwise reformatted content.


Annotation: In this grim and somewhat dated article, Lewis informs us that the ship is going down; rather than saving it, we should direct our efforts toward the safety of the passengers. Monographs and serials first! Lewis has a similar premise to the Atlas in some ways. He exhorts us to focus not on what libraries have done (the functional view) but rather on what they are for. It is here that the Atlas diverges somewhat. Lewis says libraries provide information to the public easily and affordably. I think this is a far more humble view of librarianship than that put forth by the Atlas.


Annotation: This article, if I understand it, might be a bit of a stretch to our discussion. I mention it because it relates well to some of the other abstracts and annotations provided here. Context-Driven Topologies is a system that recognizes the value of an artifact’s context as well as its content. Tracking relationships between artifacts and people could provide valuable information. It also notes the human dimension—that artifacts are connected to people. I find all of this relevant and interesting to our discussion of the artifact in librarianship.

It brings to my mind the observation that an artifact can have a digital context in its digital state as well as a natural context in its natural state.


Annotation: Smiraglia speaks of the cultural value of artifacts from the cataloger’s perspective. He states that it is part of the essence of librarianship to comprehend and transmit the cultural milieu along with the artifact. In a sense, catalogers are curators. This line of thinking is at odds with the Atlas in that it understands this essence not as conversation but as dissemination. Curators are storytellers. They tell us what all the stuff means. For an utterly contrarian view on the much-loathed “recorded knowledge,” see section two, paragraph one of this article.
Library assessment is not an optional activity; assessment is a librarian's professional obligation. Assessment enables librarians to articulate member needs and organizational goals and allows them to know whether both are met effectively and efficiently. Librarians who assess also maximize opportunities to demonstrate library value and impact to their stakeholders—and they are ready with evidence to bolster requests for additional resources as needed.

Assessment, like many library activities, is not a single event. Rather, it is an ongoing cyclical process. The process begins with the identification of goals or expected outcomes of a library service or collection. Historically, librarians have focused on “input” or “output” measures, such as the number of books circulated, the cost of databases per use, or the percentage of students receiving information literacy instruction. While critical for managing library services, collections, and other activities, such measures do not provide librarians with the information they need to assess library impact. In contrast, outcome measures reveal information about library value in many forms, such as the effect of circulated resume books on job seeker success, the role of medical journal articles in patient care, or the increased ability of students to select and use credible information resources. Librarians seeking to investigate outcomes, rather than input and output measures, should consider writing goals in the language of educational objectives: “The member will be able to + ACTION VERB PHRASE.”

The member will be able to articulate the impact of library resources on his or her job search.

The member will be able to identify journal articles relevant to diagnosis of patient health issues.

The member will be able to engage in face-to-face conversations about new fiction publications.

The member will be able to contribute new information to online discussion forums.

Taking the time to craft explicit outcomes enables librarians to articulate the value they provide to their members. Once librarians have clearly stated their outcomes, they enact the services, collections, or other activities that are necessary to achieve them.

In the next step of the assessment process, librarians collect, interpret, and analyze evidence to ascertain whether their activities are achieving the intended outcomes. Evidence collection can take many forms, and most of them involve members in an assessment “conversation” either directly or indirectly. For example, surveys, interviews, and focus groups allow members to self-report how they have felt...
the impact of the library. Artifact analysis is another method for collecting evidence; librarians can observe or evaluate member-created documents, such as blog posts, multimedia presentations, or bibliographies to determine the ways in which the library facilitates information use and knowledge creation.

Finally, librarians use evidence analysis to make decisions and take actions to achieve the main purpose of assessment—to increase library impact on members. In this step, sometimes called the “closing the loop” stage, librarians use assessment evidence to improve library activities and increase library value. In addition, librarians can use assessment evidence to “tell the story” of the library to stakeholders, either to celebrate successes or leverage problem areas to gain additional resources.

With so much benefit to be gained from assessment, why do some librarians avoid it? Librarians commonly cite these barriers: lack of time or resources, lack of a coordinated structure, lack of experience or knowledge of assessment processes, and fear of negative results. Although challenging, these assessment barriers are not insurmountable. They can be addressed using a few key strategies: prioritize, coordinate, educate, and communicate. Librarians who are short on time or resources for assessment must prioritize. What is important must be accomplished. Thus, if librarians acknowledge the importance of assessment, then they must minimize, reassign, or eliminate another work duty or resource cost. Fortunately, assessment often reveals which library activities are most valuable and which may be terminated without a significant decrease in library impact. Librarians who need supportive structures can coordinate with others who engage in assessment within the library, in other areas of their overarching institution, or in a professional association. If know-how or experience is a barrier, librarians should educate themselves by identifying professional development opportunities focused on assessment, participating in assessment communities online, or seeking out seminal readings on the topic. Finally, communication is the best way to address librarians who fear negative results. Librarians who conduct assessment must communicate with their colleagues and stakeholders clearly—not only about how assessment results will or will not be used but also about what information will be shared beyond library walls.

Armed with these strategies and the steps of the assessment cycle, librarians are well prepared to engage members in library assessment and use the results to continuously improve library services, collections, and other activities. This is the professional obligation of all librarians—to increase library value.

**QUESTIONS/CONVERSATION STARTERS**

1. What outcomes do our libraries seek to achieve? Are we being ambitious enough?
2. What tools will enable us to know whether we have achieved our outcomes? Do they actively involve members in the process?
3. What does achievement of our outcomes look like? What does a member who has been impacted by our library look like?
4. What will we do if we find out we have not yet achieved our outcomes? What do our next steps look like?
5. How do we articulate library value to members?

**RELATED ARTIFACTS**

Authoritative vs Authoritarian has an aspect of

Figure 95
AVOIDING THE FLORENTINE DILEMMA

MAP LOCATION
F, 9

THREAD LOCATION
Page 182

SCAPE

BACHELOR OF INFORMATION AND INSTRUCTIONAL DESIGN

MAP LOCATION
E, 8

THREAD LOCATION
Page 183

SCAPE
BOUNDARY ISSUES

MAP LOCATION
C, 5

THREAD LOCATION
Page 85

SCAPE

Pressure for Participation

Figure 98
Much of the reasoning and ideas for cataloging relationships is well covered in the Threads. The underlying technologies to do so are not. There is an active set of projects, communities, and research going into building the necessary infrastructure for this work. Most of it falls under the rubric of the semantic web. Although not all the concepts of the semantic web are in line with new librarianship (there seems to be a much more optimistic vision of data without context), the standards being put forth such as the Resource Description Framework (RDF) and registries and service-oriented architectures hold great promise.

**RELATED ARTIFACTS**


CIRCULATION

MAP LOCATION
F, G, 8

THREAD LOCATION
Page 166

SCAPE

CO-LEARNING

MAP LOCATION
E, 8

THREAD LOCATION
Page 179

SCAPE
COLLECTION DEVELOPMENT

MAP LOCATION
F, 4

THREAD LOCATIONS
Page 157

SCAPE

COMMUNICATIONS

MAP LOCATION
E, 9

THREAD LOCATION
Page 172

SCAPE

Figure 102

Figure 103
COMMUNITY AS COLLECTION

MAP LOCATION
F, 4

THREAD LOCATION
Page 159

SCAPE

Figure 104

COMPUTER SCIENCE

MAP LOCATION
E, 9

THREAD LOCATION
Page 174

SCAPE

Figure 105
CONSTRUCTIVISM

MAP LOCATION
E, 3

THREAD LOCATION
Page 27

SCAPE

AUTHOR
Jocelyn Clark

AGREEMENT DESCRIPTION

From the agreement “Importance of a Worldview,” we move along the mission Thread to “The Importance of Theory and Deep Concepts” to “Learning Theories” and then to “Constructivism.” Exploring constructivism as a learning theory as relevant to the mission of librarians leads us to the development of constructivism as a theory of knowledge creation. Constructivism postulates that knowledge is created within a person, not communicated from the outside (i.e., knowledge is internally constructed based on interpretation of our experiences). Cooperstein and Kocevar-Weidinger (2004) give a great summary article on the application as a learning theory. Thanasoulas (n.d.) also gives an excellent overview of the topic.

Constructivism is generally agreed to be the process where individual knowledge is created internally through a person’s interaction with an external world. “Learners construct their own knowledge by looking for meaning and order; they interpret what they hear, read, and see based on their previous learning and habits” (Thanasoulas). This contrasts with the objectivist philosophy that learning is transmitted from teacher to student directly. Social constructivism acknowledges the roles that social interaction and culture have on that knowledge creation.

There are critics of constructivism. They argue that it denies the existence of a true reality—that philosophically there are issues with creating a worldview of complete relativism. They take issue with statements like that of Tobin, “A constructivist perception acknowledges the existence of an external reality, but realizes that cognizing beings can never know what that reality is actually like.” Critics of constructivism as a learning theory suggest that constructivists want to teach that there are no objective facts to be learned; that constructivists want people to reinvent the wheel repeatedly. In addition, there exists an ongoing debate between encouraging self-discovery of science and mathematical relationships through constructivism versus teaching the principles objectively (Chakerian). Despite the ongoing philosophical debates, many constructivist principles are employed
routinely and successfully but perhaps are not representative of pure constructivism. In the context of new librarianship, we do not necessarily have to enter into the philosophical debate about constructivism because we are looking more narrowly at its concrete applications as a learning theory and at its application within the cosmos of librarianship.

In the classroom, constructivist theories are applied through a learning model that includes opportunities for active questioning, interpreting, and problem solving (Marlowe). The work of Jean Piaget is used extensively in developing programs that support active learning. Solomon provides some concrete principles to guide the use of constructivist principles in the classroom. Cooperstein and Kocevar-Weidinger also discuss constructivism in library education. Many other resources are available that discuss the implementation of constructivist principles in a classroom environment. Some are listed below. However, a classroom is not the same thing as a library, and a librarian is not the same as a classroom teacher.

In a library, the concept of facilitating knowledge creation is closely tied to the principles associated with developing an independent-learning, inquiry-based, project-based classroom. However, the question relative to the mission of librarians isn’t about classroom studies so much as it is about use of the theory of constructivism to build a model of librarianship that enables people to create their own knowledge. How do we create an information environment that facilitates personal knowledge creation? In most of the classroom applications, we still have a situation with a teacher designing a lesson and then administering it using constructivist principles. The teacher has an agenda for the students, and although students are experiencing some freedom to explore, in the end, the teacher has defined learning objectives. That type of instruction may work in school library media centers but is not a model we can use for auto-didactic activities, as those in a public library, or anywhere outside a formal learning environment. In librarianship, we are often less an instructor than a guide. In physical libraries, we are often inherently creating an environment for personal knowledge creation without defined learning objectives. One example is the creation of learning commons in academic libraries. Another might be the integration of a discover layer tool onto a traditional library catalog. In addition, many of the social library and Web 2.0 library tools are based on interactive knowledge construction and align with the theories of Vygotsky.

One interesting question about the application of constructivism in the library goes back to Ranganathan’s principle of saving the time of the reader. Sometimes we are involved in accessing multiple sources, creating theories, exploring topics, and creating knowledge. Sometimes we just want to know a quick answer to help us on our way; we don’t want to be involved in an additional protracted journey of self-discovery. It reminds me of a conversation I had with my mother in about the eighth grade:

Me: Mom, what does “didactic” mean?
Mom (giving the appropriate mom response): Well, why don’t you look it up in the dictionary?
Me: Mom, I know how to use a dictionary, can you just tell me what the word means?

Sometimes having your mother tell you the answer is all you really need if the objective is an external fact so you can carry on with your other activities. At the reference desk, we might send a student on a quest with just some guidance, or we might just hand a user the answer. Which one really depends on the situation, the library, and the question. In the process of constructing knowledge for themselves, people might need anything from a quick fact, to a formal lesson on identifying credible sources, to an uncensored Internet connection, to a room to work on a group project. Identifying those tools is the challenge of applying constructivism in libraries.

To go in the opposite direction, if we have a librarian with an Internet connection (and no library) standing between an information-seeker and the knowledge, can we really be implementing constructivism? Perhaps we need to get out of the chair and let them use the computer to facilitate their exploration. The question changes to: How do we create tools to facilitate knowledge creation in the virtual world? Constructivism as a learning theory encourages us to look at all the ways people create knowledge and understanding for themselves and then challenges us to explore those tools in our redefinition of librarianship.

RELATED ARTIFACTS

Documents


**Resource Material**

**PIaget**


**Classroom Examples**

Here are some Web sites and videos that give concrete examples and discussion of constructivism in a classroom:


**Other Videos**


**Possible Constructivist Tools**


**Reference Websites:** These Web sites contain a multitude of writings on constructivism. The Emtech site contains writings in opposition to constructivism in addition to other writings.


CONVERSANTS

MAP LOCATION
E, 3

THREAD LOCATION
Page 32

SCAPE

AGREEMENT DESCRIPTION

See Conversation Theory Agreement Supplement
Knowledge is Created through Conversation

Importance of Theory and Deep Concepts

CONVERSATION THEORY

MAP LOCATION
D, 2, 3

THREAD LOCATIONS
Pages 23, 31

SCAPE

Knowledge is Created through Conversation

Conversants
Language
Agreements
Memory

Conversation Theory

Credibility

Figure 108

AUTHOR
R. David Lankes
In an interview with an Italian library journal, I was asked, “The conversation” is a brilliant metaphor, since The Cluetrain Manifesto, but somehow vague. According to you, which forms can the conversation take?

I responded that conversation is not a metaphor. When I say “knowledge is created through conversation,” I mean that at least two parties are actively going back and forth in an engaged manner and language is being exchanged. Why “parties” and not people? What do I mean by the notion that language is exchanged? Let me start at a basic level. This is all grounded in Pask’s Conversation Theory (although he does it at a much deeper level).

A conversation has four parts:

1. Conversants: at least two parties,
2. Language: sets of meaning going back and forth,
3. Agreements: shared understandings between the conversants arrived at through language, and

Conversants: Parties to a Conversation

In a conversation, you have at least two parties or “agents.” Why not call them people? Because agents are a scalable notion, that is to say, it can be two people (you and I), two groups (say a teacher and his or her students), two organizations (like a library and a vendor negotiating a contract), two countries (a treaty), or even two societies (the great conversation on the meaning of life).

Likewise, these agents can be within a single person. In fact, it is the basis of a lot of instruction and education theory. Call it metacognition or critical thinking skills, or simply arguing with yourself, you have these conversations all the time. If you just asked yourself, “What does he mean by that?!,” who are you asking? Pask, in about 100 pages of dense prose, says that you are in a conversation with different aspects of yourself set up to come to some agreement about a concept. Waking up in the morning and deciding what to wear (“This makes me look fat, this is too dressy…”) is a conversation.

Also, this conversation can happen over a great period of time and through a series of media. So, you read this book (my part of the conversation), think about it, and send me an e-mail about how you agree, or disagree, or simply want clarification. That is a conversation (to be precise, if you are reading this book, you are having a conversation with yourself; it is only if you start sending me feedback that I get involved).

Language: Talking at Their Level

So what are these two or more agents doing? They are exchanging language. This may seem obvious, but it has a lot of implications. There is a large body of research about how people exchange language. For example, there is a discussion on how people know how to take turns in a conversation. There is active research in how people determine things such as power relationships in a conversation (e.g., who is in charge). All of this research is relevant here and can be (and has been) applied to conversations in libraries.

However, Conversation Theory does not directly examine these aspects of conversations. It omits them for several reasons, not the least of which is that much of Pask’s work predates discourse theory. More important for us, however, is that Pask wasn’t just dealing with language between two people. Conversations can also be between two organizations or two parts of one individual. So he approached it in a much more general way. It is also a way that has great implications for how libraries work on a day-to-day basis.

When two agents are sharing language, they do so at one of two levels. The first level is directed and pretty low level. This kind of language is used when at least one of the conversants doesn’t know much about a topic. Take, for example, a librarian walking a patron through a database. It might be a simple set of exchanges, such as “click here, then click here, then type in your query.” The patron’s part of the conversation may be a series of clicks and “OK, now what?” Because the patron doesn’t have much knowledge about what he or she is doing, the language is not rich. Pask calls this kind of language $L_0$. $L_0$ language is used to set up the conversation.

In contrast, $L_1$ is language exchanged between two agents when they both share knowledge of a topic (or domain as Pask would call it). In these exchanges, language is used to build a common understanding of a domain, mutually expand domain knowledge, or clarify some part of the domain. Imagine two librarians debating the finer points of classification, for example.

It is easy to say the patron/librarian example from before was an example of bad instruction (“Don’t just teach where to click, teach why”), but that is a bit simplistic. Good instruction (and Pask would argue, good systems) attempt to raise the conversation from $L_0$ to $L_1$. 
However, you have to start somewhere. Furthermore, there are many times when $L_0$ is just fine. Think driving directions (I just want to get to the library. I don’t need a lesson in city planning).

**Agreements: Agreeing and Agreeing Not to Agree**

So we have a conversation where information is being exchanged in a sequence between two agents (people, organizations, countries). That alone does not create knowledge; that is simply a process between two black boxes.

If a conversation is at its heart simply a back and forth exchange, what's the point? For example, I could say “1,” you could say “2,” then I say “3,” and so on. Are we really learning anything? Not really because we already know what we are doing (counting up by one), and that means we already know this. No, to learn something, we must seek agreements. That is, we go back and forth making an assertion and seeing what the response is. If I say something and get back an unexpected answer, I need to figure out why. So if I say “1” and you say “3,” I might ask, “Are we counting up by 2s?,” and you might say, “Yes.” I might then say “fine” (meaning I have learned what our task is) or even “5,” and we can continue. This is a pretty minor case of learning, I grant you.

Once we’ve been doing this for a while, we build a whole host of agreements, on which we can seek new ones in new conversations. So if I say “libraries are cool,” for that to mean anything to you somewhere in the past you had to have had a conversation on what the words “library” and “cool” mean. If not, I could just as well have said that we need to turn up the heat in libraries, or, to a C programmer, sets of precompiled functions I can include in my software are really neat. In truth, this book and your internal and external debates are seeking agreement on what we mean by the word “librarian.”

Already you can glimpse some of the implications of Conversation Theory. There are many libraries that claim an educational mission. If learning is an active set of agreements and conversations, then simply providing access to information is insufficient to fulfill our mission! Acquiring materials, organizing materials, and presenting materials may aid in conversations, but they are insufficient to educate. We must present a forum, tools, and opportunities for agreement and conversation. Further, librarians need to actively engage communities in seeking agreements.

So, we have a process of information interchange in sequence that seeks out agreements. It should be noted that an agreement can include “We will never agree on this.” The collection of these agreements is kept in a memory that can be represented in something Pask calls an entailment mesh.

**Memory and Entailment Meshe: Pask’s Tangles**

Your memory constitutes what you know about the world. It is the sum of agreements we retain after our conversations. However, it is not a simple list or blob of these agreements. As we just discussed, agreements build on themselves. Memory is the agreements and the relationship of these agreements. If you want to impress your friends, you could call memory a “knowledge representation” system like ontologies and semantic networks. If you have no friends, think of it like a map of the stuff you know.

The important thing you need to know is that your memory is all about relationships. That is to say, Conversation Theory talks about the fact that you understand the world not as a series of isolated events or facts but as a dynamic network of agreements and understandings. So to “learn” (Pask talks about “knowing”), a person needs to actively relate new information to what is already known.

Because we’re in the thick of theory, I have to introduce another important phrase: entailment mesh. An entailment mesh is a method of representing the relational nature of one’s memory. It is related to a whole host of visualizations like concept maps or brain maps. Why bother with a fancy phrase? Well, for one thing, to keep us in line with Conversation Theory, but more important, for precision. What’s in your head stays there. Although there is a lot of good research from cognitive psychology to neuroscience that attempts to understand precisely how memories are stored in the brain, Conversation Theory does not. It is much more concerned with how these relationships are expressed, particularly in analog and digital systems. Whenever you create a representation of the memory (try to show how things are connected), you are creating an entailment mesh.

**RELATED ARTIFACTS**


Todd Marshall has put together this bibliography on Conversation Theory and the works of Gordon Pask:


The Mission of Librarians is to Improve Society through Facilitating Knowledge Creation in their Communities
CORE VALUES

MAP LOCATION
G, 3

THREAD LOCATION
Page 119

SCAPE

Service is not Invisibility

Core Values

Ethics

Openness

Learning

Intellectual Freedom and Safety

Intellectually Honest not Unbiased

will influence

is seen in

is composed of

is composed of

is composed of

is composed of

AUTHOR
Kelly Menzel, Nancy Lara-Grimaldi

Figure 110
The Atlas states that we still live in a condition of information scarcity, but it is no longer that information that is the scarce thing—it is our ability to absorb and make sense of information that—to build knowledge—that is scarce. Michael Goreman (2000) mirrors this statement when he speaks of the relative differences between today’s society and American society in the late 19th century. He speaks of the proliferation of materials, the sudden and numerous technological advances, the question of what to do with all of the new materials, how to catalog them, how to provide access, and so on.1 “In all probability,” he states, “the largest single difference in a late 20th-century life, compared with a late 19th-century life, is lack of repose and opportunity for repose.”2 Many of the questions asked are about how to run a library. He argues that the core values should be the same as those asked in the latter part of the 19th century.

Many letters, communications, and editorials in the Library Journal in the earliest years of the 20th century were concerned with new techniques, methods, and applications of machinery. The same articles and pages also carry much rumination on the implications of what they saw as a great rate of change in the profession and in service to the growing and changing population.3

Regardless of the point in time, librarians have always struggled to accomplish the same things and held the same things as core values. So, what has changed since then? According to Goreman, we simply have less time to wade through all of the information being produced. Without “the opportunity for repose,” people are bombarded by too many items to look at and often too many to even keep track of. That is when people give up. The question, then, is how we as librarians should apply our age-old core values to today’s society to help a society with too much information and not enough time. Should we add efficiency as a new core value despite that, as the Atlas points out, it was deliberately not included in it after Dewey’s obsession with the topic?4 Being more efficient would certainly aid in slogging through all of the information and making it easier for our members to find what they need when they want it. Such a core value, however, would likely interfere with other core values, such as service. The most efficient service is often not the same as the best service.

**RELATED ARTIFACTS**


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CREATING A NEW SOCIAL COMPACT

importance of a worldview

creating a new social compact

Evolution of the Social Compact

results in

importance of action and activism

involves

leads to
CONTRIBUTOR
Amy Leigh Edick

CONVERSATION STARTERS

1. Who gets to pick what the social compact will be?
2. Is it the right choice?

RELATED ARTIFACTS

Risks of Data means knowledge of Importance of Action and Activism however, must avoid

Figure 112
CURRICULUM OF COMMUNICATION AND CHANGE OVER TRADITIONAL IDEAS OF LEADERSHIP

MAP LOCATION
D, 7, 8

THREAD LOCATION
Page 180

SCAPE

Figure 114
DEATH OF DOCUMENTS

MAP LOCATION
F,G, 2

THREAD LOCATION
Page 44

SCAPE

AUTHOR
Jocelyn Clark

CONVERSATION STARTERS

1. What kind of tools are we using to store memories and communicate ideas?
2. As our recorded world becomes more fluid, how do we capture snapshots of it for documentation, memories, or communication of ideas?
3. What is a document anyway?
4. Is the document dying or are certain characteristics of the document dying?

RELATED ARTIFACTS

Documents

What is a document and is it even a useful definition? Two theoretical views of the definition of a “document” are found in the following sources:


THE CHANGING WORLD OF PUBLISHING

There is a lot of discussion in the world about the decline of newspaper publishing, the decline of the independent bookstore, and the growth of self-publishing on blogs, wikis, social media, and bulletin boards. Many journal articles are now accessed more frequently online through fee-based databases. In addition, the world of direct access publishing is increasing.

DECLINE OF NEWSPAPERS


Change in Publishing


Predictions of the Death of the Book or the Ultimate Failure of the eBook

There seem to be dueling theories about the ultimate success or failure of the paper-based book as an artifact. Will the paper or the ebook win out in the end? Does it matter? How does the business model of publishers change as the format changes?


Contends that printed books will be replaced by digital books and that book distributors and readers should actively support the transformation by encouraging digital book creation and the standards required for storage and delivery.

jlaccetti (2007, April 18). Digitise or die: Margaret Atwood. Video posted to http://www.youtube.com/watch?v=5GUJ4uA7G2w.


Changing Permanence

Documents that exist in the digital world can be much less permanent than paper-based documents. Related concepts include: perpetual beta, living (or evergreen) documents, and continuous improvement. All of these ideas point to the concept of impermanence. Content that exists in a particular form one day may not exist in that format the next day. Efforts to increase permanence such that accessibility to ideas is maintained require that time is stopped occasionally such that a snapshot can be kept as a record. More important is that today’s library cataloguing routines are difficult to apply to documents that won’t stand still. How do you catalog an artifact that won’t remain in existence?


Business Document Management Systems

Although paper books, newspapers, and other printed material may be decreasing, the business world is turning to digital document and content management systems to augment their communication and documentation processes. For years, there have been Paperless Society/Paperless Office utopia theories. In contrast, requirements for record-keeping seem to be increasing.


Document Management Software for Project Managers and Business Examples


Other Topics of Interest Relative to Document Management in the Business World

Content management, digital documentation, knowledge management systems, information delivery systems, and more.

Increasing Access to Digital Resources and Digital Archives

Services like Google books and the Project Gutenberg are increasing digital access to archival materials at the same time that current book publishing is decreasing. Access to these documents is no longer facilitated by or dependent on the library archives. In contrast, these archives are now partly dependent on commercial ventures, which have both benefits and costs.


Materiality of Communicative Practices

Researchers in communication theory are also dealing with the impact of technology on established communication practices. The idea of “boundary objects” is explored.

In this Thread, Lankes (2009) compares the idea of participatory librarianship to that of liberal (or participatory) democracy. “Liberal democracy” is defined by Encarta as “a political system that has free elections, a multiplicity of political parties, political decisions made through an independent legislature, and an independent judiciary, with a state monopoly on law enforcement.” A similar definition for participatory democracy can be found on AllWords.com. Two excellent and well-known quotes from Thomas Jefferson and James Madison highlight in particular the importance of knowledge and access to information to a liberal democracy. The potential for library involvement, then, should be fairly obvious.

The biggest problem, Buschman argues, is that librarians aren’t really doing anything to capitalize on this opportunity. Librarians are generally calling on the grand ideals of Jefferson and Madison to show their importance in a democratic nation but not actually concerning themselves with ways to bring the idea into action (Buschman, 2007, p. 1484). To start librarians thinking more about how they can bolster democracy, Buschman presents a few ideas put forth by scholars in a number of fields that can help guide librarians to doing more for democracy than just providing access to information.

The first idea is heavily tied to the Atlas’s focus on conversation and is also the easiest concept to incorporate into a library setting. Buschman claims that Jürgen Habermas presents democracy as rooted in conversation, and that public places are where these important discussions happened and continue to happen. Further, he claims that some of these previously existing places for discussion, namely mass media, are no longer the freely public forums they once were (Buschman, 2007, p. 1487). The other big concept presented by Buschman is that “an institution cannot foster democracy without practicing it” (p. 1493), which echoes the Atlas’ discussion of the importance of community interaction and decisions in libraries.

As Michael Buckland (2008) points out in response to Buschman’s article, libraries aren’t important just for developing a democracy but also other political structures and beliefs (p. 1534). Does a library need to practice all modes of government in some way to appropriately foster those methods? Not to do so is another form of bias on the librarians’ part, and there are plenty of people who feel there are better forms of government out there than democracy.

It is not only impossible to be completely unbiased as a librarian; it may be harmful in building trust with library members. Jill Hurst-
Wahl (2009) recently wrote about how the key to earning trust in a social network setting is to behave normally and be yourself; it makes sense that the same thing may be true for in-person interactions. Yet the same is certainly true for the other extreme. If we let ourselves get too involved or become too fanatic in our jobs, we may lose that hard-earned respect and trust.

There are ways in which librarians can encourage democracy and debate without getting too deeply involved, and the Progressive Librarians Guild can be a great resource for ideas. Michele Sipley (2003) presents a number of ways to covertly encourage discussion in a school library setting, including working with teachers to set up debates by students, holding question-and-answer sessions, teaching critical thinking, and more. These ideas can be translated to other settings, such as public libraries, where there can be space for local politicians or groups to debate topics.

There are also ways for librarians to actively take a stand, the best examples of which are tied to the PATRIOT Act. Emily Drabinski (2006) looks at a number of ways in which librarians were affected by the PATRIOT Act and what they did to fight back. For more aggressive activism for democracy, Chris Gaunt (2004) describes her personal experiences with nonviolent dissent outside of the librarian setting.

CONVERSATION STARTERS

1. How should librarians move beyond the idea that libraries support a democracy by supplying information? What else can we do to create a democratic space?

2. What shouldn’t we do (or what is too much and too biased and should be avoided)? How far can we go before it is considered not our place or that we are opening an unnecessary can of worms that is making things worse? Can we ethically do more than provide a place for a discussion by participating heavily in the conversations?

3. Is activism such as Gaunt’s appropriate within a library setting? Or is that something only to be pursued as an individual? Can your personal activism really be separated from you as a librarian? Too much activism may have a negative effect on trust and respect from the community and could seriously impact a library’s role in the community.

4. What should be the role of technology in promoting democratic environments in libraries? Is technology in this instance any different than it is normally? The same sorts of downfalls mentioned here are common in any instructive use of technology: too much focus on the tool rather than the material and ideas behind it, not using the right tool for the purpose, not marketing it appropriately to the audience, and so on.

RELATED ARTIFACTS


The following report is based on a series of visits to the Department of Justice (DOJ), February 13–15, 2008. During these visits, several conversations took place among the researcher, librarians, and library clients within different sections of the DOJ and in several DOJ libraries. An initial draft of this report was then provided to the Department for feedback. This revised report briefly outlines the observations in each of these conversations. It attempts to highlight opportunities and provide an outsider’s reaction to these conversations given a narrow window of engagement. The emphasis in all of this is on the ability/role of DOJ librarians to facilitate these conversations.

What emerged from the visits was the beginning of a planning process based on participatory librarianship and conversations. Although the principles of participatory librarianship have been used to present an overall vision of library systems (Lankes et al., 2007) and to develop library software (Lankes, 2008) and services, a clear method for planning and evaluating library services holistically has yet to be developed. Although this case does not directly present such a methodology, it does point to one. From the case, the approach would be to:

1. Identify major participatory communities within the service community.
2. Identify and describe the major conversations within and across these communities.
3. Identify the services and resources provided by the library to these conversations (later this needs to be refined into means of facilitation).
4. Look for gaps (where the library could but is not providing facilitation), dead ends (where the library is providing a service not linked to conversations within a community), and opportunities (where the library could provide service to a community’s conversation but is not).

In the case example below, three participatory conversations were identified. Within a key community (legal staff), a high-level conversation was identified (the “life of the law”). A basic mapping was done (figure 1). Certain opportunities to provide better facilitation were identified as well (e.g., the “In Search of” process for lawyers and the extranet for the librarians).
This initial approach was used as part of a strategic retreat process at a small academic library with some success. Although clearly great specificity and data are needed to firm up this planning process, this case study serves as a first step.

CAVEATS AND LIMITATIONS

Several caveats are important to note. Three days and a handful of focus groups are far from adequate to capture the richness of any organization. The best that can be hoped for are initial observations and to capture broad themes and ideas. Although much of this report is written in an authoritative tone (i.e., making assertions and generalizations), that is simply a device to prompt further discussion. The idea is to prompt and provoke. This often leads to richer conversation rather than a more cautious and nuanced tone. So although there aren’t many “the research thinks,” “it might be,” or “one would guess” phrases within, they are implied.

The initial result of this visit was a chart of the “A Participatory View of the Department of Justice Libraries” in figure 118. This chart seeks to capture the different conversations occurring from the library perspective. It is far from complete, but it attempts to capture broad areas of understanding.

PARTICIPATORY COMMUNITIES

There appears to be four major participatory communities. These communities represent groups of people talking about similar things in similar fashions. They share processes and concerns. Certainly within the communities there are a lot of different voices with different roles (lawyers, managers, paralegals). Also, there are certainly communities not addressed in the visit (policymakers, IT, etc.). Why bother talking about communities? Why not simply use the standard breakdown of library and patrons? Because in a participatory approach, the library’s role is to facilitate communities’ conversations. They must understand the dynamics of the communities regardless of whether those interactions are with the library. Also, in any attempt to increase the quality of participation (conversations) within the communities, and thus improve the knowledge of these communities, one must respect the norms, cultures, and structures of these communities. Simply put, why would lawyers want to participate in library systems when they are part of a different community altogether? If libraries want to build effective conversations, they must do so in as close alignment to communities as possible (including building systems within the communities rather than within the library).

For example, within the legal staff, there is not much discussion or concern with how case files are managed. It seems that most lawyers keep a set of files in a series of folders on their desktops. There is no standardized way of storing these data. Clearly, how these files are stored is of great interest to librarians. From a library perspective, capturing these data, organizing them, and providing them back to customers is of high priority, but to the legal staff it is not. Thus, if librarians were to attempt to capture these data to build new services, they would find great resistance on the part of legal staff. Why? Because to the legal staff, once all of these data are used to file a formal courts document (such as a brief), the world of documents around that formal document becomes nearly irrelevant. If it is not in the brief, it is not important. If the library deems it important to capture and organize this information, it does so by having a conversation internally to its own community. If it wants to get lawyers on board, it will have to make a strong case based on the norms and in the language of the legal staff.

In the site visits, five communities became apparent:

1. **Legal Staff** Lawyers and support staff are well versed in the formal conversations of the law. From formal filings to informal searching on databases, there is a high-level understanding of a general process: understand the legislative intent of a given law, build a brief that captures both the facts and the theory of the case, and understand the life of the law including precedents, decisions, and related legislative action. The conversations of the legal staff are in many cases formal and regulated. Not every case will include “Legislative Intent” formally. There are also many informal conversations happening between litigators.

2. **DOJ Librarians** The librarians in the Department of Justice form a community that regularly exchanges information, techniques, and resources. However, although there is a clear desire to provide outstanding service, much of how this service should be delivered remains an open question. With little to no data on actual service utilization, service priorities and decisions are often based on individual success, anecdotes, and personal philosophies. This makes it difficult to truly gauge the effectiveness of services.

3. **Database Vendors** Hein, Westlaw, and LexisNexis constitute the core databases for the legal profession and are clearly needed across the enterprise. However, each section has its own key re-
sources. There is great competition between these vendors with little information sharing.

4. Other Sources of Legal Information This disparate group consists of other law libraries, legal research centers, other law firms, and a wide variety of other players. There are some formal means of communications, such as AALL, but there are also structural issues in creating formal connections (privacy of case matters, competitive advantage, proprietary information, and billing structures).

5. General Audiences This is not a formal community by any means. Rather, it is the open information environment that the Department of Justice exists within. It is constantly changing and has little coherence.

Within these communities, there are opportunities for the library to improve service and to better facilitate knowledge building. Which, if any, of these opportunities the libraries pursue is a matter of internal priorities and resources, although a few recommendations are made.

It should also be noted that it is in the intersection of these communities (and of conversations across communities) that most of the opportunities for improved library service lie. Therefore, in the discussion of the communities, special note shall be made of these cross-community collaborations.

Legal Staff (A Litigating Section)

There is an interesting dichotomy of knowledge creation and capture that occurs within litigating sections. On the one hand, there are formal processes of documenting knowledge and conversations. Legal rules of disclosure, brief production, and case filings force lawyers to make most knowledge explicit. On the other hand, there is a much larger volume of information or “research” that is gathered and created in the process of brief development. Along the process of creating a brief, there seems to be an accumulation of information until a “theory of the case” is developed. Once this is developed, materials are loosely organized into folders and subfolders. Some of this material might make it into an archiving process, but much remains in the heads of lawyers and other legal staff. It also seems that most information organization is case-oriented. All data are gathered and associated with cases with little larger topical-oriented organization.

It would appear there is a great need for an organizational system for lawyers to keep case-oriented information, plus the rich world of research around a case. Right now librarians capture some of this in pathfinders and informal files on experts but only when the legal staff comes to the library for information and assistance.

This is not to say that there aren’t some attempts at a more section-wide organization of cases and knowledge. One litigating section talked about their “In Search Of” (“ISO”) process. ISO is a means of section lawyers asking for information from others in their section. Throughout the day, legal staff send requests for information (who has dealt with topic X, has anyone used X as an expert witness, etc.) to a secretary. Twice a day, the secretary bundles up the requests and sends out a section-wide e-mail with the questions. Answers are then sent from legal staff to legal staff with no attempts to match questions with answers section-wide. Mid-level supervisors also serve as repositories of organizational knowledge/history. Another mechanism to share knowledge within a division is a “matter” database. This informal system attempts to capture cases and legal matters currently under consideration by a division.

The informality and patchwork nature of these section-wide conversations seems to be the result of several factors. The first is the need for confidentiality in the cases under consideration. Some cases and issues are too sensitive to be made known widely (indeed topics may not go beyond the lawyers directly involved in the topic). However, this need varies widely across sections, with many sections having virtually no such prohibitions. The other factor relates to the nature of the cases under consideration. Some sections work on a relatively small domain of issues where sharing information yields great dividends, whereas a section dealing with a wide variety of cases would find little overlap in lawyer knowledge.

Librarians as Investigators

It is worth noting an interesting idea that emerged in how some of the legal staff saw the role of librarians. Clearly, librarians have gained great success in specializing in research concerning expert witnesses. Librarians also appear to have a great opportunity in situating themselves directly into the legal process. Several times the idea of librarians working closely on a case—whether in terms of providing direct evidence or aiding the development of case theory—was mentioned. In these circumstances, lawyers attributed the success of cases directly to the aid of library staff. In the case of anti-trust, this even developed into real staff resources.

The idea of librarians as civil investigators was raised several times. Whereas in criminal cases DOJ provides investigatory staff or agents, in civil cases this is not always the case. Civil lawyers mentioned using
Agreement supplements librarians in this capacity to discover evidence and materials pertinent to the case. This seemed to go beyond expert witness research and was seen as a much closer relationship between lawyer and librarian. It seems this kind of relationship is worth special scrutiny (and promotion) in any follow-up activity.

Recommendations

There is a great opportunity for the librarians in the department-wide case management initiative. Although development and implementation of the electronic case management system may well be beyond the resources, expertise, and authority of the DOJ libraries, they should be a part of the overall process. By having librarians “at the table” in the development of this system, the libraries can ensure a presence in the system likely to become the most used interface in the Department. Beyond this tactical concern, librarians have a great deal to offer system creators in terms of information management and reuse. By both better understanding the processes lawyers must use, being more visible to litigators in this process, and helping ensure good information practice, DOJ librarians can have a large and positive impact on the system. One approach might be to create an institutional repository that looks like a law review journal or some other format lawyers would use on a regular basis.

Such a system would also allow for new services to provide feedback into the legal community. For example, the “Brief Bank” currently offers exemplary briefs to lawyers. It would be interesting to analyze these briefs and return the results to litigating sections. One could imagine a sort of reverse citation analysis where litigators get feedback on which items are cited the most in briefs (legal codes, cases, but more important, bodies of evidence and current thinking). Analyzing the information sources and people DOJ lawyers use might provide interesting data back to divisions. They could see what sources they depend on regularly, detect any biases in sources, learn about new resources, and identify seminal cases in the making. This might be a good partnership with the Bureau of Justice Statistics. Such an initiative also aligns to the purpose of the Brief Bank. If DOJ is concerned with consistency in approach, policy, and documentation, the library can provide a vital bibliographic check toward this end.

DOJ Librarians

The DOJ librarians have an excellent reputation among the groups participating in the visit. They are proactive and engaged. They are also clearly dedicated to service. There are, however, three areas for improvement that stood out when looking at them as a group. Librarians appear to be risk averse, manually oriented, and data poor. Once again, this is an aggregate view with individual exceptions. Let us take each in turn.

By and large, DOJ librarians are risk averse. This is a result of the DOJ culture and the nature of the practice of law. It is natural and right for all members of a legal enterprise to be acutely concerned with disclosing too much information. Librarians naturally do not want to be the source of a leak, to make their legal clients look bad, or to be accused of undermining the core litigation activities. Far from being a negative, this shows keen understanding of the culture. However, it clearly creates some conflict between librarian principles of openness and the large DOJ culture. Librarians also seem to fail to take into account that the lawyers act as the gatekeepers and either make the necessity of confidentiality clear to librarians or do not disclose confidential information in the first place. The result is that the librarians are hesitant to share anything outside of the firewall even when they have clear ability to do so. Currently, librarians default to not sharing and going outside the firewall without formally examining the issues.

These issues have been brought up in terms of sharing legislative histories, but the more interesting case might be expert witness databases. DOJ librarians have been successful in building their reputations and utility by becoming master searchers in terms of expert witnesses. Librarians scour the web, databases, and other information sources for an expert’s documents, thoughts, and profile. The result is information that then goes to legal staff. However, experts are often used repeated times or by multiple parties. One could imagine capturing all of these expert resources into a central repository for a section. A strategy might be the development of a high-level expert database that does little more than identify an expert, a general area of expertise, and a case they were associated with. This way a lawyer could quickly find out whether an expert had been used before and by whom without the risk of maintaining extensive files of citizens. However, librarians are wary to create such a database, worried that it could be requested under FOIA and might reveal legal strategy. They may well be right, but has the question ever been formally asked? By defaulting to an “If in doubt, don’t” default position, the librarians may be holding back useful services unnecessarily.

The second characteristic found was a reliance on highly manual processes. This can be most clearly seen in terms of the DOJ Virtual Library and the pathfinders on the site. These pages are static and
require manual link checking, editing, and updating. This results in a lot of extra labor in maintaining the site and lost opportunities that a more sophisticated technical approach might bring (such as SDI-like services or alerts on new/changed resources for interested parties). It is ironic that some of this manual processing stems from the departmental use of PHP. PHP is a web-scripting language created for the explicit purpose of integrating dynamic elements into web pages. The root cause for this manual orientation seems to be a distrust of the IT staff and services. The IT infrastructure is seen as highly buttoned down and antithetical to innovation. This problem seems exacerbated by a near absence of a library IT authority and a previously failed attempt to build a custom acquisitions system. IT authority is not simply technical knowledge that is certainly present in the library but the ability for the library staff to directly control the IT being used. This topic is addressed more deeply in the recommendations.

The last characteristic of DOJ librarians worth noting is the data-poor environment in which they work. This poverty does not relate to the data and information sources used in the practice of librarianship (databases, holdings, etc.), which are vast. Clearly DOJ librarians have done an excellent job making a case for resources. Rather this refers to the evaluative data of service use. Use of data in terms of evaluation, utilization, and even size of patron base simply is not part of the everyday workings of the librarians.

Although there are many good reasons for this near absence of data (lack of time to gather statistics, absence of a circulation system, poor tools to track Web site usage), the end result is that discussions on service priorities come down to persuasiveness of personal arguments and reliance on authority. In other words, when deciding what services to enhance and which to cut, decisions are made by how well someone argues a position, not on actual use and projected impact of the services. In a collegial environment like that of DOJ libraries, these methods can work, but they can also cause friction and division in staff over time.

An example of how all three of these characteristics come into play can be seen in the current discussions around a new integrated library system. The two current ILS systems must be replaced. The question on the table is how to replace these systems. There is currently a perception that the technical service staff and the reference staff have different priorities in terms of replacing these systems. The reference staff sees a need for a different approach to holdings and feels the technical services staff is being too traditional. However, in conversations with the technical service side of the house, the exact same desires are put forth. No one sees an “off-the-shelf” ILS as ideal. They are cumbersome, lack innovation, are inherently not secure, and take a great amount of effort to maintain. The only thing that all agree on is the value of a good acquisitions system because of the universally agreed-on value of efficiently and effectively licensing resources for the entire agency (not coincidentally, the acquisitions service has the most data available in terms of usage, costs, and overall value to the agency).

In the debate on replacing the catalog, risk aversion, manual process, and data poverty are quickly apparent. There is a strong desire to buy an off-the-shelf solution by the technical staff. Not because these are seen necessarily as the best solutions, but off-the-shelf ILS solutions are the safest in terms of guaranteed delivery of functionality, support of the system, and experience. The technical staff was burned by trying to build custom solutions in the past, and that lesson still remains front and center in the consideration of a new system. In response to the universally perceived deficiencies with the current catalog solutions, librarians have been using manual processes to make up the difference. The Virtual Library is a product of manual work around an inadequate catalog. Yet there is a real question as to the true value of the catalog in the first place. Without data on who is using the catalog, for what, and how often, how can the group make a real plan? It would seem that the primary interface to DOJ holdings for lawyers is the reference librarians. Outside of a few notable exceptions, lawyers ask librarians for materials and don’t know or care whether these resources come from a collection, interlibrary loan, or, in some cases, librarians using their own public library cards. By knowing the reality of who uses the catalog versus who uses the Virtual Library, one could decide where to invest resources. If the catalog is indeed used beyond librarians as an inventory system, then using resources to enhance the underlying ILS to be more portal-like makes good sense. However, if it is primarily for librarians, buy the easiest to maintain with a good acquisitions module and be done with it.

Recommendations

One could make a whole host of recommendations to address some of the concerns. However, the fact is that there is a culture in the libraries, and by and large that culture seems to be working. The questions are not really about how to make libraries less risk averse, nor are they about how to gather more data on service utilization (that only helps if someone will attend to the data). What participatory librarianship tells us is that, to further a conversation, people must participate in something that has a useful context and meaning in their daily lives.
So the point is to take something the community already considers important and address issues in that context. The ILS makes an interesting starting context.

First, take the areas on which there seems to be agreement. The new ILS must act more as a portal to a wide range of information beyond physical holdings. Patrons and librarians alike must be able to see a more holistic picture of the services and resources available. What’s more, such a system must provide robust backend systems for acquisitions. Further agreed on is that current ILS systems are inadequate or, at the least, represent the priorities of different library types. Current ILS systems already present a security nightmare for the Department and the librarians who have to certify and maintain them. Add to this the complexity of maintaining a full ILS system when only a fraction of current functionality is needed. Plus ILS vendors are busy adding new features in a proprietary manner that will be inapplicable to the DOJ setting, thus increasing the maintenance needs without increasing the system’s functionality.

The obvious alternative to purchasing an existing ILS is to build a custom solution, meeting just the needs of DOJ, much as the first OPACs were developed by academic libraries dissatisfied with commercial alternatives. However, past experience has shown how difficult that proposition is (in terms of building custom software for DOJ and in terms of building new library systems in general). There is a third option, and one that might work well for the DOJ setting. Because holdings information is not seen as sensitive data and can be made publically available (indeed, it already is within WorldCat), one could see a hosted solution being utilized. This system would reside outside a firewall and simply be pointed to by DOJ. The acquisitions function could remain a separate function hosted within DOJ.

Several hosted systems are worth looking into, the most notable being OCLC’s WorldCat Local. Other possibilities would be to externally host an open source ILS, such as Evergreen or Koha. However, once the idea of hosting a system externally becomes viable, the possible benefits and nature of the system become much more interesting—interesting particularly in terms of addressing questions of risk aversion, manual labor, and data poverty.

What if the librarians evaluated all of their resources in terms of what could be externally hosted? What portions of the Virtual Library, digitized legislative histories, pathfinders, whatever, could safely sit outside of the DOJ firewall? This would be done in conjunction with clearance officers to make policy and boundaries clear, lowering the risk that librarians feel they are taking by sharing information.

Once a sizable external collection can be created in terms of information resources, the infrastructure used to host this library extranet becomes wide open, outside the purview of DOJ IT, allowing the libraries to utilize their own IT skills. With the raft of hosted web solutions available, DOJ librarians could create sophisticated and interactive systems (RSS feeds, blogs, streamed instruction, multimedia pathfinders, shared bookmarks, group wikis) without the constraints of firewall-level lockdown. With today’s widely available hosted solutions and open source software, librarians can now build sophisticated web tools with minimal technical knowledge, thus mitigating the issues of manual tool building and maintenance. Further, such tools can have built-in tracking and statistical systems (such as Google Analytics) that will provide rich data on actual use.

These rich reference tools can then be combined with the hosted catalog to create a useful portal system for DOJ staff. Further, given that these resources are already cleared for public consumption, the DOJ libraries can reap the added benefits of better serving tax payers and be seen by peer institutions as taking a leadership role.

Imagine the DOJ extranet: a web-accessible service contributed to and used by law libraries across the country. An extranet is an internally focused web presence hosted outside of the organization—like an “intranet” hosted beyond the firewall. A DOJ lawyer could get onto the site and quickly search across catalog, pathfinders, and database locator materials (and using technologies such as Open URL, perhaps licensed resources) from inside or outside of the firewall. The same lawyer could set up an alert system so as to be notified by e-mail or RSS feed of new materials in their area of practice. Furthermore, law libraries from across the country could add their own pathfinders and materials because they too can benefit from sophisticated hosted solutions outside of their own firewalls. They might also add their holdings information to a true union legal catalog.

Aside from the obvious service benefits of the extranet to the DOJ lawyers and librarians, DOJ libraries take a highly visible leadership position in the legal community. It could also be spun into a great giveback to taxpayers and help address the Department’s reputation for secrecy. The project also creates a new continuing innovation opportunity for DOJ librarians. The site can be a testing ground for new services and help teach librarians about new technologies. These technologies may not be directly implemented in the extranet, but they would still have utility.

Take, for example, social networking sites such as MySpace and Facebook. Although it is highly doubtful that DOJ law librar-
ies would build and run a successful social networking site for DOJ lawyers (they don’t have the time, the confidentiality of their work precludes participation, etc.), by learning how such sites work, DOJ librarians can enhance their expert witness searching repertoire and teach lawyers how information from such sites can be gathered for use in briefs. The system becomes a context for continuing education. More on this concept is detailed in “Key Recommendations” later.

Database Vendors

Another obvious community that DOJ librarians must be aware of is the loose collection of vendors that create, combine, and sell licensed resources such as databases to DOJ. There is fierce competition among these vendors and little in terms of cooperation. The nature of this community makes it difficult for easy integration of these resources into any portal solution and will necessitate the continued role of librarians in navigating these resources on behalf of the legal staff. However, with the obvious buying power of DOJ and the ability to bring attention to issues in legal information, there may be levers that DOJ libraries can use to prompt vendors to aid DOJ libraries in their work.

Recommendations

The first thing DOJ libraries should do is press database vendors to provide better and more regular statistics in terms of resource use. Although “pay-for-use” databases provide clear data, flat-fee databases do not necessarily provide common and comparable statistics.

It would also be useful to include database vendors in the discussion of the extranet. By allowing vendors to participate in the project, they will gain attention and have the ability to develop general-purpose tools (such as OpenURL resolvers, web services, XML-layer exchanges) that they can use to enhance their own product offerings.

Other Sources of Legal Information

There are many sources of legal information beyond the DOJ and the database vendors. Courts, state agencies, and university law libraries are only a few examples. These examples tend to have well-established communities unto themselves and are easily discoverable. However, there are a host of less formal legal sources, many commercial, that seem to be of value to DOJ librarians in their daily work. In fact, a great deal of effort seems to be spent in locating and evaluating these disparate legal sources.

Recommendations

It would be worth keeping track of which external legal sources are referred to and how often. Beyond interlibrary loan requests, how often do librarians seek out these sources on behalf of legal staff? Such work is the basis of pathfinder development, but more formal examination of these sources may yield interesting patterns of use. Such patterns would be helpful in an extranet project. In this context, such sites could be described and included and also invited to directly contribute information and data once vetted by library staff.

General Audiences

This broad category is a loose community that in reality constitutes the open web and various disciplines from which DOJ staff draw information. It is only seen as a coherent community in that major trends, fads, and technologies emerge in this space that impact DOJ. One need look no further than the rise of large-scale digitization efforts such as Google books. Such a project creates new resources for DOJ to use, but it also creates impressions on the part of some DOJ staff that libraries are becoming less relevant. Such notions are based on a fundamental misperception of what a library is. On several occasions, lawyers raised the idea that libraries are less useful because of increasingly available digital information and the redundancy of print materials. Such cases stood out and the individuals discussed are exceptions, but it does raise the question of how prevalent this idea is beyond the core patrons the library has won over. This of course goes back to issues of measurement data in terms of patron use of resources and how wide the libraries user base truly is within DOJ.

Recommendations

The bottom line is that DOJ libraries are not immune from pressures, misperceptions, and fads promulgated on the open Internet. By knowing its constituency well and being seen as a player on the open web, the DOJ libraries have an excellent opportunity to proactively address and shape these pressures.

Key Recommendations

This report made several recommendations. Some are straightforward: They develop and track more usage data to better aim services and inform decision making of DOJ librarians. This includes DOJ library services (such as reference, Virtual Library usage, catalog us-
A few moments later, a DOJ lawyer receives an e-mail alert that a new pathfinder in his or her area is available. The lawyer brings up the new pathfinder and clicks through to a preformulated Westlaw query. Westlaw automatically detects the lawyer is within DOJ’s firewall and executes the query seamlessly (had the lawyer been at home, he or she would have been prompted for a password). Finding some relevant additional sources, the lawyer sends an e-mail to his or her librarian, where an ILL request will be done.

The preceding scenario is within reach of the DOJ. Using open source software, existing web services, and minor development effort, such a system can be put in place without substantial investment into custom software development. Further, such a system can be built in conjunction with a number of high-profile partners. What is required? An organizational effort on the part of DOJ libraries, an experimental philosophy, and some resource investment.

The necessary components of such a system would be a hosted open source infrastructure outside of the DOJ firewall. A university would be an ideal home for such as system, but AALL might also provide a home or some other noncommercial, nonadvocacy institution. In any case, it would require a supported piece of hardware with adequate bandwidth and backups.

The DOJ libraries would need to review their existing Virtual Library for a substantial base of resources that could initially populate the public site. Significant work would also need to go into specifying and implementing a hosted inventory/catalog system for the DOJ collections.

The whole project would be presented as an ongoing experiment, seeking reliable service, but stressing innovation over fortification (key documents and resources could be duplicated as static files within DOJ for unexpected downtime). Once this initial base of resources and infrastructure is in place, partners should be sought out to be part of the experiment. States, universities, and other non-commercial legal entities could be prioritized, with vendors being invited to develop new products to enhance and integrate with the public site (much like PubMed).

To explore the possibility of the extranet, a few initial steps should be taken:

1. **Technical Readiness** In most cases, technology should follow needs assessment and concrete planning. However, in the DOJ case, librarians need a better sense of what technical capabilities exist in the open web environment as a means of stimulating
their brainstorming and thinking. Technical readiness will both expose librarians to the possibilities of new technologies as well as establishing their confidence in using and incorporating these technologies. They need to be more at ease with technology development. This could be done online, but perhaps a series of intensive one-day hands-on workshops would be a better idea. In these workshops, they would build technologically enabled pathfinders, blogs, and full-blown sites, increasing their confidence.

2. **Brainstorming** After technical readiness, librarians can spend time thinking about conversations going on within the library (and externally where applicable) and come up with a vision and mission for the extranet.

3. **Inventory and Policymaking** With vision in hand, librarians can scour the existing Virtual Library and other library resources to determine what can and cannot reside outside the firewall. In parallel, work needs to begin on implementing a hosted solution for DOJ holdings.

4. **Experimentation** With a mission in place, a project team can begin work with an external partner or partners on developing functional prototypes of the extranet. These implementations should show the advantages and disadvantages of a hosted open approach. It will also give library staff and clients real systems to react to.

5. **Implementation** Once prototyping determines the baseline of the extranet, DOJ and partners can go about building and previewing the system. Librarians should be an integral part of the building process, not simply clients consuming someone else’s work. They should be given time to work as part of the development team.

6. **Ongoing Education** Once the system is in place, librarians exploring new or existing technologies and service models can learn and build within the extranet.

While the priorities and realities of the DOJ will dictate the actual timeline, the above steps could be accomplished in 12 to 18 months.

**CONCLUSIONS**

The DOJ clearly enjoys great library service. The librarians are skilled, dedicated, and committed. However, they are also constrained in their abilities to innovate by a chasm between the services they provide and the tools to provide them. Good librarians, no matter their titles, are tool builders. Pathfinders, ILS’ databases, and even standing files are tools. The current IT environment makes it difficult for librarians to build effective tools. This, more than an environment of confidentiality, is holding the libraries back from innovation. To this point, it is the librarians who sense this frustration, and they have been able to shield lawyers from this reality through a lot of manual effort.

The good news is that, in participatory library terms, DOJ libraries are exemplars. They have a strong understanding of the communities they serve and are facilitating and improving them. However, it is difficult without better evaluative data to say how far that support extends within the DOJ organization. If DOJ does nothing more than document its successes, it is in an excellent position. However, if it wants to continue to be a leader and be seen in that leadership role beyond DOJ, it must come to terms with the technical tools available to it. By using hosted solutions in the guise of an extranet, it can provide better service to its clients, solve its immediate ILS problem, feed into the current library staff’s thirst for innovation, and position itself in the larger legal information community.

**RELATED ARTIFACTS**


Limitations of Pask’s Conversation Theory

When looking to theory for support of the basic principles of participatory librarianship, as discussed above, Pask’s Conversation Theory provides a link to the foundations of library and information science by referencing the information theory and system applications research of the 1950s and 1960s. However, Pask’s primary concern was to provide instructional guidelines for implementing his learning system. Pask’s writing style is reminiscent of system specifications, and he focuses on describing and supporting a set of rules that define the core of his proposed educational interface. His perspective is indicative of his times and reflects a confident belief in the ability of the machine to surpass human cognitive limitations if we can only learn to harness that power.

While the intention of Conversation Theory resonates with the spirit of participatory librarianship, the technical aspects are, in fact, over thirty years old, and Pask’s specifications do not necessarily help us put our ideas into action today. Nor does Pask’s theory reflect the subsequent decades of communications research that would follow after he originally introduced his system.

Here we provide a brief overview of additional theories that address the study of conversation, coming from a range of fields. Our intention is to enrich our definition of conversation and attempt to connect Pask’s work to the present.

Understanding Conversation in a Wider Context

Generally, theories of human communication that address conversation can be grouped into five broad and potentially overlapping categories: structural/functional, cognitive and behavioral, interactionist, interpretive, and critical (Littlejohn, 1996). All of these categories attempt to explain or describe some aspect of the structure of exchanges between individuals; however, they differ in their level of analysis (individual, group, culture), their unit of analysis (signal, word, utterance, message), and their filters (systems, linguistics, politics).

Structural/Functional Theories

Conversation research in the structural/functional realm looks at patterns of exchanges and utterances with a goal of constructing frame-
works based on the mechanics of verbal communication. Structuralism is based on linguistics and stresses the organization of language and social systems. Functionalism grew from biology and seeks to understand the ways that organized systems sustain themselves. Functional models assume that the world is comprised of systems that consist of variables in a network of functions (Littlejohn, 1996). This family of theories includes structural linguistics and discourse analysis. Pask’s Conversation Theory also falls under this category, a unique example of system theory built on principles of conversation.

**Behavioral and Cognitive Theories**

Primarily focused on the individual, theories of communication influenced by behavioral psychology look at stimuli–response relationships, whereas more cognitive theories look into the information processing that lies beneath these relationships, often taking into account the physiological basis of human perception. Like structural/functional approaches, these theories also try to identify the most important variables associated with communication. However, in addition to focusing on the person over the text for evidence regarding these variables, this approach also focuses on individual human thought rather than collective experiences (Littlejohn, 1996). Hence, the residue of conversation (or participation) in the form of knowledge is not as important as the behavior of individuals. Other approaches refer more directly to socially constructed knowledge, such as interactionist theories discussed below.

**Interactionist Theories**

Interactionist theories involving conversation take a slightly more sociological perspective, looking at the influence of actors and environment on outcomes to better understand human communication. Because of the situational nature of this approach, the research tends to focus on specific social groups and cultures and is less generalizable than structural/functional theories (Littlejohn, 1996). Pragmatics is the branch of discourse linguistics that looks at the larger social context of conversation. Conversation analysis, although structural in some aspects (i.e., examination of turn-taking), also seeks to identify social and cultural influences on the content of conversation.

**Interpretivist and Critical Theories**

Explanations of conversation-based communication can also be analyzed through an interpretivist lens that seeks to identify power dynamics between actors. These dialectic theories have grown from foundations in interpretivist and critical theory and are, for the most part, outside the scope of our current investigation as they stress the political and social implications of personal exchanges over the potential for knowledge creation.

**Two Approaches to be Considered in More Detail**

We have identified two approaches to the study of conversation that we feel may complement Pask’s Conversation Theory as we move forward to refine and implement participatory librarianship: discourse analysis and conversation analysis. Although these approaches overlap in theory, method, and goals, each offers a distinctive point of view to the study of conversation.

**Discourse Analysis**

Discourse analysis is the examination of the structure of language as it occurs above the sentence level. Grounded in the tradition of structural linguistics, which primarily focuses on the use of language at the sentence level, discourse linguistics studies the structure of messages as expressed in groups of sentences, paragraphs, and passages. Discourse analysis is not strictly limited to dialog but can focus on the text of a single speaker. Depending on the context and application, the analysis of messages can lean more toward a traditional linguistic basis for structure (more highly ritualized contexts) or can take a more sociological perspective (more informal or less predictable situations) that is more dependent on knowledge regarding culture and social context. Regardless, discourse analysis always starts with the concepts and terminology of linguistics and seeks to overlap this framework onto naturally occurring text (Cutting, 2002). This is in contrast to the more interpretive methods used in conversation analysis, discussed below.

The subject matter of discourse analyses is most often natural language, although this research is also useful when working with computer-generated text, such as that produced by question-answering systems. It is important to note, again, that discourse analysis is dependent on the examination of actual examples of natural language, being interested in description over prescribing maximally optimal conversation practices.

Pragmatics, also an extension of structural linguistics, can be described as being one level of language analysis higher than discourse analysis. Pragmatics is considered to be interdisciplinary in its approach to language (Verschueren, 1999). Beginning with a structural
framework, when compared with other linguistic areas, pragmatics gives greater importance to the social principles of discourse (Cutting, 2002), addressing the cultural aspects of language use, the social aspects of human behavior related to the communication of messages, and roles played by speakers, including issues such as social distance between speakers and rules of politeness.

Further investigation of discourse analysis principles and methods would involve examining Speech Act Theory (Searle, 1969), which seeks to describe rules governing the act of speech, with the utterance being the base unit of analysis; and propositional coherence (van Dijk, 1979), an extension of discourse studies that looks at the ways in which people create cohesive messages in speech. Neither of these theories directly addresses conversation specifically, although because of the importance that Speech Act Theory places on the intention of the speaker, either or both could enrich our examination of conversation as participation.

Conversation Analysis

Often used in ethnographic studies to closely examine the sequential order and content of conversations between members of a specific group or culture, conversation analysis has roots in both sociology and linguistics. Focused on naturally occurring dialog, this is where the more conventional notion of conversation as talk comes into play (Wardhaugh, 1985). Through careful analysis of text (usually spoken), this approach seeks to catalog interactional features (such as turn-taking, silences and gaps, and overlaps) of a given conversation (Littlejohn, 1996), in addition to identifying evidence of more general conversational rules to better understand why people say what they say.

Conversation analysis often takes an interpretivist format, building a code from repeated and careful reading of a body of text rather than applying an already existing structure to the text. Because conversation analysis looks so closely at a particular example of conversation to generate a model of the communication, it is more difficult to generalize from this approach (Cutting, 2002).

Philosopher H. Paul Grice developed a fundamental theory of conversation involving so-called Gricean Maxims that describe general principles of interaction that humans follow when engaged in most conversations. When involved in conversation, we assume (unless provoked otherwise) that, among other things, others will be telling us the truth, that they will tell us only the things we need to know, that what they say will be meaningful to us, and that they will be polite (Wardhaugh, 1985). Conversation analysis can be used to look for violations of rule like these and to explain how these violations affect the outcome of the communication as evidenced by turn-taking, silences, and interruptions.

When both Pragmatics and conversation analysis are used to describe the organization of conversational groups, it is called Interactive Sociolinguistics (Cutting, 2002). This is also an area that might be generative for future research, as it might allow us to view conversations within context and provide a more flexible (possibly too flexible) framework for defining the mechanisms of knowledge creation through conversation.

CONVERSATION STARTERS

1. Libraries are traditionally quiet spaces. Can we retain this while encouraging two-way conversations within the library?
2. Two-way conversations already occur between library staff. How can the library facilitate conversations between patrons and between patrons and staff? How can these conversations be retained so as to enrich the library?
3. Librarians are traditionally in the business of vetting sources for patrons, making sure the information they provide access to is accurate. How can this be negotiated in a conversation with no sources to check?

RELATED ARTIFACTS


DIFFERENT COMMUNITIES LIBRARIANS SERVE

MAP LOCATION
C, 5

THREAD LOCATION
Page 95

SCAPE

Figure 120
**DIGITAL ENVIRONMENTS**

**MAP LOCATION**
C, 6

**THREAD LOCATION**
Page 86

**SCAPE**

![Diagram](image)

**EDUCATION**

**MAP LOCATION**
E, 10

**THREAD LOCATION**
Page 176

**SCAPE**

![Diagram](image)
Embedded librarianship is an excellent descriptor for defining the changing role of librarians. It’s not just about decentralized service, as Gary Freiburger and Sandra Kramer (2009) discuss in their article titled, “Embedded Librarians: One Library’s Model for Decentralized Service,” but about a change in mindset and the need for librarians to market their expertise.

As embedded librarians, we need to become visible experts in proving valuable information. This requires an understanding of our users’ needs and a working knowledge of the quality and availability of resources that can best meet their needs.

Whether we are organizing entrepreneurial, writing, or musical services, as embedded librarians we are attempting to identify a need, facilitate a conversation, and inform or solve a problem.

**CONVERSATION STARTERS**

1. How do we become embedded librarians?
2. Do we take up kiosks at the mall?
3. Do we set up a table outside our local Shoprite?
4. Do we send flyers home through the schools or pay for advertising on the back of supermarket receipts alongside $3.00 discount coupons for the local carwash?

**RELATED ARTIFACTS**


ENTAILMENT MESH

MAP LOCATION
F, 2

THREAD LOCATION
Page 49

SCAPE

Figure 123

ENTREPRENEURIUM

MAP LOCATION
F, 4

THREAD LOCATION
Page 98

SCAPE

Figure 124

AUTHOR
R. David Lankes
AGREEMENT DESCRIPTION

The Entrepreneurium: Building a Research-Based Model for Serving Small Businesses and Entrepreneurs

Assessment of Need

Syracuse University and the Free Library of Philadelphia propose to investigate the roles and opportunities for public libraries in the support of entrepreneurs. This study is a direct result of the Free Library of Philadelphia engaging the business community and seeking to better serve the entrepreneur, a key driver of economic development, an effort that has been named the “Entrepreneurium.” Rather than simply build a new center or replicate existing efforts of other libraries, the Free Library feels there is great value in developing such services from grounded research. It also feels that such research is invaluable to the rest of the public library community.

Increasingly, public libraries are seen as stakeholders in the economic development of their communities, as was highlighted in a recent report by the Urban Libraries Council:

Public libraries build a community’s capacity for economic activity and resiliency, says a new study from the Urban Institute. [The study] adds to the body of research pointing to a shift in the role of public libraries—from a passive, recreational reading and research institution to an active economic development agent, addressing such pressing urban issues as literacy, workforce training, small business vitality and community quality of life.1

Because small and new businesses currently constitute 45.1% of the payroll2 in the country, an increased focus by libraries on the startup, in addition to the more established library role in job searching, is warranted.

Public libraries have long been involved in providing service to entrepreneurs. From print and electronic resources that are so critical to this constituent to workshops and one-on-one assistance, libraries are attempting to fill gaps in services available to entrepreneurs. Libraries are often invaluable resources to the startup, offering the Gale Virtual Reference Library, ReferenceUSA, Dun & Bradstreet’s Million Dollar Database (whose usage at the Free Library has almost doubled), and Business and Company Resource. The Free Library alone spends more than $100,000 each year on 12 databases useful to entrepreneurs and small business owners. This dollar figure doesn’t count the extensive one-to-one assistance, workshops, and reference activities that libraries are offering. The Free Library is hardly alone in its current outreach to entrepreneurs, with notable programs at the Brooklyn Public Library, the St. Paul Public Library, Middle County Public Library, and even the British Library.

However, librarians create many entrepreneurial offerings with little direct involvement in startup operations. Further, libraries may emulate existing entrepreneurship programs in the not-for-profit sector without deep consideration of the library’s role beyond the provision of resources. In essence, a great deal of money is being spent on an important activity but with little concrete research and evaluative data on which to build their programs.

If public libraries are to play an important role in entrepreneurship, thereby enhancing their communities and the libraries’ role within the community, they need evidence-based guidance in creating, operating, and governing entrepreneurship centers. This research project will provide such guidance grounded in the real world, with real data, and with real resources.

National Impact and Intended Results

The overall aim of this proposed research activity is to increase and promote the ability of public libraries throughout the country to stimulate entrepreneurship in communities. The Entrepreneurium, an umbrella project concept, will do this through data, actionable plans, and shared resources. The resources and findings of this project will strengthen the public library’s role in economic development by creating mechanisms to engraing the public library in the entrepreneurship communities throughout the country.

The emphasis on entrepreneurship and the startup comes directly from the mission of public libraries to enhance their communities. Entrepreneurial activities not only form a major part of the U.S. economy, but they also are directly relevant to traditionally underrepresented populations. According to the Public Forum Institute, 600,000 to 800,000 new businesses are started in the United States each year:

These small businesses are the foundation for our employment growth. They allow their owners to work for themselves and be self-sufficient…. Firms of fewer than 20 employees generate the majority of net new jobs in the U.S. New jobs from start-ups are an immediate and significant boost to the economy. New dynam-

ic theories of the economy suggest that the prevalence of small firms provide a constant tide of new ideas and experimentation vital to the health of the economy as a whole.³

A recent article in the *Journal of Leadership and Entrepreneurial Studies* brought some interesting statistics together:

74 million Americans stated they plan to start a new venture within the next five years while an additional 199 million Americans plan to start a venture someday. (The Small Business Economy, 2006) Women-owned ventures increased from 5.4 million in 1997 to 7.7 million in 2006. (Center for Women’s Business Research, 2007) The non-profit Tax Foundation reports that entrepreneurs pay more than 54% of all individual income taxes. Approximately one new firm with employees is established every year for every 300 adults in the United States. As the typical new firm has at least two owners-managers, one of every 150 adults participates in the founding of a new firm each year. Substantially more—one in 12—are involved in trying to launch a new firm. The net result is that the United States has a very robust level of firm creation. These numbers make it clear that entrepreneurial ventures are dominating the US economy . . . truly an entrepreneurial economy.⁴

Other studies show that “immigrants far outpaced native-born Americans in entrepreneurial activity last year while African Americans were the only major ethnic or racial group to experience a year-to-year increase in the rate of entrepreneurship.”⁵

The realities of American entrepreneurship—that it is wide scale and diverse—make it an excellent lever point for public libraries to directly impact the welfare of their communities. However, the simple act of collecting entrepreneurial materials, while valuable, is far from realizing the true potential impact of the library. What is needed is a proactive set of programs based on best practices in the governmental, corporate, and not-for-profit sectors. This project will identify these best practices. It will create a firm research foundation of best practices, programs, and resources that can be replicated at libraries around the country. It will also seek to build a lasting, if informal, network of public libraries engaging entrepreneurs.


At the end of the project, a public library shall:
- have a comprehensive inventory of the resources and services necessary to start an entrepreneurial center/activity;
- be able to best evaluate the readiness of the library’s patrons for the startup enterprise,
- have a ready set of empirically tested interventions to build the entrepreneurial skills of its community, and
- have a network of other libraries interested in entrepreneurship it can share with and learn from.

**Project Design and Evaluation Plan**

Participatory librarianship forms the conceptual basis for the design and evaluation of this project. Simply put, participatory librarianship, based in large part on Conversation Theory,⁶ recasts library and library practice using the fundamental concept that knowledge is created through conversation.⁷ Libraries are in the knowledge business and are, therefore, in the conversation business. Participatory librarians approach their work as facilitators of conversation. Be it in practice, policies, programs, and/or tools, participatory librarians seek to enrich, capture, store, and disseminate the conversations of their communities.

Participatory librarianship provides a set of theoretically derived principles for engaging key library constituencies in projects such as these. First, the library serves as a facilitator of conversation. Second, true engagement with the community means shared management responsibilities. Third, investment in tools for knowledge creation is preferred over the collection of artifacts from previous knowledge-creation processes. Preliminary engagement with the business community in the Philadelphia area using these participatory concepts has already identified the importance of an entrepreneurial focus (vs. a focus on general business or job skills). It has also identified a rich set of areas for investigation in terms of services and needed skills of entrepreneurs.

Although there is no strict relationship between the participatory theoretical approach and a suite of methods, qualitative techniques shall be employed due to the exploratory nature of the project and to provide the richest dataset possible to allow for later discussions of

⁷. More information on participatory librarianship can be found at http://www.ptbed.org.
model transferability into new settings. Each phase of the research, as outlined below, will employ mixed methods, including interviews, document analysis, and focus groups. The researchers will also employ a validity cycle, where emerging concepts and findings are fed back to participants (in this case, site visit organizations and a panel of entrepreneurial experts) for confirmation and additional data gathering. The end result of this naturalistic inquiry shall be specific interventions and understandings tied to higher level concepts.

This three-year study will create a firm, empirical, and replicable foundation for entrepreneurship centers in public libraries. It will do so in four phases detailed in table 2.

<table>
<thead>
<tr>
<th>PHASE 1: DEVELOP A SKILLS ASSESSMENT FOR PATRONS BASED ON SUCCESSFUL PRACTICES</th>
<th>YEAR 1</th>
<th>RESPONSIBILITY: SYRACUSE</th>
</tr>
</thead>
<tbody>
<tr>
<td>DESCRIPTION</td>
<td>THE NECESSARY SKILLS FOR ENTREPRENEURS WILL BE DEVELOPED BY CANVASSING THE ENTREPRENEURSHIP AND LIBRARY LITERATURE, AN ADVISORY BOARD OF SUCCESSFUL ENTREPRENEURS AND SUCCESSFUL ENTREPRENEURSHIP CENTERS (INCLUDING THOSE IN LIBRARIES). CANDIDATE SKILLS INVENTORIES AND INSTRUMENTS WILL BE TESTED IN PILOT GROUPS TO ASSURE VALIDITY OF THE INSTRUMENTS.</td>
<td></td>
</tr>
<tr>
<td>OUTCOME</td>
<td>SKILLS INVENTORY THAT A LIBRARY CAN USE WITH THEIR PATRONS TO DETERMINE FUTURE PROGRAMS AND TOOLS NEEDED WITH VALID INSTRUMENTS; LITERATURE REVIEW OF ENTREPRENEURSHIP IN LIBRARIES; SITE VISIT REPORTS OF CENTERS.</td>
<td></td>
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</tbody>
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<table>
<thead>
<tr>
<th>PHASE 2: ADMINISTER THE SKILLS INVENTORY</th>
<th>YEAR 1</th>
<th>RESPONSIBILITY: FREE LIBRARY</th>
</tr>
</thead>
<tbody>
<tr>
<td>DESCRIPTION</td>
<td>THE RESEARCH TEAM WILL WORK WITH THE FREE LIBRARY OF PHILADELPHIA’S PATRON POPULATION TO DETERMINE GAPS IN CURRENT PATRON KNOWLEDGE IN TERMS OF ENTREPRENEURSHIP. THE CURRENT PATRON POPULATION INCLUDES A LARGE NUMBER OF ENTREPRENEURS AND ENTREPRENEURSHIP PROGRAMS.</td>
<td></td>
</tr>
<tr>
<td>OUTCOME</td>
<td>AN “ENTREPRENEURSHIP” PROFILE OF THE FREE LIBRARY COMMUNITY, PLUS A TEMPLATE FOR SIMILAR PROFILES AT OTHER LIBRARIES.</td>
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</tbody>
</table>

<table>
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<tr>
<th>PHASE 3: TEST PROTOTYPE PATRON INTERVENTIONS TO INCREASE ENTREPRENEURIAL SKILLS</th>
<th>YEAR 2</th>
<th>RESPONSIBILITY: FREE LIBRARY, SYRACUSE</th>
</tr>
</thead>
<tbody>
<tr>
<td>DESCRIPTION</td>
<td>WHILE PHASES 1 AND 2 WILL DETERMINE THE NEEDS A LIBRARY MUST MEET IN TERMS OF SUPPORTING ENTREPRENEURSHIP, THE REMAINDER OF THE STUDY FOCUSES ON HOW THE LIBRARY CAN MEET THOSE NEEDS. IN ORDER TO DETERMINE THIS, DIFFERENT SERVICES AND TOOLS, IDENTIFIED EITHER IN THE SITE VISITS, THE LITERATURE, OR FROM THE RESULTS OF THE ASSESSMENT WILL BE TESTED. INTERVENTIONS MIGHT INCLUDE TRAINING SESSIONS, ONLINE NETWORKING TOOLS, AND/OR NEW COLLECTIONS OF MATERIALS (SUCH AS BUSINESS PLANS).</td>
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| OUTCOME | PROTOTYPE INTERVENTIONS WITH EMPIRICAL EVIDENCE TO THEIR EFFECTIVENESS; METRICS TO DETERMINE THE SUCCESS OF INTERVENTIONS; SPECIFIC PHYSICAL NEEDS OF A GOOD CENTER. |

<table>
<thead>
<tr>
<th>PHASE 4: DETERMINE SUSTAINABILITY AND TRANSFERABILITY MODELS OF ENTREPRENEURSHIP CENTERS</th>
<th>YEAR 3</th>
<th>RESPONSIBILITY: FREE LIBRARY, SYRACUSE</th>
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<tbody>
<tr>
<td>DESCRIPTION</td>
<td>INTERVENTIONS ARE OF NO USE IF THEY CANNOT BE SUSTAINED. NO PROGRAM CAN BE SUSTAINED IF IT DOES NOT FIT INTO THE OVERALL STRUCTURE OF A LIBRARY. THE RESEARCH TEAM WILL DEVELOP SUSTAINABILITY AND MANAGEMENT MODELS FOR USE WITH ENTREPRENEURSHIP CENTERS. PARTICULAR ATTENTION WILL BE GIVEN TO HOW DIRECT OWNERSHIP OF THE CENTER AND ITS GOALS CAN BE SHARED BETWEEN THE LIBRARY AND THE ENTREPRENEURIAL COMMUNITY. THE FREE LIBRARY WILL ALSO HOST A SYMPOSIUM ON THE TOPIC OF “ENTREPRENEURSHIP AND THE LIBRARY” TO GAIN FEEDBACK ON THE WORK PRODUCTS OF THE GRANT AND DISSEMINATE WHAT WAS LEARNED.</td>
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<tr>
<td>OUTCOME</td>
<td>SUSTAINABILITY MODEL; OWNERSHIP PLAN BETWEEN THE LIBRARY AND ENTREPRENEURS; SYMPOSIUM AND SYMPOSIUM REPORT</td>
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Each of these phases seeks to employ mixed methods, but all depend on testing concepts and models in real situations with real clients. Throughout the study, the research team will draw on the expertise of a board of successful entrepreneurs and key stakeholders, including members of the banking sector. The overall goal is to create a toolkit that public libraries can use nationwide.

Table 1 also forms the basis of both ongoing and summative evaluations of the project and the model. Evaluations will be conducted throughout each phase to ensure only valid outcomes are achieved and passed to the next phase. For example, in phase 1, the “skills inventory” will be validated in terms of data gathered, as well as in terms of the instrument itself (e.g., language use). Only once the inventory has been validated will it be passed on to phase 2, where the entrepreneurial profile of the community developed corresponds to the overall service population of the Free Library’s Central Library.
Dissemination

Disseminating the findings of this research is seen as a priority task for the research team. The importance of entrepreneurship exists not just in Philadelphia but across the nation. A primary motivation in conducting research is that it is transferable, not simply building a set of services at a single library as a demonstration project. To that end, the research team has three strategies for the dissemination of the findings of this research.

The first strategy is ensuring that the instruments and materials generated as part of the research (such as the skills inventory, literature reviews, and site visits) are produced for national consumption. The second strategy is the use of http://entrepreneurium.org, a planned participatory Web site that will allow for immediate and easy access to the materials and findings of the study. The site will also allow for profession-wide input and commenting, thus serving as the foundation for an informal network of libraries interested in entrepreneurship programs. The building of the site will utilize best practices in community web development. The third strategy is the offering of a national symposium in phase 4 of the study. This symposium will provide for immediate input and feedback in a face-to-face fashion. The symposium will take advantage of the participatory features of the Web site to allow for distance participation in the symposium as well.

Sustainability

As a research project, the end of the grant is the end of the effort. However, exploring the sustainability of entrepreneurship programs at public libraries is a key effort within the scope of work. Further, a number of the entrepreneurship activities identified through this research project will be incorporated into the Central Library’s current Business Department, and the Free Library’s plans to expand the Central Library and construct a new Business Department offer the potential to sustain the project’s results well into the future. The Free Library is excited to incorporate a full spectrum of services, resources, and facilities necessary to support entrepreneurs and small business owners in its new Business Department. As one of the largest urban libraries in the country, in a world-class city that attracts and supports entrepreneurs, the Library will continue to serve Philadelphia’s growing base of new business owners with the resources identified in this research project.

Conclusion

Public libraries have an opportunity in the area of entrepreneurship to improve their communities and their position within those communities. Entrepreneurs and public libraries share an aspirational nature. Both activities are seen as means to advance the best of a community. Public libraries serve as instruments that support the public’s ability to overcome their current limitations to succeed, be it in literacy, school, vocations, or the business world. It is vital that public libraries are equipped to court, support, and advance a vital sector of our economy, the entrepreneur. Further, libraries must be able to both justify their means of supporting the entrepreneur and evaluate their effectiveness in this support. Such a research foundation will give any interested library a compelling story to tell in the boardroom, city hall, and business community. By supporting innovation and personal initiative, public libraries not only contribute to the bottom line of their municipalities, but model themselves as a place of leadership for the community. It is now time for libraries to go beyond simply providing resources for the intrepid few and actively promote services to empower all. The research from this project will help libraries, and those libraries will in turn improve their communities.
It was 1999, and the AskA consortium was meeting at Harvard’s Graduate School of Education. The panel of librarians, library instructors, AskA services, and government officials were discussing a set of quality standards in virtual reference (Kasowitz et al., 2000). When the standard stating that services should be without bias was brought up, an interesting discussion ensued. Joseph Janes observed that the biases of a given AskA service were in many ways the strength of the service. Take AskShamu (http://www.seaworld.org/ask-shamu/index.htm), for example. AskShamu was a service of SeaWorld that answered questions on marine biology and was considered an exemplary service. “What kind of answer do you think they will give when asked whether keeping animals in captivity is a good thing or bad?” asked Joe. Likewise, one could ask a library about the benefits of fair use.

The point was not that these services were without bias, but whether their biases were obvious, and more important for the consideration of a virtual reference consortium, whether the network of all the services achieved a neutral stance. This may seem like a fine distinction, but it highlights an inherent struggle in the ethics of a profession that is situational but seeks universal approaches. Take the ALA code of Ethics (American Library Association, 1995). The first code states, “We provide the highest level of service to all library users through appropriate and usefully organized resources; equitable service policies; equitable access; and accurate, unbiased, and courteous responses to all requests.” Here the professional librarian should be neutral and unbiased. Yet in the sixth code, librarians “…do not advance private interests at the expense of library users, colleagues, or our employing institutions.” So, as in the case of AskShamu, what happens if the employing institution has a bias? I argue that all organizations and all individuals have inescapable biases. The best one can do, from an ethical perspective, is to disclose those biases as much as possible. At the least, this allows our patrons to be aware of potential distortions in service.

Such a disclosure is an essential part of conversation. Conversation Theory and later theories on discourse and communication talk about a sometimes subtle negotiation process that takes place between parties in a conversation. Issues of status, language, and experience all factor into an interaction. These interactions and negotiations ultimately end up in a series of agreements that form the basis of knowledge creation. The library profession is quick to point out such biases in service populations—the public thinks books are all the library offers, the patrons think the library is stuffy, and so on. Sometimes these biases are elicited through research and found in data, but often they are actually perceptions/biases the professional holds about the public.
With this more situational approach to ethics, where biases and ethical constraints are negotiated as part of knowledge creation, it also becomes clear that the inevitable biases of librarians will shape the conversations of the community. This is far from a bad thing. Librarianship is a principled profession. That is to say, it is a profession that has taken the time and effort to make explicit its principles and ethics. As such, it is seen as an honest broker in many conversations and information-seeking processes. It has become a respected and credible voice because it is so forthright about its ethics and principles.

However, such a principled approach can degenerate into a sort of paternalism when not guided by adherence to some larger goal. In librarianship, this ultimate goal is service, and it should prevent paternalism. Without this drive to serve and be part of a community, the library can seek to shape the community based on a narrow and elite view. This can easily be seen in the early American library movement when the promotion of literacy became the promotion of the “right” literacy as defined by the library (most often Christian white men). One can still see such paternalism in reactions to the rise in gaming programs at the library. Stocking public library shelves with science fiction and romance novels is acceptable, but promoting video games somehow does not rise to the bar of propriety. Worse, public libraries that may have story times and knitting groups shy away from game nights because teens should somehow be engaged in more educational programs, such as knitting and puppet shows?

The bottom line is that ethical neutrality is a myth. Everyone and every organization have a stance and a set of biases. The best it can do is to make such biases known. Further, it is only by grounding a field’s ethics and principles in the ultimate goal of service that librarians avoid separation from the community and promotion of their ethics over those of the community.

Obligations to the Community

The flip side of paternalism toward a community is surrender to that community. A comment to the Ann Arbor District Library asked for “free prostitutes and pie” (http://www.flickr.com/photo_zoom.gne?id=74201588&size=o). Although this would be sure to attract some new patrons, many would question whether prostitution and pies belong in a library. Some would base these questions on the ethics of a library that would trade in human desire and promoting obesity, even in communities where both might be legal. Clearly, although the library is of the community, it does not have to reflect the full range of ethical positions of that community.

How can the library have it both ways—reflecting the community’s ethics while maintaining its own? The answer comes again through Conversation Theory. In a conversation among individuals or community members, such as the library and its patrons, there is a negotiation occurring between two sides. Each actor in the conversation is working toward an agreement that includes what information, actions, and the like are “in bounds.” Libraries and librarians must reflect the ethics of their community, but they must also shape them. In many cases, the libraries have negotiated an understanding that intellectual freedom and fair use, for example, are ethical imperatives that enrich a community, although in other agents of the community they are suppressed. In some cases, however, libraries have failed in these negotiations, such as in CIPA, and they must resign themselves to operating the best they can within the boundaries the community has set.

What we see in these often subtle negotiations is that sometimes libraries and librarians actively promote their ethical frames, sometimes they simply make such frames and biases explicit, and sometimes they actively suppress them in the service of a higher ethical burden—service.

Consider again the issue of filtering Internet access. At first, it seems to go against the basic principle of free and unencumbered intellectual access to information. However, let’s take the situation of a public library that turns off filtering of public access computing for adults on request. Now let’s say that the police, aware of this practice, start patrolling the library and looking over people’s shoulders, in particular watching for parole violations by sex offenders. One can well imagine that such observation might have a chilling effect on Internet usage. Is it ethical to require filtering of all terminals to remove the police presence, thereby allowing the greatest access to the greatest number of people? The ultimate answer to this question can only be derived by actively engaging the service community in conversation. It may sound like this approach rules out ethical stands or that the lowest ethical common denominator shall win, but this ignores the power of a principled profession that in most cases already holds credibility and the good faith of the community. Put plainly, negotiations can be active and spirited, and sometimes people agree to disagree.

Inclusion of Communities

Another community aspect of our new approach to librarianship and the question of ethics is direct inclusion of the patron into the library’s processes. As the technology brief states1:

How can such a traditionally rigid system [the catalog]… be made more participatory? What if the user, finding no relevant information in the catalog, adds either the information or a placeholder for someone else to fill in the missing information? Possibly the user adds information from his or her expertise. However, assuming that most people go to a catalog because they don’t have the information, perhaps the user instead begins a process for adding the information. The user might ask a question using a virtual reference service; at the end of the transaction, the user then has the option to add the question, along with the answer and associated materials, to the catalog. Or perhaps, the user simply leaves the query in the catalog for other patrons to answer, requesting to be notified when an answer is posted. In that case, when a new user does a catalog search and runs across the question, he or she can provide an answer. That answer might be a textual entry (or an image, sound, or video), or simply a new query that directs the original questioner or new patrons to existing information in the catalog (user-created “see also” entries in the catalog). (Lankes et al., forthcoming)

This idea of community inclusion directly into library processes has also included ideas of offering community organizations shelving space for them to house (and maintain) their own documents. Other ideas discussed as part of ongoing conversations with the Free Library of Philadelphia include the library publishing works by community authors and musicians or accessioning video of local events and town meetings.

Although such ideas raise questions of quality, expertise, and the like (to be answered in an ongoing and active conversation with the community), there are ethical issues raised as well. As we have just discussed, libraries are not required to represent the full range of ethical norms of their communities in their offerings, just as a community’s churches, courtrooms, or classrooms are places with strong ethical boundaries. What is interesting about all of these settings is that, at their best, they invite open discussion and instruction on ethical conduct.

This idea that a library can be a proactive cauldron to instruct ethical behavior is far from a unique concept. Discussions on intellectual freedom, copyright, and the role of libraries in digital divide issues are at their heart as much about ethics as they are about policy, technology, or practice. Even the ALA Code of Ethics prescribes action:

We strive for excellence in the profession by maintaining and enhancing our own knowledge and skills, by encouraging the professional development of co-workers, and by fostering the aspirations of potential members of the profession.

“Striving” and “fostering” imply moving beyond a simple unbiased or neutral approach to work. Instead, they imply actively biasing conversations. Note the fifth code of the previously mentioned ALA code of Ethics, which states that librarians should “advocate conditions of employment.” Or look at the third code where librarians “protect each library user’s right.” This has translated into a pronounced bias and position with regard to things such as the PATRIOT Act. By inviting the community into the library as partners, we also have a chance to invite the community to learn and share (and continuously shape) our ethics. Librarians are free to do so because they understand that it is impossible to enter into any relationship (including a service relationship) without biases.

A Biased and Principled Profession

Knowledge is created through conversation. As an individual or community seeks to learn, it seeks to engage in a process of communications that lead to a series of agreements. Ethics plays a two-part role in this knowledge-creation process, and both are vital. The first is in the belief that librarians must act ethically in these interactions. They must be dedicated to service, dedicated to providing the best information available to them, and doing so in a way that best represents the community within which the librarian is situated. The second role of ethics is in the communication act. Librarians must make their ethical stance clear and discoverable. This includes being upfront about potential biases held by the librarians, the library, and the profession as a whole. It is only by being up front and honest about existing ethical stances that the profession can continue to be a trusted member of the community and broker of information.

Librarians are biased toward disclosing more information than less, providing more viewpoints than fewer, and doing so in a way that biases personal privacy over institutional supervision. In essence, librarians believe in private interactions with public information. Librarians must understand these are biases founded in ethics and that the span and scope of their ethical behavior must be constantly negotiated within the community of which they are a part.

RELATED ARTIFACTS

EVERY COURSE HAS SYMPOSIA AND PRACTICA

MAP LOCATION
E, 9

THREAD LOCATION
Page 179

SCAPE

Figure 127

Figure 128

EVOLUTION OF INTEGRATED LIBRARY SYSTEMS

MAP LOCATION
H, 2

THREAD LOCATION
Page 144

SCAPE

Figure 128

Figure 128
Evolution of Systems

MAP LOCATION
H, 3

THREAD LOCATION
Page 35

SCAPE

Evolution of Integrated Library Systems

School Information Management Systems

L₁

Reference Extract

influenced by

will be influenced by

Systems are going to have multiple L₁’s

will be influenced by

Evolution of Systems

from

System View

Figure 129

AUTHOR
Andrea Phelps
**RELATED ARTIFACTS**

**Documents**


Commentary: Describes not just the origins of GST but also what it entails and some of the effects it has had on science and other fields.


Commentary: Discusses the biological aspects and uses of GST. Another good look at why the theory was necessary and where it came from, even though it only applies to the uses of the theory in biology.


Commentary: Reviews the early beginnings of the GST and the drive of Weiss and Bertalanffy's desire to fix the mechanical nature of study in biology in the 1920s. A helpful look at what brought about the various system theories that Bertalanffy and his friends and colleagues worked on.


Commentary: Most useful for its definition of open system, this essay does help prove the lasting use and relevancy of Bertalanffy's theories.


Commentary: Bertalanffy’s presentation of his theory and what led to the creation of GST. Not only does he describe the trends in biology but similar trends in the other sciences. This may be satisfactory for the context of the Atlas, but if there are more librarian-specific trends and systems that would help enlighten the reader, those might be of more use in this arena.


Commentary: Explains the reason that System Theory became adopted by electricians and some of the problems the field has with System Theory. Compounded with the information on what drove Bertalanffy to create the theory in his own field of biology, this gives a slightly better picture of what GST evolved from.

**Presentations**

The community a library serves, and society as a whole, are quickly changing. Ranganathan’s 5th law of librarianship states that the library is a growing organism. Because both the library and its surroundings are changing, the relationship between them is also in a constant state of flux. As the social compact among the library, librarians, and members evolves, libraries and librarians must constantly reevaluate their missions. Before considering the mission statements, however, we must first examine how the social compact has changed and how that change has affected members’ expectations of the library and librarians.

The already prevalent and still-growing dependency on technology has had a large impact on the social compact among the library, librarians, and members. This has presented libraries and librarians with the opportunity to effect change as they attempt to work within the new social compact. The challenge comes not in recognizing the need for change but in determining the best way to forge ahead. Libraries and librarians have different mission statements. However, neither can be effective unless it is compatible with the other.

Librarians have informally operated within the new social compact as it has evolved with the changing needs of members. However, the current mission statements of the libraries in which they function limit them. It is much easier to change the mission statement of the librarian than that of the library because it is less formal and subject to fewer obstacles. Where a library mission statement is subject to discussion and approval by boards, committees, librarians, members, and so on, a librarian’s mission statement is much more personal. As librarians interact with patrons in their daily lives, they are exposed to changes in the social compact as they occur. Once they have learned of the changes, librarians can immediately refocus their mission statements to meet them.
Libraries, in contrast, must go through an official process to change their mission statement. I have never heard of a library that allowed patrons, librarians, or administrators to access and edit its mission statement in real time. Even as the library adjusts to meet the community’s changing needs by increasing online services, adding computers with Internet access, developing new programming, and so on, it is unlikely that the mission statement has been amended to reflect these changes. By the time the mission statement has been changed, it is likely that a whole new social compact will have developed. One could argue that a broad, theoretical mission statement would give both librarians and libraries room to adapt to new social compacts as they form because it imposes few limits. Conversely, a broad, generalized mission statement might cause confusion and inhibit growth because it does not give enough direction.

A more specific, detailed mission statement carries its own set of problems. In their article, “Revisiting Library Mission Statements in the Era of Technology,” Svenningsen and Cherepon argue that library mission statements should include all kinds of formats. Is referencing specific formats a good idea? Changing technology plays a large role in reshaping social compacts; however, not all technologies are going to stand the test of time. Ten years ago, a library may have argued for the inclusion of zip disks, a technology that is rarely used today, in their mission statement. A specific mission statement, especially regarding technological formats, will need to be revised much more frequently than a more general one. Library mission statements are much more effective if they are outcome-specific. It is up to the librarians and their mission statements to ensure these outcomes are achieved given the current social compact.

The most important element of both library and librarian mission statements is an emphasis on the user. This is especially true as we make the shift to web-based resources. Children, teens, and young adults turn to the Internet for many of their information needs. They are less likely to seek out help from a librarian even when visiting library Web sites. Librarians and libraries must be vigilant not only in fulfilling evolving social compacts but also in educating and supporting members. Many members are unsure of the librarian’s ability to effectively utilize new technologies. Ultimately, they fear that librarians are evolving at a slower pace than the institutions in which they work. This is the exact opposite of reality. Librarians must reassure members that their mission statements and abilities are effectively evolving as they reach out and embrace the new social compact.

**RELATED ARTIFACTS**


EXTRINSIC

MAP LOCATION
F, 1

THREAD LOCATION
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SCAPE

FREE LIBRARY OF PHILADELPHIA

MAP LOCATION
E, 4

THREAD LOCATION
Page 97

SCAPE
FROM AUTHORITY TO RELIABILITY

MAP LOCATION
F, G, 3

THREAD LOCATION
Page 91

SCAPE

FROM SCHOOL TO SCHOOL OF THOUGHT

MAP LOCATION
E, 9

THREAD LOCATION
Page 181

SCAPE
In the context of the Atlas, “games and gaming” encompasses many forms of structured play—board and card games, computer games, video and console games, role-playing games, war and combat-focused games, and even alternate reality games. Just as librarians support a variety of member interests and age ranges, the librarian should support all types of games that are appropriate for the needs of the specific group of members.

Games, like movies, music, and even fiction, are a form of popular media that the librarian supports. As the role of gaming in society has grown, the role of gaming in libraries has also grown. Sometimes this draws a critical eye from the public in the same way that, over the years, movies, popular music, and even recreational reading has drawn as the library supported these services. The “penny dreadfuls,” inexpensive popular serial fiction from the late 1800s and early 1900s, drew the same kind of questioning as gaming does today (Dyson, 2008). Over the years, the library has changed to reflect the changing recreational interests of the public that it supports. Currently, at least for electronic games, “the average game player is 35 years old and has been playing games for 12 years” (Entertainment Software Association, 2009), and “sixty-eight percent of American households play computer or video games” (Entertainment Software Association, 2009). Therefore, it makes sense that librarians support games for a growing portion of their population.

There are two primary ways through which a librarian supports games and gaming—through collections and services. Many librarians have created collections of games, and in this way the game is treated just like any other artifact in the library. Games are selected according to a selection policy to develop a collection that meets a specific need and audience. School and academic librarians build collections of games to support the curriculum either through games
that teach other subjects or games that are used to teach courses about gaming. A growing number of special collections of games and game-related materials are in libraries and museums. These games can be accessed by users in the same way that other forms of media are accessed. In many cases, they are circulated and played either at home or in the libraries. Supporting games as collections falls in line with a more traditional view of librarianships and can neatly fall underneath policies that dictate other collections.

In line with new librarianship is the support of gaming as a service. With these gaming services, patrons are able to play games in the library. There are several ways that gaming goes in libraries. Most librarians allow patrons to use computers for whatever they would like for a certain period of time. This means that while patrons can use the computers for database searching and web browsing, they can also use them for personal e-mail, social networking, and gaming. Some librarians do ask that while others are waiting, those using computers for personal enjoyment limit their use. Another common implementation of gaming in libraries is as part of a summer reading program or other program for children. One traditional sight in many libraries is public domain games, such as chess or checkers. In fact, U.S. libraries have supported chess since the 1850s (Mechanics’ Institute, 2009).

The growing area of gaming as a service is a formal gaming program. These programs could be focused on one game, such as a Scrabble tournament, or one type of game, like the Nintendo Wii, or a variety of board, card, and video games in a mixed session. These gaming programs may be an open play event, where players come and engage in games with each other with no other structure, or a tournament, where players play within a structure with the goal of providing competitive play and recognition. These programs could be focused on one age group, such as teens or seniors; could be explicitly intergenerational, such as a family game day; or could be open to all. Programs could be one-time or ongoing, and they vary in size from a Pokemon regional tournament that draws hundreds or an ongoing Dungeons and Dragons game that brings six players per week.

Surveys done by the Library Game Lab of Syracuse have unearthed three common reasons for gaming programs. The most common reason is to provide a service for those who are not served as well as other groups by the libraries; typically, these are teen-focused programs designed to draw teens into the library. Another common reason is to create an activity that allows members of the community to engage with each other in a participatory manner (compared with more passive programs where the audience comes together to watch something but not engage). The third common reason for gaming programs is to extend existing library programs; summer reading gaming is a good example of this. Because games engage and motivate, gaming programs can create new dimensions to book talks and other traditional library programs (Nicholson, 2009).

One of the problems that librarians can have in starting gaming programs is making decisions about which games to use based on personal gaming interests. Just as librarians should not make decisions about which books to purchase for the library based on their own reading interests, librarians need to be careful to represent the needs and interests of their target community in selecting games. Librarians should start with their mission and goals and use these to inspire development of gaming experiences. The games selected should be justifiable as the most appropriate choice for the patron group and the librarians’ missions. The programs can then be assessed to demonstrate how they fulfill the librarians’ goals. These assessments are then valuable for those needing to answer the critics of gaming programs.

When used with the librarians’ goals and missions in mind, gaming programs can be motivating ways to bring people to the library on a regular basis to engage with each other through shared activities. They easily fit into the model of new librarianship as interactive and exciting activities that fit the interests of a growing group of the population.

RELATED ARTIFACTS


For more information about gaming in libraries, Dr. Nicholson taught a 30-video course through YouTube on Gaming in Libraries, which can be accessed at http://gamesinlibraries.org/course. In addition, Dr. Nicholson has written a book on the topic called Everyone Plays at the Library, which is coming out by Information Today in 2010.
Government libraries vary just as much as public and academic libraries do in terms of size and audience. Some are tiny and have a narrow scope, such as the apparently volunteer-run NCTC Conservation Library, whereas others, like the Library of Congress, are large. Still others function more as academic or public libraries. Military base libraries, for example, are meant to support active duty members, their families, base staff, retired military members, and even military school students and local people in all their information and entertainment needs. In fact, a large number of public and academic libraries serve partially as government libraries through their function of federal depositories. Therefore, it makes sense that each has a radically different membership to serve. A university that functions as a federal depository may serve students, faculty, and researchers of its usual community, but the depository also serves the general public of the area, local government, and other libraries. Meanwhile, the NCTC serves NCTC staff, students, Aramark employees, FWS employees, and visiting scholars, although some of the collections and services are available to the general public as well. Each, however, shares the common goal of attempting to serve its particular communities as well as possible.

This is obviously a wide range of member communities to deal with, even for a single library. What skills can unite such a wide range of member needs and library types? In other words, what does one need to be able to serve these communities? The Federal Library and Information Center Committee (FLICC) has produced a document of federal librarian competencies, which attempts to outline this.

The paper’s sections for “Program Development and Outreach” and “Customer Education and Training,” which are most relevant to basing services off one’s community, suggest that an expert (the highest level of competency) should be able to do the following:

1. To see the range, see http://www.usa.gov/Topics/Reference_Shelf/Libraries.shtml#U.
Program Development and Outreach

- Demonstrates ability to evaluate and adapt the principles and practices of program and event planning and development.
- Demonstrates ability to evaluate and adapt the principles and practices of outreach to existing and potential clienteles.
- Demonstrates ability to develop, evaluate, and support alliances and collaborative relationships in program development and outreach.
- Demonstrates ability to evaluate and stratify existing and potential clienteles to customize programs and outreach.4

Customer Education and Training

- Demonstrates ability to evaluate bibliographic instruction outcomes and adapt delivery methods.
- Demonstrates ability to evaluate information literacy programs’ outcomes and adapt them.
- Demonstrates ability to evaluate and select standard or emerging training and instructional techniques.
- Demonstrates ability to evaluate and select or design the library’s instructional materials.
- Demonstrates ability to evaluate and select or create education and training delivery methodologies.
- Demonstrates ability to create and evaluate the library’s education and training products, services, and programs.
- Demonstrates ability to apply understanding of diverse learning styles to evaluate efficacy of education and training programs.
- Demonstrates ability to plan, implement, evaluate, and adapt library educational and training programs.5

All of these skills are about tailoring current practices elsewhere in the field to the librarian’s particular environment and customer base. Unfortunately, the FLICC does not see the ability to create something entirely new to fit what the “customers” need, and to jettison current best practices elsewhere if they do not fit the members’ needs, as an important skill. The biggest problem I see with these competencies, however, is that they do not mention discussing changes or decisions with the members at all, but merely applying theory of learning styles to what is done; and are focused solely on programming and teaching styles. It lists no changes of how the library works as a whole to accomplish these goals.

At the same time, these skills are basic enough to be listed as the core competencies for librarians in any setting. This is understandable because federal libraries alone are so diverse. The document recognizes this, stating, “The expectation is that the competencies will be helpful to others beyond the federal librarian community including human resource professionals, information technology peers and partners, executive level management, policy-makers, product developers and the vendor community, educational institutions, and certifying entities, as well as other information professionals.”6 Yet there is no mention of creating a dialog with the library members to discuss how to best change things. This seems to fly in the face of what the Department of Justice Law Libraries did because to know what their members needed, much conversation was required; even more was required to reach the point where the members relied heavily on what the librarians could find and trusted them to find the right information without even checking the catalog resources. Nor is there mention of working with other library types to create better services for shared communities despite the fact that government libraries often share the same audiences as local, public, academic, and special libraries—and despite the document’s own mention of borrowing best practices. Without a dialog, how will those best practices be properly implemented in the first place, and how will anyone know how they were tweaked so that the profession as a whole can seek out better “best” practices? Essentially, the basic skills of serving a populace are in place within these core competencies, but the issue of communication and creating services when needed, rather than tailoring them out of old best practices, are ignored.

5. FLICC, 13.
6. FLICC, 2.
Example Libraries

So, how do other libraries stack up against this document and against the Atlas’ call for wholly serving one’s community? To check, the Web sites of several different government libraries were examined to see how each library is currently working to actively serve its members.

The Muir S. Fairchild Research Information Center for Air University is, obviously, academic in nature. It appears to be doing a good job of targeting its audience and getting conversations started even in the online sphere. There is a section entitled, “Featured New Books,” directly on the homepage, which shows the book’s cover and gives a short description. Clicking on this item unfortunately leads to only the catalog record for the book, which doesn’t exactly invite discussion. However, the featured new books are each about main topics the students deal with and are a way of making the library relevant to their needs outside of the classroom. In addition, there are links on the side for Text a Librarian and downloadable audio book projects, both of which show an attempt to connect to the members on their own level and through the means of communication they most often use. There’s also a main sidebar for members to “make a comment,” which leads to a short online form for making suggestions. Unfortunately, every line must be filled out for the form to be processed, and there is no ability to remain anonymous. These requirements make it harder for people to quickly point out issues they have with the library or a simple service they wish was there. They also dissuade sending in complaints or asking for new services because the member’s name and rank is on file. Programming is not advertised or even mentioned in any detail, leaving the library’s services beyond the basic (book circulation, practice rooms, ILL) in question.

The Wirtz Labor Library serves both Department of Labor employees and the general public with information regarding labor, both current and historical. The main page is simple and direct, stating what the library does and whom it serves, along with how members can use the online Web site, with major topics hyperlinked for easy access. The main resource sections (labor law library, law tips archive, Internet bibliographies, etc.) are also hyperlinked in a side bar; each leads to a more specific catalog or information regarding that service/collection. Although this is a traditional library portal, it seems to do a good job in serving its members by providing clear directions on how to access the information they are looking for. Unfortunately, the in-house services are not mentioned on the Web site, so people are more likely to simply use the Web site rather than seek out the physical location.

RELATED ARTIFACTS


GROWING IMPORTANCE OF TWO-WAY INFRASTRUCTURE

MAP LOCATION
E, 6

THREAD LOCATION
Page 112

SCAPE

School – Growing Importance of Two Way Infrastructure – School Information Management Systems

Figure 139

HUMANITIES

MAP LOCATION
E, 9

THREAD LOCATION
Page 176

SCAPE

Relation to other Domains – Humanities – Postmodernism

Figure 140
HYBRID ENVIRONMENTS

MAP LOCATION
C, 5

THREAD LOCATION
Page 94

SCAPE

Pressure for Participation

Figure 141
The Mission of Librarians is to Improve Society through Facilitating Knowledge Creation in their Communities

Figure 142

CONVERSATION STARTERS

1. Where do programs fit into the current worldview of librarians? Although not artifacts, programs are often based on artifacts (books, games, even people in the case of guest speakers) and are usually highly focused on the tools used to accomplish a specific program’s overarching goal. For example, your typical book club may be created to increase critical reading of books within a community, to create a sense of togetherness by having a large number of people read and think about the same thing (or talk about topics vaguely related to the book, more often), or even just to broaden people’s horizons by having them read something they usually wouldn’t. These same reasons, with slight tweaks, often drive other programming, such as gaming programs, film showings, and cultural events. However, librarians usually become so focused on the program (reading, showing a new film, inviting traditional storytellers) that the original meaning behind the program is lost and the reason becomes “to get people to show up” or “to have a neat program.” In addition, programs vary widely by the type of library, as do the reasons behind them. An IL program may be created at a school media library to help students learn how to research effectively for classes, while the same program may be required by a college and integrated into the school curriculum or required for new employees at an office. So, do programs ultimately fit into the current artifact-based worldview, and where would they fit in a new, integrated worldview?
2. Once a uniform worldview is created, how do we go about making others aware of it from an outsider’s point of view? Hopefully, having one will make the profession more unified in general and libraries will work “better” from the eyes of the patrons and other professions, which will in turn draw the attention of others. But is marketing the worldview to others advisable or even feasible? Worldviews are hard to explain, especially to those who aren’t a part of them. At the same time, though, library members (and potential members) have a right to know what the worldview is behind their libraries, just as other professions and scholarly fields do. Placing the worldview by a library’s mission on the Web site is one thing, but truly showing others the librarian’s worldview is entirely different.

RELATED ARTIFACTS


Annotation: This short article gives an overview of several previous worldviews in the information world. It also provides a potential future worldview for librarians to look to and touches on how such a worldview may affect how librarians and libraries work. It’s interesting not only for the worldview it posits, which is similar in many aspects to that the Atlas appears to be calling for, but for the fact that it recognizes and explains changes in worldviews. The author recognizes the dialectical nature of today’s society and the current lack of this in libraries, as well as sees communities as tied by common threads but still vastly different from each other. He feels that librarians need to reach out and help support the “collective cognition” of their communities. It also illustrates how changes in a worldview affect the world right down to terminology. Although it is from 1997, the ideas it puts forward are still valid and worth looking at.


Annotation: This article explicitly looks at the possibility of a specific teacher-librarian worldview, asking early in the article:

It is clear that all the authors in this issue feel a responsibility to go above and beyond their immediate work environment to advocate for the profession at large. We wonder if this sense of responsibility emanates from a shared worldview. Do we, as teacher-librarians, have a collective set of beliefs and values that underpin our work? How does our worldview influence our work as advocates? (Ewbank and Moreillon, 2007).

The authors give their own ideas as to what that particular worldview is, which, coupled with similar testimony from librarians in other specialties, could be helpful in determining what is similar and different about the various library positions. The authors’ conversation also highlights issues stemming from the current lack of common worldview. The article is also helpful from a more basic standpoint, in that it gives a clear definition of worldview and how individuals form their worldviews, complete with examples.


Annotation: The author references Ewbank and Moreillon's article and brings up several points it misses, including the fact that worldviews vary based on culture and geography, making the united worldview they propose unlikely. He uses an interesting analogy about fish pie recipes. Although he then digresses into actual recipes rather than introspection, he does make a valid point. This, however, could not easily count as a stand-alone piece; it needs to be used in reference to the article it discusses.


Annotation: The article examines a set of “core values” that can help librarians recognize and articulate their beliefs, as well as providing new library students with a strong foundation. Although this is slightly different from a common worldview and more explicit (he is also only looking on a national level), his ideas as to why this is needed are similar to the reasoning behind a common worldview. They articulate the need for librarians to have something concrete in common from which to frame their decisions and help the public (and, likely, themselves) understand what librarians stand for. At one point, he states, “it is important to remember that without common values, we are not a profession.” This statement seems worthwhile to look at in more depth. The core values, as created by the ALA Core Values Task Force, may be useful to look at when searching for wording and components of a common worldview.


Annotation: This article contends that “cultural diversity and recruitment practices within academic libraries are limited by the profession’s worldview.” Although the author’s comments on the hiring of minority librarians aren’t relevant to the Atlas’ goal, the article does contain some interesting points. The author is against the “distillation” of what librarians do and stand for into even the eight core values Sager references and proposes for enduring values rather than common values to be listed. There is an interesting list of historical librarian positions based on culture, and the author brings up questions regarding the worldview American libraries promote (i.e., a Western one). He comments on the limitations such a worldview creates, both in terms of space, and in the concept of who is a proper librarian. In addition, his philosophical connections may be worth looking into in more depth.
IMPORTANCE OF ACTION AND ACTIVISM

MAP LOCATION
D, E, 7

THREAD LOCATION
Page 117

SCAPE

The Mission of Librarians is to Improve Society through Facilitating Knowledge Creation in their Communities

The Mission of Librarians is to Improve Society through Facilitating Knowledge Creation in their Communities

A recurring theme throughout the Atlas and our discussion of new librarianship is that of knowledge creation. This theme is at the root of action and activism by librarians. The “Importance of Action and Activism” section in the Atlas argues that knowledge is created even when those having the conversation know little or nothing about the topic. Lankes explains that knowledge must be tested through action. But what action should be taken? The Atlas says that any action will impact knowledge creation, but it will also skew the conversation surrounding the topic. How can we as librarians know that our actions are not skewing the conversation for the worse?

Ojala (2004) believes we must tailor information to the audience. She argues that information professionals can take action not only by analyzing or summarizing information but also in how they present...
it. The first or boldest item in a list of resources is likely to have a
greater impact than the last. Ojala champions this fact as a means to
better serve members and to better market services. At no point does
she discuss or even mention the ethical implications of skewing the
conversation. Lankes concludes the “Importance of Action and Activ-
ism” section with a call for “a new apparatus of librarianship,” a part
of our worldview that ultimately talks about ethical and appropriate
knowledge and conversation. Ojala’s stance highlights just how im-
portant that is.

In addition to the call for a new apparatus, Lankes argues that
simply having values and principles is not enough. Librarians must
work to improve society through action. It can be argued that this is
possible through the skewing of conversation. For example, if a librar-
ian highlights the results of an online search that come from reliable,
safe Internet sources, they are skewing the conversation to promote
the creation of knowledge through responsible, safe web navigation.

A classmate, Jocelyn Clarke, shared an example regarding a search
for information on mixing illegal drugs. She found the sites written by
enthusiasts to contain more complete and helpful information than
the neutral sites. Is it ethical and appropriate to encourage knowledge
creation from a source that promotes breaking the law through illegal
drug use? It may depend on the member. It would be more ap-
propriate to share these sites with a mother worried about her wayward
child than with a preteen working on a report for school. The student
is most likely looking for facts while the mother is looking for a way
to help her child.

As librarians we are taught not discriminate based on age, reli-
gion, socioeconomic status, and so on. Is skewing the conversation for
members a method of discrimination? I don’t think it is, but I do
think it is a good question for librarians to keep in mind when taking
action. If we are going to skew the conversation (we are), we must
work to stay aware of how knowledge creation is changed. “Informa-
tion professionals need to refrain from evaluating or ‘improving’ upon
internal information” (Marshall, 1997). Librarians must be sure that
they are not skewing the information in the process of skewing the
conversation.

We cannot have a discussion on the importance of action and
activism without also considering service. Librarians strive to serve
the communities to which they belong. They also believe “the best
knowledge comes from working in the richest information environ-
ment possible.” What impact will “the richest information environ-
ment possible” have on knowledge creation? This includes proven as
well as faulty information. Eventually, the Wright brothers figured
out how to build a plane that would fly, but first they went through
many plans and models that did not work. The richest information
environment possible would include these faulty plans. A member is
unlikely to learn how to build a plane from them, but they might gain
a deeper understanding of the principles of flight. Librarians must be
sure to keep a record of failures along with successes if they want the
“best knowledge” to be created in their library.

Ultimately, only through action and activism can librarians en-
sure that members gain information in the manner that suits them
best and determine which information is most valuable. Only through
action and activism can librarians develop the richest information en-
vironment possible where the best knowledge can be created. Rowley
(2006) argues that data become information, which becomes knowl-
edge, which becomes wisdom. By taking the above actions, librarians
will not only improve knowledge creation in their community but
also encourage the creation of wisdom.

CONVERSATION STARTERS

1. What is ethical and appropriate knowledge and conversation?
2. When a librarian provides a member with several resources from
different publishers, media, schools of thought, and so on, how is
knowledge creation impacted? Does it discourage the creation of
new knowledge?
3. What role do librarians play in documenting knowledge creation
within their community? Should all knowledge creation be re-
corded even if the knowledge it creates is faulty?

RELATED ARTIFACTS

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knowledge sharing: new opportunities for information professionals. Online, 21. Ret-
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IMPORTANCE OF TECHNICAL SKILLS

MAP LOCATION
C, 8

THREAD LOCATION
Page 167

SCAPE

Figure 144

Core Skills

Importance of Technical Skills

includes
IMPORTANCE OF THEORY AND DEEP CONCEPTS

MAP LOCATION
C, 3, 4

THREAD LOCATION
Page 18

SCAPE

AUTHOR
Michael Luther

Figure 145
CONVERSATION STARTERS

1. Institutions have missions and Associations have missions, but do broad fields such as Sociology or Psychology have missions?

RELATED ARTIFACTS


Annotation: The basic idea is that every problem is an opportunity, and sometimes what can seem an unsolvable problem is actually potential for a giant advance. But the prologue of this interesting book says it far better than I can, so I will let the book speak for itself.

“In Science, being completely and utterly stuck can be a good thing; it often means a revolution is coming.”

“The Things that don't make sense are, in some ways, the only things that matter.”

There has been so much talk of the imminent cataclysm within librarianship—that the field is obsolete, and it is merely a matter of time. Although the last decade has been a period of great creativity and experimentation in libraries, I don't know that we are any less stuck. Our relevance is still very much on the table. What librarians have shown is their perseverance and creative thinking. Maybe the time is ripe for our own revolution.


Annotation: This is a review of Crowley's book. The idea of cultural pragmatism is introduced as a means of bridging the wide gap between the academic and the practitioner. Cultural pragmatism is “an aid to researchers in both camps for its inclusion of context specificity and the need for testing a theory's usefulness through continually analyzed experience.” Theory cannot just be an exercise for furthering one's academic career; it must be applicable in the real world.


Annotation: With a focus on theory and knowledge and an emphasis on “the library in the life of a person,” this article seems particularly relevant to our discussions of the importance of theory.


Annotation: This article ties into the Atlas nicely by helping the library community to understand the current state of theory development and use. Analytical articles like this one will help us see where we are and where we should go, perhaps by seeing which are the most hopeful theories to follow or merging theories into a more unified theory of librarianship.


Annotation: Perrone points out that the purpose of theory is to tell us why we are doing things. Library school is an ideal place to engender this “shared theoretical basis.” Although these theories are not eternal, such systems of values can become internalized and therefore deeply entrenched. Managers should also lead occasional theoretical discussions to draw out competing theories within an organization. Perrone notes the shift that has occurred in the way libraries are perceived and suggests that change has come so fast that we should not make assumptions that everyone has the same understanding of our field.


Annotation: This article investigates a topic that should be very important to our current discussions in New Librarianship: knowledge. The author presumes that the job of the library is not to provide access to limitless quantities of information (as he claims it once was) but to provide knowledge management. After discussing a number of past theories of knowledge, he offers a new one: “Knowledge is confirmed observations.” This confirmation can take place on a personal level (by oneself) or on a social level (by someone else). Knowledge is broken into four categories, and functions are assigned to each category. This, the author hopes, will help to organize the modern library.


Annotation: Thompson, by using Chatman’s extended work in theory and theory building as an exemplar, hopes to aid in teaching the “practical use of theory and theory building” in library and information science. Chatman was interested in “information poverty” and applied various social theories to shine light on user behavior and information poverty specifically. Four social theories are examined: Diffusion Theory, Opinion Leadership Theory, Alienation Theory, and Gratification Theory.
INFORMATION SCIENCE

MAP LOCATION
E, 10

THREAD LOCATION
Page 171

SCAPE

Relation to other Domains

Information Science

Getting Past the Lv I Debate

Figure 148

INFORMATION SEEKING

MAP LOCATION
E, 4

THREAD LOCATION
Page 153

SCAPE

Transition of Traditional Skills

Information Seeking

Figure 149
INFORMATION SERVICES

MAP LOCATION
E, 6

THREAD LOCATION
Page 88

SCAPE

AGREEMENT DESCRIPTION

See Internet Model Example Agreement Supplement

INFRASTRUCTURE PROVIDERS

MAP LOCATION
E, 5

THREAD LOCATION
Page 86

SCAPE

AGREEMENT DESCRIPTION

See Internet Model Example Agreement Supplement
CONVERSATION STARTERS

1. We should innovate because any organization can stagnate and eventually fail without change. But we should also innovate because it’s a buzzword that looks great on resumes and library mission statements. How do we tell the difference between innovating because we have to, in a good way, and innovating because we have to, in a bad way?
2. How can we get around the creativity-killing anxiety that arises when we are told we must innovate (now!)?
3. Is there ever a time when something is going so well that we should stop innovating for a while? How can we tell?

RELATED ARTIFACTS


INNOVATION VERSUS ENTREPRENEURSHIP

MAP LOCATION
F, G, 6

THREAD LOCATION
Page 128

SCAPE

INSTITUTE FOR ADVANCED LIBRARIANSHIP IDEA

MAP LOCATION
E, 8

THREAD LOCATION
Page 184

SCAPE

AUTHOR
R. David Lankes

Figure 153

Figure 154
Agreement supplements

A Note about the Description

Developed initially as part of ongoing dialogs with the Free Library of Philadelphia and other library and information science schools, the Institute is an example means of expanding the educational ladder (see “Need to Expand the Educational Ladder”). The ideas within this example could certainly be replicated at any prestigious and/or progressive library (academic, public, special, governmental, etc.).

The following description is a slightly modified version of a proposal prepared for the Free Library of Philadelphia. It has been slightly modified to make it more generic, but it is still a proposal and reads as such.

Concept

The Institute for Advanced Librarianship is envisioned as an elite clinical teaching and research environment that seeks to innovate current library practice and invent the future of the field. It shall prepare future leaders in information science and technology with world-class academic and research programs that emphasize innovation and real-world impact. The Institute shall be a shared effort of the library science community, housed at one of the nation’s leading universities and located at the world-class library. Rather than competing with other library science programs, it will work with and enhance the current offerings of these programs.

Each year the Institute will offer 10 fellowships to current LIS students who have completed their basic or core instruction (normally their first year of a full-time program). These students will be in residence at the partner library for two semesters, where they will study as a cohort, improving and innovating real services for real users. They will gain invaluable technical and organizational skills (marketing, change management, risk assessment, budgeting) from full-time faculty, experts from industry, visits to policymakers, and top practitioners all in the framework of innovation and change. They will then return to their home schools to graduate.

Detailed in this agreement are the concepts, structure, and aspirations for the Institute. It is divided up for easy access to the particulars, but taken as a whole it is a vision for harnessing the strengths of partners and location to improve libraries and, ultimately, the communities they serve. The Institute is a place to prepare change agents in the academy, industry, government, schools, and towns throughout the continent.

The Need

Libraries in North America are seeking a new mission. Beyond the advances in technology and the explosion in information production, the communities they serve are changing, forcing libraries to adapt. These communities are changing as a result of the increasing capabilities of and reliance on a digital information infrastructure. This digital transformation shows up not only on the Internet but in areas as diverse as entertainment, where digital distribution of media is changing television and music distribution alike; government, as essential services such as tax payment and even voting are becoming digitally enabled; banking; and health care. Whether a community member interfaces with this new digital world through a computer, cell phone, or mediator such as a bank, the digital pressure is changing nearly all aspects of daily life. In such a world of connected massive stores of diverse data, no wonder libraries that seek to serve these communities are facing a challenge of identity, resources, and mission.

While library science and information schools have traditionally served as facilitators in such field-wide examinations, their effectiveness in this role has been blunted. There are several reasons for this:

- A Greater Emphasis on Research Funding: The economic realities in higher education drive any discipline in today’s universities to greater emphasis on research funds; there is also greater pressure to grow existing degree programs and start new ones. The need to expand budgets through research funds means a greater emphasis on applied research in “hot areas.” Today, with information being central to so many endeavors, those hot areas are in defense, telecommunications, and economic development. Further, although many universities are trying to reverse the trend, career success for research faculty still comes through increased specialization, making the results of research harder to translate into broader settings, including libraries.

- Pressure to Expand Enrollment in Degree Programs and Start New Degree Programs: Although research dollars are an expanding part of a school’s budget, in most programs tuition pays the bills. Add to this the pressure of growing college enrollments and a societal pressure for more universal postsecondary education, and classes are getting bigger. Where more library science students may not be found, new programs at the master’s and undergraduate levels are leading to larger schools with more diverse foci. In some universities, information science is being cast as an essential curriculum, and schools are being asked to take a greater role on curricula throughout a university or college’s offerings.
By proactively engaging the next generation of leaders and giving them the skills to enter, innovate, and, most important, institute lasting change in organizations, the Institute shall prepare libraries for the changing world they exist within. Furthermore, the Institute shall create a dedicated cohort of change agents that will position libraries as leading institutions within their communities, where they can garner greater support and respect through excellence in service.

Institute Impacts

Margaret Mead is quoted as saying, “Never doubt that a small group of thoughtful, committed citizens can change the world. Indeed, it’s the only thing that ever has.” It is this sentiment that shapes the Institute to be small in terms of people but large in terms of impact. This plan lays out a program with 10 students per year and three full-time faculty. These numbers are unheard of in a field where full-time faculties can be as large as 45, and schools can graduate more than 200 students a year. The size does not represent a lack of ambition but instead a strong desire for focus. In essence, this program seeks to create Mead’s small group of “thoughtful, committed citizens” who shall change the world. This impact approach is based on the realities of the library field.

Librarianship is a profession that is diverse in its settings but coherent in its membership. One can reach a large percentage of the library profession efficiently through the Internet and conferences. Once you reach this core of engaged individuals, one can have enormous impact. For example, presentations at the American Library Association’s annual conferences reach provosts at universities, school librarians in K–12 schools, public librarians, and even Chief Information Officers in industry. Furthermore, rightly or wrongly, individuals have been shown to have a large impact on the thinking of the profession. From Melvyl Dewey to F. W. Lancaster, the field is often primed for dynamic individuals with a compelling mission.

The potential for impact can be seen in the rise of virtual reference. In a little less than 8 years, a relatively small group of researchers and practitioners were able to transform answering reference questions online from a novelty to a broadly implemented basic service in public, academic, and corporate settings. Similar experiences can be recounted in the metadata and public access computing communities.

The Institute shall have the following short-, mid-, and long-term impacts:

Far from being seen as universally negative, the ability of the library and information science schools to adapt and, in many cases, thrive in the current higher education marketplace is a good thing for library science as a whole. There are more students enrolled now in library science programs than ever before, and they are graduating with new and valuable skills. However, there are few if any places where library innovation is being examined in a holistic way.

This has led to the profession forming a series of leadership programs. However, as Jana Varlejs (2007) of Rutgers University states, “Leadership institutes for librarians have proliferated recently in the United States, yet there has been little evaluation to show whether they are effective in producing leaders.” These programs tend to be short term, with a week or two attendance, and uncoordinated. However, such programs have shown success. The goal of the Institute for Advanced Librarianship would be to build on these programs designed for mid-career professionals by preparing leaders earlier in the process and concentrating on change management and innovation.

As the library science schools expand and succeed, there is an increased need for a program that can concentrate their success and learning to the library as an institution. As the library profession forms leadership programs, there is a need to concentrate their lessons earlier in the career and in a greatly expanded format. The proposed Institute is presented as a means to these ends.

• The Increased Shifting of Boundaries in the Information Professions: As more and more industries are awakening to the value of effective information utilization, they are seeking the graduates of library and information science schools. The realities of higher salaries—and, in some students’ minds, greater chance for change—are putting pressure on schools to deliver more transferable skills. As such, many classes teach vital skills but without a library-centric view.

• The Lack of a Continuing Education Model: The main problem that library and information schools face is the lack of a continuing education model for the field. There are few requirements for ongoing engagement between schools and professionals beyond the initial master’s degree. What’s more, with a wide variety of conferences and workshops offered by a vast range of nonuniversity organizations, it is nearly impossible to maintain a long-term dialog between the schools and the profession. So while universities have much to offer to the library profession in terms of new models, missions, and skills, their most efficient corridor to the field is through new graduates who enter an organization with little cultural knowledge and low professional status.

In a little less than 8 years, a relatively small group of researchers and practitioners were able to transform answering reference questions online from a novelty to a broadly implemented basic service in public, academic, and corporate settings. Similar experiences can be recounted in the metadata and public access computing communities.
• Short Term: The Institute will be quickly positioned in a leadership role within the library practice community, given its home at both a library and a prestigious university.

• Short Term: Library and information science programs will seek partnership with the Institute due to its position within a prestigious university and the ability to highlight their own contributions to library science.

• Mid Term: The Institute shall highlight the utility of library and information science through an expanding network of partnerships with industry and clinical faculty.

• Mid Term: The experiences of the Institute in working with students from a diverse set of LIS programs will aid partnering schools in refining their curricula by providing direct feedback on student preparation by comparing students across programs.

• Mid Term: Projects of the Institute will improve service offerings at the Free Library of Philadelphia and partnering practice environments.

• Long Term: The growing cohort of Institute graduates will take on leadership positions within library science, thus providing a greater platform for library innovation and positive change.

• Long Term: Libraries will improve and increase their benefits to their communities.

The Institute shall not be simply a school but a school of thought. It shall have a focused and integrated intellectual signature that will diffuse throughout the field through its research, students, and operations.

The Curriculum

The curriculum of the Institute shall be an equal mix of practica and symposia taught by some of the nation’s leaders in information science, marketing, technology, and librarianship. Rotating hands-on practica shall place students in direct contact with the subject matter and the community. Students shall learn customer service skills from reference librarians, vice presidents, and marketers. They shall learn information organization from catalogers, metadata specialists, and digital library researchers. They shall learn technology from IT staff running libraries, corporate CIOs, and university provosts. They will learn policy from visits to Congress and participation in legislative days. This experience-based learning shall be complemented by symposia—highly interactive classes with scholars, business entrepreneurs, and thought leaders from around the world. The net effect will be a continuous cycle of ideas and innovation matched to the realities of real-world institutions.

Structured Outcomes, Unstructured Courses

The Institute curriculum shall take advantage of the small number of students, the focus of innovation, the location at a world-class library, and ready access to a deep pool of expertise in the region by not using a traditional 3-credit hour topical structure. Instead, the structure of the courses will be highly fluid, with only a few structural components consistent from year to year:

• A standing daily symposium for the cohort and faculty to exchange ideas, plan new experiences, and jointly explore topics.

• A year-long practicum where the student explores an area of librarianship and produces a functional system (piece of software, service, collections, or process) that has been implemented and is appropriately sustainable.

• A colloquium on the topic of their practicum that the student organizes and is delivered to the library community.

In place of formal classes and traditional structure, the Institute’s curriculum shall be founded on the growing model of assessment in high education: outcomes. Through the course of planning and launching, the overall goal and objectives of the Institute in technology, innovation, and change will be refined into a rubric. This rubric constitutes a sort of contract between the Institute and its academic partners. To provide real evidence and outcomes, the Institute shall use a series of mid-semester reviews and a portfolio to ensure student achievement.

The actual content of the curriculum will come from a variety of sources:

• The Faculty: Full-time faculty, clinical faculty, and faculty of practice will work one on one with students and as a cohort to explore aspects of librarianship and information industries. They will share their own expertise and craft practical engagements to cement concepts.

• Directed Readings: Each year, with the input of the faculty and the Board of Visitors, a reading list shall be constructed. The readings shall form a common core of information that students and faculty alike shall use in their interactions and projects.

• Field Experiences: Visits from and to libraries, information science schools, government, and industry located throughout the region.
The core of the Institute’s educational program lies in a practicum experience. The students, working with the faculty, shall devise a year-long project that they will have to plan, execute, and evaluate. This project (practicum) shall incorporate outcomes from across their experiences, and they shall reach out to experts at their home schools, other LIS programs, industry, government, and the not-for-profit sectors.

The bottom line is that with a strong focus on outcomes over courses, the Institute shall be responsive to current events and able to take advantage of new opportunities as they arise. In many ways, the Institute’s curriculum shall reflect highly successful PhD and management programs.

Research in the Curriculum

A heavy dependence on faculty for a curriculum centered around innovation requires that the faculty involved are engaged in innovation activities. To that end, core faculty are expected to have active research agendas. These agendas shall include funded research activities from multiple sources. They are also expected to include cohort students in these projects. In fact, student practica may be portions of these funded research projects.

Faculty Model

A diverse and fluid Institute requires multiple types of faculty to serve differing purposes, including providing consistency across cohorts, direct guidance on research, library-centric viewpoints, and broader information perspectives, as well as highly specialized expertise in areas such as marketing and economics. The faculty model of the Institute breaks out each of these roles and their responsibilities.

Core Faculty

The key personnel of the Institute are three tenure-track professors who run the Institute, have the most contact with students, and provide the scholarly underpinnings of the program. Because the primary aim of the program is innovation and re-invention of a vital field, the scholarly core is essential. True, lasting innovation must be derived from core principles and theory. The core faculty must be academically rigorous to ensure a strong conceptual foundation for this new approach to librarianship.

Core faculty are seen as innovative, with excellent reputations and research skills, yet they are in the middle or even early phases of their careers to provide long-term benefit to the Institute. They shall have PhDs in the library and information science domain and would be expected to actively seek external funding for research and projects. The three core faculty would each have distinct roles:

- **Director**: Oversees the Institute, is the interface between Institute partners, and provides overall vision and leadership for the program.
- **Associate Director for Research**: Is tasked with seeking out and creating funded research opportunities, provides methodological guidance to other faculty and students, and interfaces with research funders.
- **Associate Director for Academics**: Oversees other faculty types, works to bring in the highest quality clinical faculty, and structures and schedules curricular activities.

All faculty would be expected to be on the tenure track and comply with tenure requirements at the university partner. This is vital not only to ensuring the quality of the faculty (and making that quality evident to those outside of the Institute), but also in terms of recruiting and sustained performance. It will be nearly impossible to recruit top-tier faculty to the Institute without the protection of tenure. The market for LIS faculty is currently competitive, with existing information and library science faculties growing rapidly. Given the choice between a tenure-track position and a non-tenure-track spot, the natural inclination will be to a school offering tenure.

Clinical Faculty

Clinical faculty members are affiliated experts in their disciplines who teach symposia and aid students in their practica. They are expected to have full-time careers outside of the Institute and to maintain outstanding reputations in those outside endeavors. These are not the traditional “adjunct” faculty who are brought in to teach regularly taught courses, but rather leaders in industry, government, and librarianship who share their valuable time once or twice a semester.

Faculty of Practice

Faculty of practice are full-time employed staff at the partner library and partnering organizations that provide direct oversight of students as part of their regular duties. Examples might include the head of the Business and Industry Department who will work with students and...
show them how to manage such an operation, much as an internship supervisor might. It should be noted that not all staff at the library would be considered a faculty of practice—only those staff members who show excellence in their operations, dedication to the mission of the Institute, and great engagement in their interaction with students.

**Plan Partners**

Partners are essential for its creation and continued success. While the list of partners will grow as the Institute moves from planning to implementation to continued operation, the types of partners needed at this point are clear:

- A Setting for the Institute
- Library and Information Science Schools
- Libraries
- Academic Home
- Funders

Each of these broad categories is addressed in greater depth below.

**The Setting**

The Institute shall be physically housed in a large library with ready access to regional resources in commerce, government, and nonprofit sectors. The size of the library matters in that it must provide many rich opportunities for experimentation. The physical location of the library is also important in that it should provide access to multiple library types for student projects. So while Institute students may meet in a public library, for example, they may be doing their project work across town in an academic or a school library.

**Not an Apprenticeship Program**

It needs to be made clear that the Institute is not envisioned as an apprenticeship program or some sort of superinternship. This is not intended to bring the best students to the library to learn existing practices and spend their days mastering the tools of present librarianship. Although some hands-on work is needed as a basis to launch innovative services, the focus is on developing new and better practice. This development will be done through scholarship and experimentation, not replication and praxis. In this way, the Institute does not represent a step back to the days when library schools were simply outgrowth of library training programs, but a new paradigm where outstanding scholarship is done at the point of impact, much like a university hospital where new treatments are developed.

**Schools**

There are 56 ALA-accredited library programs in North America.1 These programs represent a wide variety of institutions—from the small and specialized to the large and diverse. The LIS programs are vital partners for the Institute in three ways:

1. **Shapers of the Innovation Curriculum:** Participating schools will be a large source of the initial and ongoing shape of the Institute’s curriculum. Through consultation with standing bodies of LIS programs like ALISE and the iSchool conference, as well as members of the Institute’s Board of Visitors, the experiences of LIS programs will help shape the offerings of the Institute.
2. **Pool of Applicants:** As of 2004,2 there were nearly 17,000 master’s students working toward a degree in library science (Wisser & Saye, 2004). This represents the pool from which 10 shall be chosen.
3. **Partners in Research:** Just as the Institute seeks to be highly collegial in its educational offerings, so too does it seek to collaborate widely in terms of research. It is important that the Institute’s core faculty (and students) remain active and visible members of the LIS research community and not become a boutique operation.

The Institute shall actively work to make these programs official partners. Partnership can be at a variety of levels. At the most basic, LIS schools and the Institute shall make arrangements for the transfer of credits earned by cohort students (this shall be discussed in greater detail below). Each school with an accepted student shall also receive regular feedback on that student’s performance, as well as a comparative analysis of the student’s competencies versus students from other programs (without identifying these other programs). The report can be used as part of an LIS program’s performance for accreditation. Beyond the sharing of students, the Institute shall seek to constantly engage partnering schools in matters of trends in librarianship and research.

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2. The latest data available online from ALISE.
Target the Top

As previously stated, there are a wide variety of LIS programs. It will take time to reach out to all of these programs. Therefore, the Institute shall target the top-ranked LIS programs according to U.S. News and World Report in the prelaunch phases. With these schools on board, the Institute is guaranteed top-quality students and an excellent reputation.

With the reputation of a high-quality university partner and the vision of the Institute, it should be possible to quickly get these schools on board. However, if the Institute is seen as regressive or a retrenchment of traditional librarianship, these programs will not be interested in participating. One mechanism to get these programs on board and seed the Institute’s academic program would be to grant these programs a slot for the first class.

The Power of Visiting Faculty

A challenge for this program will be ensuring credits and information flow smoothly from the Institute to the home college of a student. Simply transferring in half of a student’s master’s degree, even from a prestigious university, is problematic at best. While each partnering school may have its own method to do this, some initial models might involve naming core Institute faculty as visiting or adjunct faculty within the home school. Another model might be to have a faculty member within the home school act as a sort of supervisor for the student and issue credit within the home school as independent studies or internships (or a combination of these). In any case, it would be an exception if more than a student per year were selected for the Institute’s programs, so the administrative burden on partnering schools should be minimal.

Not a School

There are some substantial reasons why the Institute shall not offer a fully accredited library degree program and, further, why the Institute should not be placed within an existing school (or university with a school). By focusing on the second year of existing degree programs, the Institute avoids ALA accreditation. Such accreditation would mean the offering of basic LIS courses, a job well handled by existing programs. It would also put the Institute into competition with existing LIS programs for students and ranking. Once in a competitive stance, the Institute’s ability to draw the best students from other programs is severely limited. The same logic applies to locating the Institute within an existing LIS school. Although it may be possible to set up a firewall between an existing program and the Institute, it would be difficult to demonstrate independence to other schools and universities.

Libraries

If schools represent the supply of students, libraries represent the bulk of the demand. Libraries of all sorts must see the value in the Institute; in particular, they must seek out the graduates of the program. This enthusiasm must be maintained in continuous engagement and through the net effect of Institute alums and research.

Libraries must have a place on the initial advisory board and in subsequent Boards of Visitors. Institute faculty and students shall also be highly visible within library associations and meetings. Furthermore, a variety of library types (public, academic, school, special, etc.) must be represented.

It should also be noted that not all graduates shall be destined for libraries. Innovation, change, and technology skills are highly prized throughout the information industry. Non-library participation in hiring, clinical faculties, and projects should be seen as a sign of success, and the Institute shall constantly seek to bridge a strong core of librarianship to other fields. However, librarianship does remain the core focus.

Several large libraries and library organizations have been informally consulted on the Institute concept. Those consulted voiced universal enthusiasm for the project, and it is reasonable to work toward endorsements from these organizations.

Academic Home

The ideal home for the Institute for Advanced Librarianship shall be a university with a stellar reputation and a strong mission in terms of intellectual rigor and a practical outlook. The academic home must aid the Institute in fostering innovation, entrepreneurship, and excellence in both students and faculty.

The benefits to the university partner are both tangible and large scale. A portion of the Institute’s operating income shall be fed back to the university in the form of a standing overhead agreement. Furthermore, indirect income from sponsored research plus tuition revenue that may be generated in later expansion projects would go to the university from the Institute. The Institute shall also bring attention to
the university from the library and information communities beyond the institution’s own existing library operations.

There are also intangible benefits to the university housing the Institute. The first is that the Institute will be tackling issues of great interest to higher education in terms of participatory learning and technology (implementation as well as policy). The Institute shall act as a pool of information scholars—ready consultants working collaboratively with existing university programs.

The Institute shall also be an asset to the partnering university in exploring interdisciplinary opportunities between academic programs. Few areas are as well positioned to advanced interdisciplinary initiatives as library and information science. In many ways, a university’s libraries serve as a vital connective tissue between scholars. Librarians work across disciplines and have the opportunity to seek common goals and complementary projects. The Institute can be an invaluable think tank, influencing how the university forward interdisciplinary research working with the university’s libraries. Library and information science as a scholarly discipline has been described as inherently interdisciplinary. In addition to core concepts in information organization and services, the field draws from computing, communications, education, sociology, economics, and public policy. Look today at an information school, and you will find scholars with a wide variety of backgrounds, forging new understandings by coming together through action and application.

Library and information science belongs at a prestigious university as a discipline. As the elite schools redefine science and the humanities in the modern age, LIS skills and insight can assure wide adoption and integration of the underlying information infrastructure. Today’s LIS scholars, professionals, and facilitators can identify user needs, appropriate technologies, and maximize both the efficiency and effectiveness of information. The Institute, drawing from the best of these scholarly and interdisciplinary traditions, can become an asset to the partnering university as it continues to evolve in today’s market place of ideas, increasingly competitive research environment, and increasing social mission.

**Funding**

Vital partners of the Institute shall be its source of income. A mix of private and public funders shall fund the Institute in the form of an endowment and also continuously through research and special projects.

**Governance**

Institute governance will maximize the benefits of partnership while mitigating any potential conflicts between partners. The ideal governance structure is one that allows for all partners to have a voice but also allows the Institute to act decisively and formulate its own vision. Internal governance mechanism and policies will need to be developed by the Institute faculty once they are on board. To help shape the program to that point, a board of advisors shall be established.

**Role of Advisor Board**

The board of advisors represents the major partners of the Institute and provides input to the director, the Free Library, and the university partner as the Institute is formed. They shall advise of curricular issues, structural aspects of partnerships (how academic credits can be moved across institutions, for example), and help promote the Institute and its mission. Upon the formal launch of the Institute, the board of advisors shall become the Board of Visitors that provide ongoing guidance to the Institute.

The initial structure of the board will be co-chaired by a representative of the university home and a representative from the housing library. Other board positions shall be taken up by LIS school representation, representation from the practicing library sector, and members, where appropriate, of funding agencies.

**RELATED ARTIFACTS**


INTELLECTUAL FREEDOM AND SAFETY

MAP LOCATION
H, 3

THREAD LOCATION
Page 122

SCAPE

AUTHOR
Sarah Schmidt

Figure 155
AGREEMENT DESCRIPTION

The American Library Association (2009) defines intellectual freedom as: “the right of every individual to both seek and receive information from all points of view without restriction. It provides for free access to all expressions of ideas through which any and all sides of a question, cause or movement may be explored.” The ability to access a diverse body of information is a core value of librarianship. In this agreement, we will see its importance throughout the library: at the service desk, in collection development, and even in technical services. The literature reviewed here supports the Atlas’ ideas on intellectual freedom.

Providing a safe place for the access and expression of a wide range of views is one area the Atlas emphasizes for librarians (Lankes, 2008). In an article on the trend of media conglomerations, the authors agree (“Fostering Media,” 2007). They note that in 2003, the Federal Communications Commission changed its regulations on media ownership so that it allowed for the increased consolidation of media sources. They observe that librarians responded by officially condemning such consolidation and starting out to study what they could do to ensure that a multiplicity of resources could survive in such a climate. Additionally, the librarians decided to try to bring more public awareness to the issue of resource diversity. This sense of awareness of problems with access is echoed in another article on the issue of patron privacy (“Model Policy,” 2007). The authors consider the consequences of the renewal of the Patriot Act in 2006, focusing on librarians’ vexed position of being forced by federal investigators to hand over their patrons’ records. They note that librarians, seeking a solution that would ease the minds of librarian and patron alike, created a standard policy for librarians to lean on when pressed on privacy issues.

Self-examination of one’s own assumptions and biases is another area the Atlas emphasizes for librarians. In his study of what guides librarians’ approaches to their work with patrons, Olsson (2009) agrees. He argues that librarians need to shift their focus from systems to users. This new approach would require a more integrated method to coordinating their work with resources and patrons, one with increased attention on emotion, relationships, and how people comprehend information. But such a goal can only be achieved if one examines one’s understanding of and relationships with patrons. Olsson holds that librarians must rethink their concept of users. Similarly, Marcoux (2009) touches on this notion of self-analysis. Marcoux took part in a pilot program for educators on improving instruction for diverse populations. The course asked participants to explore their position on issues like identity, prejudice, cultural differences, and value systems. As a result of the program, Marcoux personally felt better equipped to teach to students from a wide range of backgrounds.

CONVERSATION STARTERS

1. We review and evaluate our performance fairly frequently; why don’t we give more thought to what lies beneath what we do? How can we ensure we stay ethically “sharp”?

RELATED ARTIFACTS


INTELLECTUALLY HONEST NOT UNBIASED

MAP LOCATION
H, 3

THREAD LOCATION
Page 122

SCAPE

INTERNET MODEL EXAMPLE

MAP LOCATION
D, 6

THREAD LOCATION
Page 86

SCAPE

AUTHOR
R. David Lankes

Figure 156

Figure 157
AGREEMENT DESCRIPTION

The Lankes/Eisenberg Architecture (Lankes, 1999) divides the Internet and, by extension, digital networks into four distinct layers: infrastructure providers, application builders, information services, and users. The following sections define these layers and provide examples of how each level, aside from the use level, can manipulate information in a way that is completely transparent to the user.

Infrastructure Provider

Infrastructure is composed of hardware, such as routers, and protocols, such as the Internet’s Transmission Control Protocol /Internet Protocol (TCP/IP) suite used to move bits from one place to another on the Internet, and the organizations, such as Internet Service Providers (ISPs) that provide and maintain these mechanisms. This layer is often the most invisible to end users yet can have a profound impact on the information being provided to users for credibility assessments. Infrastructure providers can easily block traffic to and from certain destinations. What many people do not realize is that such blocked traffic can be made invisible. For example, when a library blocks access to certain Web sites, it may post a message to a patron’s browser stating that the site is blocked. However, there is no technical barrier to that library only providing a “site not found” indication to a user’s browser…the same error it would send if the user misspelled a URL. Further, ISPs can block access to any application, disabling software such as Instant Messaging (IM) at the network layer. The user, not aware of such a block, would only know that their IM program did not connect to a server and may assume the error lies in the remote server, thus affecting a user’s credibility assessment of the remote server, not the infrastructure provider.

Application Builders

Applications on the Internet are software that allows information to be exchanged between different actors on the Internet. Applications include web browsers and IM clients, as well as high-level protocols such as the HyperText Transfer Protocol (HTTP) that transfers web pages. This broad category covers everything from e-mail applications that automatically mark incoming messages as “junk mail” to the Simple Mail Transfer Protocol (SMTP) that enables e-mail over the Internet, including spam. Spam filters are excellent examples of technology affecting credibility in a nearly invisible way. Many schools have implemented spam filters based on opaque and often proprietary algorithms at the organization level, discarding numerous e-mail messages before any human eyes ever see them.

Information Services

Information services are organizations that use applications and infrastructure to meet users’ needs on the Internet; examples include Google, Facebook, or a library Web site. There are ample studies that look at how information services such as Google skew results in their search engines (for an example and further citations, see Choo & Roy, 2004). For example, top results tend toward shopping and technology services in Google (Mowshowitz and Kawaguchi, 2002). Without knowing this, users may assume that top results are the “best” regardless of context.

Users

The use layer is comprised of individuals and groups, such as teachers and patrons, who primarily consume information and seek to meet their own information needs on the Internet.

RELATED ARTIFACTS


Motivating people to read is about motivating people to do what the library thinks they should do, wants them to do, or needs them to do.

Librarianship, as a profession, needs to stop fetishizing books. Sure, they look really nice lined up all pretty on the shelf, and half of us getting into the profession probably did so because we love books, we grew up reading and went to library story time, and we love the smell of books (at least until we start to sneeze). Perhaps we need a new name; perhaps we should all put “information professional” on our business cards because we are no longer simply caretakers of books. We are caretakers of information. And when we focus all our energy on the fraction of information that is contained in books, it’s as if the whole richness of programming to be found in a library can be ignored or reduced to the question of whether, on the way out, someone checked out a book.

Intrinsic motivation: Let’s find what people really want and then put barcodes on that.


I may have included this article just because the abstract actually mentioned intrinsic motivation, and I was really excited. However, I think the idea of education driven by students’ intrinsic motivations, and not by correct answers on multiple-choice, standardized tests, is analogous to the Read problem. Reducing the success of the library to something easily quantifiable, like circulation statistics, tells us nothing about the real mission of the library. Is the community learning? Is the community creating knowledge? We don’t know, but circulation is up 10% from last year.

Jennifer Rose Recht

Figure 158


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Figure 158

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The knowledge the person gained at whatever activity he or she participated in does not count because it didn’t come from something with a barcode on it.

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INVEST IN TOOLS OF CREATION OVER COLLECTION OF ARTIFACTS

MAP LOCATION
F, G, 1, 2

THREAD LOCATION
Page 42

SCAPE

ISSUES OF INSTITUTIONAL REPOSITORIES

MAP LOCATION
F, 5

THREAD LOCATION
Page 103

SCAPE

AUTHOR
William Zayac
**AGREEMENT DESCRIPTION**

**What Are Institutional Repositories?**

Slowly becoming more popular around the world, Institutional Repositories are open access databases of the works created by the people who work in or study at the repository’s host institution. One major survey of Institutional Repositories, the University of Michigan MIRACLE Project, found that research institutions were more likely to develop Institutional Repositories than universities and colleges that catered only to master’s and baccalaureate students. It also found, however, that there was a “sleeping beast of demand” among these master’s and baccalaureate institutions. That said, the concept of an Institutional Repository (at least in the digital context in which it is now used) is still in its growth phase, and its benefits and weaknesses cannot accurately be understood or assessed on a larger scale because of its limited expression in the real world. However, that has not stopped researchers from searching for and discussing these benefits and weaknesses or at least expressing their views concerning them.2

**Why Create an Institutional Repository?**

The main purpose of an Institutional Repository is to provide online access to essays, papers, presentations, and other digital works created by the faculty at a specific institution or school. One of the most important jobs of a library is to provide its users with access to a wealth of knowledge relevant to their interests and needs. Therefore, one would assume that the wealth of knowledge preserved in an Institutional Repository has a significant audience, at least for those who started the trend. It should come as no surprise, then, that many of the earliest developed collected the works of workers at research-focused institutions and that one large set of institutions following suit is comprised of universities and colleges. The access granted by these institutions allows many people to gain access to scholarly works to which they may not normally have access, whether it is because they are not in the databases to which they have access on their own or through their own respective institutions due to budgetary constraints or for whatever reason. Librarians, often focused on the transfer of information and the creation of knowledge through this communication, will immediately recognize these benefits in Institutional Repositories. However, there are other qualities that can help justify the existence of Institutional Repositories.

For one, certain repositories are more affordable to host and easier to create than they have been in the past. Several pieces of open source software for the creation and management of Institutional Repositories have been developed and are available to whichever institutions are willing to host them. Items can be more easily found with greater standards regulating metadata and its use. Items can be labeled accurately and then disseminated from a central resource. This saves faculty members time and effort as the maintenance of labels, formats, and thoughts concerning a work becomes increasingly complicated.3 And, of course, trends change and so do the opportunities for outside thinking. Scholarly works that would not normally fit into certain standard database groups may be difficult to find through “normal” resources.4 On a more basic level, Institutional Repositories provide libraries with the opportunities to develop new strategies and standards for digital collection management5 and have even expanded the perception of the library as a “viable research partner” in institutions.6

**What Issues Must Still Be Addressed with Institutional Repositories?**

As with any good library, the interface providing access to works must be appropriate for its patrons. In the Communities Thread, Lankes points out that there are many Institutional Repository home pages that only begin to provide access to works. However, the aim of librarianship is no longer to simply match people to a resource or a set of resources for which they are searching; it is (as the Atlas emphasizes) to encourage the creation of knowledge through conversations, and most Institutional Repositories do not yet do this. While looking at the initial interfaces of six different Institutional Repositories, I encountered none that came as close to providing conversation as the PLoS Biology 1. Making Institutional Repositories a Collaborative Learning Environment.
4. This is mostly in reference to my own experiences searching for respectable resources for a term paper on the music of *Buffy the Vampire Slayer*. I was able to find several essays in books about *Buffy* and several Web sites which seemed to host respectable-enough resources. Having a set of databases which may not be as restricted to significant and traditional scholarly works, as some Institutional Repositories may eventually be, would have been incredibly helpful in this endeavor. Of course, this only helps if one knows where to look or has a centralized search available covering multiple repositories.
Repository did in the Communities Thread, and only two even began to feature any information not simply for searching the database (those of Brandeis University and the Massachusetts Institute of Technology).

Institutional Repositories result from interdisciplinary work and the cooperation of many parties. Of course, sometimes certain parties cooperate more than others, and the balance of power may not be stable. There have been times when Institutional Repositories have been overcome by administrative control and policy requirements. Although administrative support is good, an overbearing administration can limit enthusiasm and growth and reduce the effectiveness of the enterprise. There may even be the tendency to treat the repository as if it were a standard journal, but “the institutional repository isn’t a journal, or a collection of journals, and should not be managed like one.”

Finally, although it provides works in an “open access” form and may use open source software in its development, a well-structured Institutional Repository requires quite a bit of work and maintenance along with people who know how to run it. Creating an Institutional Repository is not cheap or easy and will require staff members to dedicate some hours to it. It may not even be helpful to all institutions, especially if not advertised correctly to the members of their communities. As with other programs, it must be kept relevant and up-to-date to ensure that people will use it. In the case of a school where the library is not visible and does not see much use from the students or faculty, it might not even be worth considering creating this type of collection.

CONVERSATION STARTERS

• What are the limitations of Institutional Repositories?
• Do the benefits of being able to centrally locate all the works by individuals from a specific institution outweigh these limitations?
• When considering relevancy to a community, should a librarian working on creating or maintaining an Institutional Repository focus on making it helpful for the university’s community or for the world as a whole?
• How might one’s work differ to address these two potentially different groups?
• If Institutional Repositories provide such great access to work, how can a library maintain its status in the community? That is, if it actually is all on the Internet, why would someone come in to use the library (outside of to gain access to the Internet)?

RELATED ARTIFACTS


Annotation: This issue of the ASIS&T Bulletin provides a strong look at the many debates focusing around Institutional Repositories, including whether all universities should have one, how they should be created, how they should be maintained, and what is required for repository success. Both sides of each debate are presented by various authors with experience in large institutions, encouraging and displaying a true conversation on the topics.


Annotation: This article describes the history of the development of the DASH repository at Harvard University, including school policy and copyright issues addressed during the DASH’s development. Although there is strong support for the idea of allowing open access to all scholarly works through the repository, the university has created an opt-out policy to ensure that there is choice for the scholars to grant or not to grant permission for their work to go into DASH. Faculty authors’ names, when included in search results, are linked to their main profiles. By employing several unique ideas, DASH is growing and providing a good example of what Institutional Repositories can become.


Annotation: This article explores the results of the 2006 MIRACLE Survey concerning librarians’ opinions on open access resources, how well their actions support or contradict these results, and the potential repercussions of expanding open access resources too much. They cite several experts who question the limitations of open access resources and their growth, both in terms of where emphasis is placed (should we really be doing this simply because it might save money in the long term?) and how effective the movement actually is (will Institutional Repositories replace the library?).

Knowledge is created through conversation.
KNOWLEDGE IS CREATED THROUGH CONVERSATION

The Mission of Librarians is to Improve Society through Facilitating Knowledge Creation in their Communities

Knowledge is Created through Conversation

Libraries are in the Knowledge Business therefore the Conversation Business

Figure 162
**L₀**

**MAP LOCATION**
F, 2

**THREAD LOCATION**
Page 33

**SCAPE**

**AGREEMENT DESCRIPTION**

*See Language Agreement Supplement*

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**L₁**

**MAP LOCATION**
F, 2

**THREAD LOCATION**
Page 34

**SCAPE**

**AGREEMENT DESCRIPTION**

*See Language Agreement Supplement*
New librarianship, based on conversation theory, concerns itself with two levels of language being exchanged between conversants: $L_0$ and $L_1$. $L_0$ is the language exchanged between two conversants where at least one of the parties has little knowledge of the domain being discussed. It tends to be very directional (do this, now do this). Most of the discourse is negotiating meanings and terms at a very simple level. $L_1$, in contrast, is exchanged between two parties with a high understanding of the domain discussed. Here conversations tend to use special language, explore more “why” questions, and establish structural relationships between concepts.

Let’s use a simple example to illustrate the difference in language levels. Take the following sentence:

“Our catalog uses MARC to present our users with a great searching experience.”

If you are a librarian, this is a meaningful sentence. You might even ask “how can MARC impact a user’s experience?” However, if you are not a librarian, this sentence is a jumble. Are we talking about catalogs like from a store where I pick out sweaters—who is Marc and why is he so helpful—do we really want to make it easy for users—that is people who use drugs? As we saw in our previous word game, preexisting structures and contexts to words matter a lot. The more relationships and contexts of words that are shared by conversants (what we will call agreements), the higher the possible level of discourse. A high level of shared contexts equals $L_1$.

These levels of language have real implications for the systems we present to users. Systems can either attempt to work at differing levels of language, to bring users from $L_0$ to $L_1$, or bring the system from $L_0$ to $L_1$ (see the example of a search engine interface in figure 166).

It does little to educate the user about how to interact using high-level language. It is built around an assumption that users will be communicating their needs in $L_0$. The system will use complex algorithms and information-retrieval techniques to make up for the fact...
that the search engine will probably be getting a very anemic query. If you do take the time to learn the language of this system, you can actually use some rather advanced language to improve your results (in this case, using a query language with $+$, $-$, $\sim$, and quotes).

Help desks and search are often used in systems where there is an anticipated difference in the languages of the users and the system builders. In libraries, for example, reference as a function came about because indexes and classification systems were too complex for many library users. The idea was to provide a human intermediary as a sort of bridge between a person with a question and the complex language used by library systems.

The second approach is what Pask would refer to as learning systems that systematically bring users from $L_0$ to $L_1$. One of the best examples of increasing language levels in systems can be seen in modern games. Where once games came with long and in-depth manuals, today complex games actually incorporate learning into the game itself. The first level is often a form of in-game tutorial, familiarizing players with the basic mechanics of the game while still advancing the game’s narrative.

Of course the approach of raising the user’s language level is founded on the rather dubious assumption that a system can change the user. It is also antithetical to the user-centered paradigm dominant in today’s system development world. A third approach is to assume the user is at $L_1$ and it is the system that needs to catch up. The use of tagging and annotations in web systems demonstrates this approach. Here users incorporate their own language. Systems can then look for patterns in language use to provide information.

**Nobody Is Born Speaking Dewey**

It is worth stopping here for a moment to explore the real implications of these different languages. Think about the basis of a great deal of library work: classification or, more broadly, information organization. To make things easier to find, we have developed a whole host of common languages: the Dewey Decimal Classification and the Library of Congress Classification (LC), just to name two. The idea being that by mapping a body of knowledge to one system of terms, we can collocate items on shelves and make it easier (at least more efficient) to find something. We are using language to do this. In fact, Dewey and LC are the end result of an ongoing conversation centered on the question, “How can we organize the world’s knowledge?”

So why, then, doesn’t this approach always work? To be more precise, why does it work so well for librarians and so poorly for a mass of patrons? This is a great example of $L_0$ versus $L_1$. When patrons try to navigate Dewey (or LC), particularly in catalogs, they are working at or pretty close to a simple directed “click here” level. Once they get a call number, off they go to the shelves. Librarians, in contrast, understand the worldview of these classifications and so can manipulate the system much more effectively. So one conclusion that one could reach is that we need to bring patrons up from an $L_0$ to an $L_1$ conversation. How? Well, one wide-scale approach has been library instruction. Another approach, the one Pask spent most of his effort on, was building capabilities in the system to teach patrons domain knowledge and transition them to $L_1$ use of systems. Never thought of your catalog as a learning system? It shows.
There are big implications in terms of digital systems and language. One approach to the L₀/L₁ gap is in interface design. By doing a good job of anticipating the user’s needs, we can have the system do sophisticated things with little input from the user. Google is a great example of this. The old way of doing search was to provide two interfaces: simple search and advanced search. L₀ users go to simple, and L₁ users head to advanced. Google even combined this into one interface. If you are at an L₀ level, just type a term and Google uses clever algorithms like Page Rank¹ to assume that simple use of language can be best answered by the most popular information. If you are an L₁ user, in the same box you can add cool things like quotes, -, +, -, and so on. The more sophisticated your knowledge, the more sophisticated interaction you can have with Google. However, note that the interface does not teach users or help them to transition from L₀ to L₁.

Another approach to the language divide is to build learning systems. This is an interface that attempts to teach as it works. Librarians attempt to model this behavior. Good reference librarians in person or online don’t just provide an answer; they help users understand how they found an answer and impart the skills to the users so they can self-serve. This approach also inspires things like “tool tips,” where little explanations pop up when you hover a mouse over a button in Microsoft Word. Word also shows how just trying to instruct is insufficient… think “Clippy.” Perhaps the most effective demonstration of this learning approach can be found in videogames as mentioned before.

A great number of Web 2.0 sites point to another approach all together. Minimize the functions and interfaces of the system to allow users to use their own language and domain understandings. This is the allure of tagging. By letting the users add their own terms or letting users link differing information in their own way (think mash-ups or FaceBook pages), users create their own L₁ systems. Of course, these can create a sort of Tower of Babel, but it is effective in circumstances when there is already a set of common terms or agreements. At the least, by exposing the process of language development, users have a better chance to come up to an L₁ level and become more effective and efficient users of systems.
LEADERSHIP

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THREAD LOCATION
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SCAPE

Importance of Action and Activism

Author
Michael Luther

Figure 167
Lankes makes the point in this Thread that much of what we do as librarians is about process, not product. Because process takes time and because protracted journeys provide a lot of opportunity for distraction and wrong turns, one or more professionals need to lead the party from point A to point Z. Enter librarians. Leadership is presented as a duty of librarians. Duty or not, Christopher Raab (2009) says leadership is a skill that does not come naturally to many librarians. Our skills of organization make us natural managers, but “librarians sometimes have difficulty inspiring people and recognizing opportunities to lead.” Raab continues by describing the R.O.L.L. Matrix, a device intended to aid academic librarians in the identification of leadership opportunities.

In the forest/trees debate, a leader has to come down squarely in the camp of the forest. A leader has to see the big picture and care for the overall health of the vision. Accordingly, a leader must be concerned with individual practices (trees) insofar as these practices affect the larger forest. Maybe deforestation is a practice or maybe another practice leads to blight, but in the end the concern is for the whole. Others may care for individual parts.

Ammons-Stephens et al. (2009) contribute to the discussion of leadership in libraries by breaking leadership down into its component parts. They argue that libraries are successful if they are run by successful librarians, and so they propose to look at outputs and competencies as a means of developing leadership. The authors identify the core competencies as cognitive ability, vision, interpersonal effectiveness, and managerial effectiveness. Each core competency is then subdivided and the attribute itself defined. For example, one attribute of interpersonal effectiveness is accountability, defined as:

- Instills trust in others and self
- Leads by example
- Assumes responsibility for decisions made

It is hoped that competency models will help to cultivate leadership skills in librarians.

Because leadership is so important, to what extent do librarians, particularly young librarians, want to take on leadership roles? DeLong (2009) asked just this question of new professionals in Canada. She conducted a study with statistically significant findings showing that young librarians are interested in leadership roles. DeLong concludes that the profession should recognize and tap this interest.

**RELATED ARTIFACTS**


LEARNING

MAP LOCATION
H, 3, 4

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SCAPE

![Diagram of Core Values and Learning](image)

LEARNING THEORY

MAP LOCATION
D, 3

THREAD LOCATION
Page 27

SCAPE

![Diagram of Importance of Theory and Deep Concepts](image)

AUTHOR
Angela Usha Ramarine-Rieks
Learning theories are closely associated with motivation. The question that we wrestle with is not only how our library members seek information and learn, but also what motivates them to do so. Although there are a number of motivation theories discussed (for example, intrinsic–extrinsic orientation theorizes that some people create their own rewards, such as satisfaction of curiosity or simply interest in a given topic). This type of reward is intrinsic, which are satisfaction, feelings of accomplishment, and control. Rewards such as praise or a receipt of a prize are typically regarded as less effective than intrinsic rewards (Small et al., 2004).

Given the ubiquity of online content and the increasing number of entry points into the digital information “universe,” it has become necessary to move beyond existing models of librarianship and address the unanticipated issues that are emerging both inside the profession and within the members that the library serves. As noted earlier in the Atlas, our mission must accommodate learning theories and therefore individual learning. However, there is a pronounced absence in understanding learning in preparation as a librarian. Dempsey (2006) noted that libraries must co-evolve with the changing research and learning behaviors that exist within the myriad electronically networked spaces. The problem is that, as librarians, we tend to focus on the impact of technology on libraries; the real long-term issue is how technology will influence the learning behavior of our members, as well as expectations for the ways in which information is created, codified, accessed, and distributed. By successfully establishing a role supporting learning, libraries will increase the potential of expanding their community.

Critical use of information resources is fundamental to education; therefore, we stress on members abilities to use libraries and information resources critically. With the new generation of computer-literate members and the vast amount of information available in both print and electronic formats, the necessity to develop the ability to use authoritative information resources in the library is paramount. Consequently, we find that academic libraries now assume a far greater role in assisting students to locate and evaluate information critically by teaching information literacy. As Kwon (2008) notes, there is immense emotional challenges that students—the Millennials or Generation Y who are considered to be competent and comfortable about their online-networked environment using blogs, Facebook, and integrated activity with technology every day—are uncomfortable, confused, and intimidated in an unfamiliar, huge academic library. However, I tend to agree with the musings of Weiler (2005) that academe, libraries, and indeed the entire world are currently in the middle of a massive and wide-ranging shift in the way knowledge is disseminated and learned. We cannot just blame it on technologies negatively impacting the development of students’ cognitive skills but recognize and embrace the change.

Recently, we have been seeing increasing research showing that games can provide a rich experience while providing the ability to navigate virtual worlds, in which complex decision making and the management of complex issues might resemble the cognitive processes that they would employ in the real world (Ducheneaut et al., 2006; Squire, 2005; Stokes, 2005). Games are engaging because they give us enjoyment and pleasure; give us intense and passionate involvement; give us structure; give us motivation; give us doing; give us flow; give us learning; give us ego gratification; give us adrenaline; they spark our creativity; give us social groups; and give us emotion (Prensky, 2001, p. 144). There are many studies on the use of games in educational activities, and they indicate that it has the potential to support learning. This will be covered in greater detail in the Atlas. However, there seems to be a limited understanding of how learning takes place and how that learning can inform the design of effective educational games and aid its integration into contemporary environments like libraries. There are many learning theories that can be used as underpinnings for exploration of libraries as facilitators of learning.

**Overview of Learning Theories**

Human learning and the importance of social structures has long intrigued scientists involved in the development of learning theory (e.g., Bandura & Walters, 1963; Durkheim, 1893/1984; Miller & Dollard, 1941; Tönnies, 1887/2001; Vygotsky, 1978; Weber, 1922/1978; Wellman & Berkowitz, 1988). As the understanding of human learning became more refined, theorists began to explore the impact of the social environment on an individual’s learning and development. At the time it was conducted, much of this research was rooted in the psychological school of thought that confers primacy to the learner’s mind. In essence, these psychological conceptions of learning focused on the premise that learning is an individual cognitive process (e.g., Pavlov, 1927; Piaget, 1954; Skinner, 1938; Thorndike, 1901; Wundt, 1897). This individual-centered perspective of learning persisted as the central dogma of learning theory well into the 20th century.
Social Interpretations to Learning

In the early part of the 20th century, an alternative interpretation of learning emerged; instead of considering learning as predominantly an individual psychological process, research supported the notion that learning happens within, and as a result of, social interactions. The idea of learning based on personal experiences is attributed to Dewey and Lindeman. Dewey's (1916) contended that “the social environment is truly educative in the effects in the degree in which an individual shares or participates in some conjoint activity. By doing his share in the associated activity, the individual appropriates the purpose which actuates it, becomes familiar with its methods and subject matters, acquires needed skills, and is saturated with its emotional spirit” (p. 26). Similar to Dewey’s comments, Lindeman (1926/1961) proclaimed that “the resource of highest value in adult education is the learner’s experience,” and “if education is life, then life is also education” (p. 6). Likewise, he predicted “the approach to adult education will be via the route of situations, not subjects” (p. 6), and, finally, “experience is the adult learner’s living textbook” (p. 7).

This shift in the conceptual understanding of learning eventually paved the way for the development of a social learning theory (Bandura, 1977). Presently referred to as social cognitive theory (Bandura, 1986), the emphasis of this learning paradigm is that most human learning is derived from social engagement and is therefore integral to the sociocultural context in which that learning transpires. In recent years, social cognitive theory has been extended and applied to a number of related disciplines, such as organizational research (Argyris & Schön, 1978; Brown & Duguid, 1991; Senge, 1990), educational issues (Cunningham, 2000; Jarvis, 1987), and social anthropology (Lave, 1988; Suchman, 1987).

Sociocultural Model

As we see, novel ideas on learning began to gain momentum, and this subsequently ushered in new areas of research on human learning. Significant developments emphasized the importance of the external environment on one’s learning; namely, that learning is a dynamic interplay between one’s sociocultural setting and one’s psychological processes. Vygotsky and Bandura played seminal roles in the further development of this perspective of learning research. Russian theorist named Lev Semyonovich Vygotsky (1978) developed a sociocultural theory of learning that emphasized the role that social institutions and culture play in a child’s learning. Vygotsky’s sociocultural model of learning asserted that society and culture not only influence what an individual learns, but they also impact the patterns of thinking that govern the learning processes; in other words, the social environment impacts how a person learns.

Related and somewhat contemporaneous to Vygotsky’s work was the creation of social learning theory (SLT) by Bandura and his colleagues in the 1950s and 1960s. As an extension of the psychological theory of learning that focused primarily on the mind of a solitary learner, SLT (Bandura & Walters, 1963) broadens the psychological paradigm by taking into consideration the influence of other individuals, as well as the sociocultural context in which the process of learning transpires. Bandura (1977) emphasized that learning takes place in social settings where individuals learn through the processes of observation, imitation, and modeling. The work of these researchers substantiates the idea that learning is a dynamic phenomenon that involves the complex social arenas in which humans interact.

Situated Learning

Standing on the theoretical groundwork of Bandura, Vygotsky, and others (for example, see also Akers et al., 1979; Miller & Dollard, 1941; Piaget, 1969; Sears, 1951), Lave (1988) extended the work on SLT by advancing the notion that the majority of learning (cognition) is “situated” in the activity, context, and culture in which it occurs. Brown, Collins, and Duguid (1989) further developed this concept of “situated learning” by explaining that, “the activity in which knowledge is developed and deployed … is not separable from, or ancillary to, learning and cognition. Nor is it neutral. Rather, it is an integral part of what is learned” (p. 32).

Social anthropologists first connected the concepts of social cognition and practice by introducing the premise of “situated learning” (Hank, 1991, p. 14). According to Lave (as cited in Wenger, 1998, p. 281), social practice is the means to understanding the complexity of human thought that is situated in real-life settings. Lave and Wenger (1991) explicated this connection by contending that “a person’s intentions to learn are engaged [situated], and the meaning of learning is configured through the process of becoming a full participant in a sociocultural practice. This social process includes, indeed it subsumes, the learning of knowledgeable skills” (p. 29).

Over the years, this interpretation of practice has become more intertwined with SCT. Addressing this progression, Barton and Tu-
sting (2005) explained that “practice has become more central as a
concept, and there is a definite shift from a cognitive psychological framing to one which is more in tune with social anthropology” (p. 4). In short, practice is the convergence of social engagement and human thought; it serves as the cultural context underlying, as well as the outward manifestation of human cognition and learning.

Lave and Wenger described situated learning as an active endeavor in which the interaction of a community of individuals generates, not only the fundamental content of what is learned, but also the context, culture, and activities that govern this learning process. This perspective on learning provides a number of opportunities for theorists to apply and expand the situated learning construct regardless of the environment.

**Legitimate Peripheral Participation**

Lave and Wenger (1991) extrapolated the situated learning theory to develop several corollaries. They broadened the theory through the conception of legitimate peripheral participation (LPP). They explain LPP as “to draw attention to the point that learners inevitably participate in communities of practitioners and that the mastery of knowledge and skill requires newcomers to move toward full participation in the socio-cultural practices of a community.” “Legitimate peripheral participation” provides a way to speak about the relations between newcomers and old-timers, and about activities, identities, artifacts, and communities of knowledge and practice (p. 29). In other words, LPP explains that as new members participate more fully in the sociocultural practices of a group, they go through, not so much an apprenticeship, but rather a process of social integration and enculturation. In explaining this concept further, Wenger (1998) pointed out that the term “legitimate” is used to establish an entryway for belonging that is extended to newcomers and also that the meaning of the term can take many forms, such as “being useful, being sponsored, being feared, being the right kind of person” (p. 101), and so forth. They used the term “peripheral” to address the fact that initially new members learn at the periphery of the community before gaining in competence and participating more richly in the group’s experience. According to Wenger (1998), members learn not so much from the acquisition of knowledge, but from the process of legitimate social participation. Thus, social dynamics and context are paramount to learning within the confines of a community.

**Communities of Practice**

Another extension of the situated learning paradigm is Lave and Wenger’s (1991) formulation of the community of practice (CoP) model. In an attempt to rectify further the relationship between social learning and practice, Lave and Wenger (1991) conceived the notion of CoP. There are many success stories of CoP in industry and business organizations. In advancing the CoP construct, Lave and Wenger (1991) conceptualized learning as a form of participation in a “culture of practice” (p. 95). That is, as individuals engage in life’s activities, they are learning in association with others engaged in common pursuits. Lave and Wenger (1991) pointed out that together the terms “community” and “practice” constitute a new concept that transcends the meaning of each of these terms considered in isolation. Wenger, McDermott, and Snyder (2002) asserted that a CoP is a specific type of social structure with a specific purpose; that is, at its core a CoP is an action-oriented “knowledge structure” (p. 41). Since its conception, the CoP concept has been a consistent topic of interest. In general, a CoP can be defined as an association of individuals who share a common interest or concern that they collectively negotiate, learn about, and undertake.

Drawing on his work with Lave, Wenger (1998) contended that CoPs are formed by a group of action-oriented individuals who share a unified history, identity, and sense of purpose. Considering this description, CoPs can emerge in almost any setting in which common interests or concerns exist. Accordingly, CoPs can function within, or be applied to, a vast number of contexts, even libraries. In fact, Wenger (1998) made explicit the ubiquity of CoPs by pointing out that everyone belongs to at least several CoPs, and that they (CoPs) are widely distributed. Furthermore, some CoPs are transitory and ephemeral, whereas others are permanent and fixed. Wenger (1998), and later supported by Wenger, McDermott, and Snyder (2002), state that these informal associations of people (CoPs) have existed since the dawn of humankind, and, furthermore, that these enterprises are so pervasive that sometimes the very group that created them hardly notices them.

**Facilitating Collaborative Learning**

As early as 1977, Dervin stated that the core standards and practices of the library profession need to move toward a new model that will help librarians facilitate interactions among individuals, groups, and “information through more informed perspective.” Libraries typically
still tend to locate users at the end of their process flow, where they are offered carefully mediated information given to them by professionals well versed in identifying “authoritative sources.” In keeping with Dervin observations, the notion of carefully parsing out authoritative information to “end users” needs to be overturned in such a way that the primary focus of library professionals is directed toward the users themselves as the source of problem contexts that can then be addressed by the reappropriation of existing resources to meet a specific emergent need. In the same manner in which individual-centered perspective of learning persisted, libraries need to address the individualist focus that currently exists in the library environment. Buschman (2003) notes that customer-driven librarianship presents information as a commodity and “abandons the notion of the library as a sharer of information and a place of creativity . . . where information’s value does not erode because it is shared, and in fact, can sometimes increase in value” (p. 120). The concept of library member as customer privileges the individual over the social and undermines our role in sustaining and enhancing the democratic public sphere. A common thread that unites these observations challenges the individualist model and more effectively theorizes, supports, and assesses the social aspects of librarianship. Providing physical spaces where people can do collaborative work is but just a first step toward a new future for libraries.

**Learning Styles and Multiple Intelligences**

One can argue that the individual cognitive process is important, and collaborative structures should not ignore these important theories. I agree that the concept that conceives of knowledge as individual mental states is important, but is that the end of the learning facilitation? As highlighted by Hjørland (2004), the “individual’s knowledge structure” is not the starting point, but instead we also need to “look at knowledge domains, disciplines, or other collective knowledge structures.” Therefore, individualistic perspectives such as learning styles and multiple intelligences should not be tossed out of the mix but incorporated.

Consider this: Would you say that you learn better by visually seeing something, by hearing, or by acting out the information you receive? Everyone has different learning styles and learns by a combination of ways, but one type is usually dominant in each individual. The concept of people having different learning styles was initiated in 1921 by the work of psychologist Carl Jung, who proposed the theory of different “personality types.” This theory was expanded to education by determining that these individual personality types have varying ways of learning. Gardner (1993) developed the theory of multiple intelligences. His work is closely related to Jung theory but more specifically addresses intelligence rather than personality. He identifies seven intelligences: verbal–linguistic, logical–mathematical, visual–spatial, body–kinesthetic, musical–rhythmic, interpersonal, and intrapersonal. And there are more that he did not identify. Interestingly enough, traditional education emphasizes only two of these areas: verbal–linguistic and logical–mathematical. Educators have recognized that only a small percentage of the general population prefers to learn by reading. These discoveries have helped tremendously in establishing continued interest in active learning techniques that attempt to capture the learning abilities of students relying on other intelligences.

While learning styles and intelligences affirm the need for instructors and training to recognize the importance of individual learning differences and to use methods that help create a climate that increases the potential learning for all trainees, human concepts and human knowledge are a result of human cooperation and communication. Hjørland (1997) sees that individual knowledge structures can only be understood based on a group-oriented analysis of language users (p.122). As Epperson (2006) noted, librarianship must negotiate a delicate, dynamic balance. He noted that, on the one hand, dialogic education is predicated on an understanding of, and engagement with, the learner’s social context, needs, interests, and capabilities. On the other hand, education and, by extension, librarianship cannot be bound or limited by the marketplace expectations of the learner or member.

**RELATED ARTIFACTS**


LIBRARIES ARE IN THE KNOWLEDGE BUSINESS, THEREFORE THE CONVERSATION BUSINESS

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D, 2

THREAD LOCATION
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SCAPE

Knowledge is Created through Conversation

Libraries are in the Knowledge Business therefore the Conversation Business

Figure 170
Need for an Expanded Definition of Literacy will influence based on


LIMITATIONS OF TAGGING

MAP LOCATION
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THREAD LOCATION
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SCAPE

Contributor
Elizabeth Gall

Related Artifacts


LIS EDUCATION

MAP LOCATION
C, 8, 9

THREAD LOCATION
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SCAPE

Core Skills

LIS Education

- Recognize a School as a Participatory Network
- Shift in Innovation from Academy to Ubiquity
- Increase Friction in the Process
- Need to Expand the Educational Ladder

Curriculum of Communication and Change over Traditional Ideas of Leadership

Figure 173

Need to Expand the Educational Ladder

Changes because

Increase

Friction in the
Process

Shift in
Innovation from
Academy to
Ubiquity

Figure 173
LONGITUDE EXAMPLE

MAP LOCATION
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THREAD LOCATION
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Importance of a Worldview

Longitude Example

Figure 174
MASSIVE SCALE

MAP LOCATION
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SCAPE

Cataloging Relationships influenced by Massive Scale

Figure 176

AUTHOR
R. David Lankes
AGREEMENT DESCRIPTION

In the process of a Transportation Research Board study on information management in the transportation industry, several panel members observed that soon every mile of road will generate a gigabyte of data a day. These data will come from road sensors embedded into asphalt to detect temperature for winter salting, real-time traffic data from roadway cameras, weather information, toll data from Radio-Frequency Identification (RFID) expressway systems, car black boxes, and a myriad of other data sources. It is assumed that this will become a gigabyte an hour as more and more technology finds its way into our vehicles and management systems (GPS data, real-time environment monitoring, etc.). Because there are 3.5 million miles of highways in the United States, that would be 3.3 petabytes of data per hour or 28 exabytes per year.

Some readers may not be familiar with an exabyte. It is the name for a large volume of storage like megabytes, gigabytes (1024 megabytes), and terabytes (1024 gigabytes), technically $2^{60}$ bytes. Table 3 will give the reader some sense of the scale involved.

<table>
<thead>
<tr>
<th>BYTE</th>
<th>1 BYTE: A SINGLE CHARACTER;</th>
</tr>
</thead>
<tbody>
<tr>
<td>KILOBYTE</td>
<td>2 KILOBYTES: A TYPEWRITTEN PAGE;</td>
</tr>
<tr>
<td>MEGABYTE</td>
<td>2 MEGABYTES: A HIGH-RESOLUTION PHOTOGRAPH;</td>
</tr>
<tr>
<td>GIGABYTE</td>
<td>2 GIGABYTES: 20 METERS OF SHELVED BOOKS</td>
</tr>
<tr>
<td>TERABYTE</td>
<td>2 TERABYTES: AN ACADEMIC RESEARCH LIBRARY</td>
</tr>
<tr>
<td>PETABYTE</td>
<td>2 PETABYTES: ALL U.S. ACADEMIC RESEARCH LIBRARIES;</td>
</tr>
<tr>
<td>EXABYTE</td>
<td>5 EXABYTES: ALL WORDS EVER SPOKEN BY HUMANS.</td>
</tr>
<tr>
<td>ZETTABYTE</td>
<td></td>
</tr>
<tr>
<td>YOTTABYTE</td>
<td></td>
</tr>
</tbody>
</table>

What the reader needs to realize is that each succeeding row in the table, from megabyte to gigabyte to terabyte and so forth, is an exponential increase. By and large, people do not think in exponential terms. Gladwell uses the analogy of folding paper to demonstrate just how big the shifts involved in exponential change are. Imagine you have a huge piece of paper. Although the paper is large in terms of its width and height, it is only 0.01 inches thick. You fold it in half. You then fold it in half again 50 times. How tall would it be? Many people might say as thick as a phone book or get really brave and predict as high as a refrigerator. The actual answer is approximately the distance between the earth and the sun.

How can this be? Certainly if I stack 50 pieces of paper on top of each other the stack would not be that large. However, stacking separate sheets is a linear progression, and that is not what you accomplished by folding the paper. With every fold, you doubled the thickness of the paper. With one fold, the paper is twice as thick as when you started. With the second fold, the paper is four times as thick—the next fold is eight times as thick, and so on. In the first few folds, you do not see a major increase, but at about fold 40 you are doubling a mile. We are not used to thinking in terms of exponential growth because most things we deal with grow linearly. However, technology is not.

Predictable Change

In 1965, computer pioneer Gordon E. Moore predicted that the number of transistors that could be fit on a chip (roughly equivalent to the speed at which the chip could process information) would double every eighteen months. The prediction has become so reliable it is referred to as Moore’s Law. The law is an exponential change just like the paper folding. Computers have not just gotten faster over the past decade, they have gotten exponentially faster. What is more, currently, makers of storage technologies—hard drives, solid-state flash memory, and the like—are exceeding Moore’s Law. The emergence of massive-scale computing in our every day lives is a predictable change unlike the web.

The web and associated widespread Internet penetration was a discontinuous event. No one could truly predict a world where URLs come with every can of soda or where an online search company would become one of the biggest corporations on the planet. Libraries can be excused for taking some time to adjust their service models to such an unpredictably and disruptive force. Yet libraries, by and large, have adapted to the new reality. Be it providers of access, guiding online research, supporting distance education, providing virtual reference, or developing metadata schema, libraries have adapted to this change and continue to do so.

The question now lies before the library community: Will massive-scale computing be another disruptive force or, as it is a predictable change, will libraries proactively engage in the massive-scale computing world? This question is neither theoretical nor a question that can long be delayed. Consider that following quote from Wired Magazine:

Ask.com operations VP Dayne Sampson estimates that the five leading search companies together have some 2 million servers, each shedding 300 watts of heat annually, a total of 600 megawatts. These are linked to hard drives that dissipate perhaps another gigawatt. Fifty percent again as much power is required to cool this searing heat, for a total of 2.4 gigawatts. With a third of the incoming power already lost to the grid’s inefficiencies, and half of what’s left lost to power supplies, transformers, and converters, the total of electricity consumed by major search engines in 2006 approaches 5 gigawatts . . . almost enough to power the Las Vegas metropolitan area—with all its hotels, casinos, restaurants, and convention centers—on the hottest day of the year.5

Consider also that many universities, companies, and even primary and secondary schools have run out of power to add new computing equipment. Either their own electrical infrastructure cannot handle the load of computing or their municipalities literally have no more power to send.

Options?

So how can the library community respond to the emerging reality of massive data stores, unimaginable processing power, and super-fast networks? In particular, how will libraries respond when the limitations of storing the world’s information indefinitely disappears and the production of new data and information grows exponentially from today? Let us explore some options.

Option 1: Ignore It

No one said the library has to take on every challenge presented it. In fact, many criticize libraries for taking on too much. Perhaps the problem of massive-scale computing and storage is not a library problem. Certainly for those who argue that libraries are in the business of literacy and cataloging, there is plenty to do with published documents.6 After all, libraries are plenty busy with published documents and digitizing historical documents. Why add the problem of real-time information stores and digital items that don’t remotely look like documents? Furthermore, there are already plenty of other disciplines lining up to tackle this issue. From e-commerce to computer science to individual industry, sectors like transportation and medicine many have begun to acknowledge the problem of massive-scale computing. The National Science Foundation and the National Endowment for the Humanities alike have begun “cyberinfrastructure” initiatives. In addition, the computing industry has certainly taken care of these problems to date. With faster processors, smarter software, and bigger hard drives, no doubt Apple, Microsoft, or the other industry players can solve these issues.

The answer to “why not ignore it,” I argue, comes down to a simple ethical consideration. If libraries do not address these issues with their foundation of praxis and principles, the consequences for society and the field of libraries itself could be grave. Look at the largest portal and search engine companies. When they partner with libraries, such as in large-scale digitization efforts, these commercial organizations gain credibility and have negotiated safeguards of the material they are digitization (e.g., scans being redeposited with libraries). However, look at the data these organizations store on users. How comfortable is the library profession with these data stores when search engine providers cooperate with governments (domestic and abroad)? Will principles closely aligned with civil liberties and privacy be preserved? Will data stores of unique resources beyond the current library collec-

agreements be made widely accessible? The answer is obvious—only as long as the business model is served.

The ultimate result may well be the commercialization of data stewardship in the massive-scale world. We have already seen how well that works with scholarly output and journals. To be sure, I am not arguing that libraries must do it all, but they must be a vital part of the massive-scale landscape. If we truly value our principles of privacy, access, and so on, we must see them as active not simply passive. We cannot, in essence, commit the sin of omission by not engaging the massive-scale world and allowing access and privacy to be discarded or distorted. We should be working to instill the patron’s bill of rights throughout the information world, not simply when they enter our buildings or Web sites.

Option 2: Limit the Library

A closely related strategy to ignoring the issue is to acknowledge the issue and redefine our mission around it. In essence, libraries are in the knowledge business, and that is now going to be defined as document-like objects, with some sort of elite provenance and well synthesized. In fact, arguments have been made that sound close to this approach. The distinction is sometimes subtle, as in this quote from Crawford and Gorman:

Libraries and librarians serve their users and preserve the culture by acquiring, listing, making available, and conserving the records of humankind in all media and by providing services to the users of those records.  

Here, although the mission sounds expansive, the key comes in defining what a “record of humankind” is. Do large-scale datasets fit into this category? What about blog entries or reference inquiries? Certainly they appear not to in Gorman’s later essay, “Web 2.0: The Sleep of Reason.” Here Gorman bemoans “an increase in credulity and an associated flight from expertise.” The problem, of course, has always been in defining and agreeing on an expert. Such notions are almost always situational.

However, there is a much deeper problem in this line of logic. Namely, it pits two longstanding practices and ideals in librarianship: selection and intellectual freedom. Selection and weeding is common library practice. It grew out of resource limitations. Shelf space, book budgets, availability, use of jobbers, and the like are all about existing in a world of scarcity. All of these resources in the physical world constrain the size and scope of the collection. Not since the days of monks and illuminated manuscripts have libraries been convincingly able to collect it all. Today, the concept of “comprehensive” is often limited to a serial run or manuscript series.

Yet in a truly digital world, the growing prospect of cheap storage makes digital artifacts different. Although licensing and cost may still restrict access to some items, collecting massive, effectively limitless, digital items makes the selection due to scarcity argument all but moot. Imagine an academic or school library collecting every paper (including every draft and note) ever written by all of its students. Imagine every public library collecting video and minutes and audio from every public meeting held. The old arguments of not enough room to accomplish such tasks are clearly disappearing.

Certainly by having a library collect and disseminate such information we are providing free and open access to information. Whether we should, whether it is worth doing so, is no longer a selection from scarcity debate. It becomes a selection by choice debate. Can libraries choose what to collect and still say they are providing free and unencumbered intellectual access to these materials? In a massive-scale world, libraries will have to choose between these ideals.

Option 3: Catalog It All

Some have argued that cataloging lies at the heart of librarianship. Although many take issue with the argument equating “human intervention for the organization of information” solely to cataloging, including myself, it is hard to refute the more general concept that information organization lies at the heart of the profession. Why not then extend the current praxis of the field (i.e., metadata generation) to the growing mass of digital information?

It is a pretty commonsensical argument that the library field (or indeed any given field) is unable to provide the raw person power behind indexing the world of networked digital information. However, we also have some pretty good empirical reasons to show this is not an acceptable means of proceeding. The first is that, as a field,

9. Ibid.
10. Yee, “Will the Response of the Library Profession to the Internet be Self-immolation?”
have already tried this. From early OCLC experiments with CORC (Cooperative Online Resource Catalog) to the Librarians Index to the Internet (claiming more than 20,000 sites indexed), librarians have tried to selectively catalog the net. They all cite problems of timeliness and a rapidly changing Internet environment (catalog it today, the page will move tomorrow) in trying to catalog the world.

Ignore the problems of shifting pages and dynamic content and suppose for a minute that every page on the Internet was not only static but never changed its location. In 2005, Yahoo! estimated it indexed 20 billion pages.11 If we had our 65,000 American Library Association (ALA) members spend one minute per record indexing these pages, the good news is that the entire Internet could be indexed in a little more than seven months. The bad news is that those ALA members would have to work the seven months straight without eating, sleeping, or attending a committee meeting. At the same time, Google was claiming its index was three times as large.

The fact is that the Internet is, however, very dynamic. Blogs, gateway pages, news outlets, and other dynamic content represent a growing portion of the web. If all of those ALAers did decide to spend seven months cataloging the web, they would have to start in the eighth month doing it all over again. Of course, they might also want to spend sometime on the four billion new pages created each year also (using a conservative estimate from OCLC’s growth data).12

All of this debate, however, ignores the most interesting aspect of massive-scale computing—the invention of whole new records that defy traditional cataloging. Take, for example, gigapixel images. According to the Gigapxl Project:

“Imagine a historian creating a directory of gargoyles on the facade of the Notre Dame cathedral. Instead of taking a series of images of each sculpture, the historian simply takes four gigapixel images (one for each face of the building). Any user of the directory can zoom in from the entire front of the cathedral to any individual gargoyle at high resolution from a single image. How does one catalog that image? As Notre Dame? A Cathedral? A collection of gargoyles? What about a later scholar who uses the same image to explore the stained glass, construction, weathering of the facade, or any number of other details that can be explored in the image? At such high resolutions, what is foreground, what is background, what is predominant, or what is detail becomes messy at best.”

**Option 4: Embrace It**

I obviously favor the option of engagement. In fact, I would further argue that it is the ethical responsibility of library and information science education to prepare librarians for the world of massive-scale computing. By not preparing future information professionals to deal with terabytes of data per second, we are limiting their ability to live up to the ideals of the profession and the needs of the future (and many current) members.

To embrace massive-scale computing in libraries, we must:

- **Expand and Enhance Current Library Practice.** As previously discussed, librarians must become conversant in not only processing elite documents but real-time information as well.
- **Go Beyond a Focus on Artifacts and Items.** As is discussed, books, videos, and even web pages are simply artifacts of a knowledge-creation process. To concentrate on containers and documents is to be overwhelmed. By focusing instead on knowledge creation and directly incorporating patron knowledge, librarians should be better able to manage and add value to the tsunami of digital data being created.
- **See Richness and Structure Beyond Metadata.** To move from processing containers to capturing and organizing knowledge means going beyond traditional methods of classification and cataloging. Too often librarians enter a discourse community and drive it to taxonomy creation when the vocabulary, the very concepts, of the discourse community are still formative. Instead, librarians need to look to other structures in knowledge products and the creation process such as provenance, linking (citations), and social networks to provide a useful method of information discovery and enrichment.
- **Change at the Core of the Library.** All of this needs to be done at the core of library service, not as some new service, or by adding new systems and functions to an already labyrinthine array of databases, catalogs, and software.

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If our new model of librarianship is to be of any use, it must address these issues. We can see from the Atlas’ treatment of artifacts one way to approach the massive-scale issue.

The other implication of this approach is that books, videos, and documents are by-products of conversations. That is not to say they are unimportant, rather acknowledges they are only a pale reflection of the knowledge-creation process. By the time you read this article, for example, it has already been rewritten and edited numerous times. By the time the ideas are encoded into words, they have been debated and discussed by a wide spectrum of people. The citations at the end give only one of the resources used to develop these arguments (the ones written down and easily addressed). The article also no doubt leads to a few discussions and disagreements after it is published. Yet it is this written document that will be indexed in the databases. The rich conversational space around it is lost.

The idea of conversation in librarianship or a “conversational space” around articles is not all that new. Bechtel talked about how scholarly communications should be taught as an ongoing conversation in information literacy programs. Conversational organizational approaches can also be seen in citations and scholarly communication, law and precedents, bibliometrics, Web of Science, reference, and special collections, and it plays a large role in collection development. In many ways, libraries have been in the conversation business; they have simply developed technologies centered on items—so much so that we are now struggling to recapture the conversation in initiatives such as federated searching and Functional Requirements for Bibliographic Records (FRBR).

Now turn this problem around for a moment. Let us say that we could capture this conversational space. We would have audio files of class conversations, video of presentations, the full text of the articles cited (including the citations used in those articles hot linked), drafts, and editor’s notes—the whole work. Approached as items, each would need a catalog record, and all might be available in the catalog. Yet what holds all of them together as a conversation? In fact, the conversational aspects of this collection of artifacts exist between the catalog records. It is the relationship among the items, not the items. This is the kind of information we capture in an annotated bibliography.

If, in addition to capturing the items, we captured the relationships, how might that work? Imagine now finding this article online. Once there, you should be able to instantly find the rest of the items. Click—you see a previous draft. Click—there is a citation. Click—here is another article by that author. You are now surfing the conversation. It also allows you to rapidly find lots of heterogeneous data. Click on this article and see the text, find a graph, and click on it. Up pops access to a large dataset. Run some new analysis on the data and post it. Now someone finding your article can find both the original dataset and the original article that was published. It is in the relationships among the items that we gain navigation, not in the items themselves.

As a field, we must think in threads. The way to handle a terabyte of data per second is not to try and catalog items in less than a second; it is to know what thread the new terabyte extends. “Oh, this is more weather data from NOAA, I’ll attach it to my NOAA thread.” Once available, scientists, students, and the general public can use that new dataset as a starting point for yet a new thread.

Take our gigapixel image of Notre Dame. The image is simply one item in a thread about gargoyles as created by the author. The same item, however, can also become the starting point for threads by the architect, historian, theologian, and so on. Furthermore, by finding any point in the conversation about Notre Dame, be it architectural, historical, or spiritual, you can find any other conversation.

If this begins to sound like the web, you are right. However, imagine imbuing the web with the ideals and tools of librarianship. These threads we create can incorporate fundamental concepts such as authority files. The search tools and “thread” (annotation) tools can both preserve privacy and provide new structures for the library community to capture and add value to.

Conversations: It Takes Two

So by organizing materials into threads and capturing and adding value to the relationships among items, the library can begin to approach massive scales of information. However, just as with trying to catalog the world of digital information, creating and capturing threads can quickly overwhelm the resources of professional librarians. More to the point, with networked technology, we want to capture these threads at the point of knowledge creation with the authors of ideas. In order to do this, we must expand our systems and services to truly incorporate our patrons into them.

In the library science field, we have seen an evolution in thinking about the relationship between systems and users. Early computer systems were designed by programmers and more reflected the system designer than those the system was intended for. This so-called system
view was challenged and eventually supplanted (at least rhetorically) by a user-based design paradigm.\textsuperscript{15} In the user-based approach, the user’s needs and habits needed to be well understood and then reflected in the systems we created. However, today, we see a further evolution to truly user systems. In today’s spate of social Internet tools, the systems only provide a sparse framework of functionality for users to populate and direct. Wikis, blogs, video-sharing sites, and the like have shown that when users construct the system around themselves, they gain greater ownership and utility. We call these participatory systems.

Participatory systems and participatory librarians do not seek to construct a system of functions and information and then bring the users to them, but rather seek to support users as they construct their own systems and information spaces. Once again, rhetorically, this fits well with the rhetoric of librarianship. After all, from reference to collection development to cataloging (in the concept of literary warrant), we claim the users direct our services. Yet look at the systems we use to instantiate these ideals. The catalogs we provide only accept queries from users not actual documents. In reference, we have a conversation between librarian and patron, not patron and patron. It is time to take our ideals and make systems that reflect that the library is an agent of the community not simply a service to it.

In other venues, these ideas are much more fully developed, and I recommend to the interested reader seeking the more fleshed-out discussions of participatory librarianship. For now, let me simply state that to be of the community means that you have trust in your patrons and they have a voice. To be a service to a community implies a paternalistic relationship and a separation.

\textit{Recommendations and Conclusion}

Libraries must be active participants in participatory networking. This must be done at the core of the library not on the periphery. Anything less simply adds stress and stretches scarce resources even further. The reason we should be looking at technologies such as blogs and Wikis is to get closer to the community and knowledge generation and to make all of our library systems more inclusive of community. By thinking in threads and using the social intelligence of our service community, the library profession is actually well poised to take on the world of massive-scale computing.

MEANS OF FACILITATION

MAP LOCATION
C, 1, 2

THREAD LOCATION
Page 66

SCAPE

The Mission of Librarians is to Improve Society through Facilitating Knowledge Creation in their Communities

AUTHOR
Amy Edick

Figure 177
AGREEMENT DESCRIPTION

The Atlas covers four primary means of facilitating knowledge creation:

- **Access**: Providing access to a member’s conversation or providing access for a member to others’ conversations.
- **Knowledge**: Providing baseline or foundational knowledge (skills, concepts, history) so that a member may fully participate in a conversation.
- **Environment**: Providing a place of safety (physical, cultural, emotional, legal) for members so they will not be penalized by participating in a conversation.
- **Motivation**: Providing the appropriate incentives and disincentives to encourage members to engage in conversations.

CONVERSATION STARTERS

1. How does one know whether one is facilitating correctly?
2. Does it really depend on varying scenarios?
3. Is the process of the facilitation unsuccessful if the person fails on the receiving end?

RELATED ARTIFACTS


Annotation: This article dealt more with different types of facilitation linked with schools and filters. It shows the different extremes that schools vary. I feel that this is a good depiction of facilitation, even though it is only focusing on a small example. It shows how facilitation can change depending on each school’s values, morals, and atmosphere.


Annotation: This article could be a great resource to help librarians further or broaden their skills in the field. I find this one to be more fitting than the first article because it is not as specific. It could pertain to many different situations.


Annotation: This article clearly stated the different steps and processes to good facilitating practices. This seems like it would be a good tool to use, yet it may be a little misguided. Not all situations are going to be alike enough to use the same set of rules each time. There are going to be different types of people and topics involved in each situation.
Meeting spaces are the places where people can come together to hold a conversation, share ideas, and create knowledge. The librarian’s role in facilitation of these meeting spaces can take a number of forms. We can design good physical spaces, create virtual spaces, help people to use these spaces, and help people hold the meetings. There are facilitation methods for the spaces and the meetings themselves. Mostly I have discussed the spaces because the discussion of means of facilitation is a huge topic.

Initially, I did some brainstorming of all the different kinds of spaces for people to meet. There are dozens, and they can be defined in different ways. Some are formal and some are informal, virtual or physical, voice-based, text-based, video-based, and so on. The rough division falls along physical spaces versus virtual (or distance) spaces. The list is below.

In the library literature, there is a lot of discussion about physical meeting rooms and their role in library service. Many libraries have separate meeting rooms available to the members or groups. Usually, there has to be a clearly defined policy regarding who can use the meeting room, how it can be used, and the access and reservation procedures. This type of space is clearly different from the more informal spaces that are used for smaller meetings—tutoring sessions, study dates, and so on. There is also quite a bit about the transition to a “learning commons” that many academic libraries are undergoing. Transforming physical spaces into collaborative spaces include changes such as:

- Creation of multiple collaboration areas where people can converse without disturbing other library members.
- Computer terminals where multiple people can gather and be noisy.
- Supplies and technologies that can be checked out and used in meeting rooms (whiteboards, laptops, projectors, speakerphones [gasp]).
- Flexible spaces that can adapt to different groups and uses.

In the virtual world, there are an enormous number of venues where people are interacting and discussing: everything from Facebook to SecondLife to blogs to bulletin boards to chat rooms. They can be synchronous or asynchronous. Even document services such as Google Docs can be a type of meeting space or collaboration space. The numbers of collaboration spaces are increasing dramatically. Web-based productivity tools are allowing businesses and individuals to collaborate while located all over the world. Google now has a beta version of its online collaboration space: Google Wave.

In thinking about meeting spaces, we think about access to the physical space within a library, the types of physical spaces provided, access and use of virtual spaces, and facilitation of the use of those spaces.

**Types of Spaces**

Below is the result of a brainstorming session on types of meeting spaces that are used by people. Some have examples, some do not, but the idea is to begin to grasp the variety.
• Physical Spaces
  • Private Meeting Rooms
  • Instructional rooms
  • Learning commons
  • Public social spaces (coffee shops, etc.)
  • Privately held meeting spaces (my living room, corporate conference room, etc.)
  • Performance space
  • Repurposed or flexible space (dorm lounge, empty classroom, etc.)

• Virtual Spaces
  • Social networks/social spaces
    • Facebook, mySpace, ning, LinkedIn, etc.
    • Voice Thread http://voicethread.com/
    • Twine http://www.twine.com
    • Second Life
    • Massive multiplayer games
  • Wikis
    • http://pbworks.com/
  • Bulletin Boards
  • Document Services (and others)
    • http://docs.zoho.com/jsp/index.jsp
    • http://docs.google.com/
  • Chat rooms
    • http://www.chatmaker.net/
    • http://www.100topkid.com/?cat=Chat
  • Virtual and web-based conferencing technology
    • http://www.dimdim.com/products/what_is_dimdim.html
    • http://www.onlinemeetingrooms.com/
    • http://www.microsoft.com/windows/windows-vista/features/meeting-space.aspx
  • Digital Centers
    • Columbia University Libraries Digital Social Science Center
  • Collaboration Software
    • BaseCamp http://basecamphq.com/
    • Google Wave http://wave.google.com/help/wave/closed.html
    • Convos http://www.convos.com/

• Environments (both physical and virtual)
  • Conversation environments
  • Collaborative learning environments
    • Cornell University Collaborative Center
      http://mannlib.cornell.edu/rooms-labs/collaborative-center
  • Informal social spaces
  • Community of practice/interest spaces

Where Do Librarians Fit In?

Ideas include teaching, moderating, embed region in spaces, roving reference, and others. Teaching others how to collaborate, communicate, and create knowledge within these spaces seems to be key. The physical meeting space services provided by libraries vary with the type of library. Academic libraries have been moving toward learning commons and more collaborative spaces designed for students. Public libraries generally provide public meeting rooms with tables and chairs but not much else. There is not much of a presence for librarians as facilitators in the virtual collaboration world outside of some academic applications. There is still a lot of room in these meeting spaces for librarians to be facilitating knowledge creation, but the question of how to do it hasn’t been answered. Do we keep to our information island in Second Life? Or do we roam through World of Warcraft as a librarian? It gets back to access not being enough. Particularly in virtual spaces, people don’t need librarians to get access, so our role has to be something different. Our role becomes one of true facilitation and teaching.

RELATED ARTIFACTS


Annotation: This is a collection of recent articles, tools, and other resources gathered by ARL.


MEMBERS NOT PATRONS OR USERS

MAP LOCATION
E, 1

THREAD LOCATION
Page 66

SCAPE

MEMORY

MAP LOCATION
E, 2

THREAD LOCATION
Page 48

SCAPE
MOTIVATION

MAP LOCATION
E, 1

THREAD LOCATIONS
Pages 26, 78

SCAPE

AUTHOR
Andrea Phelps
**AGREEMENT DESCRIPTION**

A library existing solely on intrinsically motivated members can bring about the end of a library if the community is in hard times. That is not to say that intrinsic motivation is a bad thing and should somehow be discouraged, but rather that some forms of extrinsic motivation can help bolster intrinsic.

Although it may be out of scope of the Atlas or this Thread, it may be worth noting that motivation has to start within the librarian. If the library staff is not motivated about their job in any way, motivating members will be a huge challenge. Any lack of motivation among staff is a hurdle that should be explored and addressed in some way before any real progress will be made outside of the library. A reference interview performed by an unmotivated librarian will be a bad experience for the member and librarian. A good place to start is to think about what motivates you and then ask members of your staff the same thing.

Motivation is at the core of everything librarians do and work toward. Libraries and librarians are supposed to be community focused; without understanding what motives drive the community they are a part of, fulfilling the needs of the community and serving their members is a tall order. Understanding motives can help with more than adjusting advertising to get new members into the library, it can help librarians conduct reference interviews, plan better programs and events, purchase appropriate technology, build better spaces, and acquire actually useful materials.

**RELATED ARTIFACTS**

Among the many articles on Maslow’s Hierarchy of Needs, the following two directly relate to librarians:


Annotation: Although focused on a specific age group, Anderson’s article addresses how librarians can map Maslow’s Hierarchy of Needs to the services they provide. It provides a good example of a smaller scale incorporation of the Hierarchy of Needs into a library setting and a more intellectual approach to the Hierarchy.

REFERENCES


Annotation: This article discusses some of the effects of actions based on intrinsic versus extrinsic motives. We discussed in Blackboard how extrinsic motivation can carry negative connotations and have a lasting effect on members, but intrinsic motivation can be easily swayed. This article looks at some other effects of intrinsic and extrinsic motivation in volunteer work and may have some really interesting insights into how to leverage both forms of motivation in a library setting.


Annotation: This article looks at the harm to intrinsic motivation that can occur when an activity is given an extrinsic reward as well. The analyses of these phenomena among college students seem central to how librarians should advertise and extrinsically motivate their members.

Last, these two articles look more specifically at children and young adults, and how they are motivated:


Annotation: Roeser and Peck present Contemplative Education as a means of motivating students. A few of the subcategories worth looking at in depth are those involving community membership and teacher–student relationships (which in many ways compare to that of a librarian and student, particularly in a reference interview). Although very conceptual, the article has some really interesting ideas about intrinsic motivation and how to spark intrinsic motivation in children.


Annotation: Tatar looks at what attracts children to books and reading. Although not a broad look at how people are motivated, it is certainly an interesting look at what librarians should take into account for reader advisories and ways to interest children in reading.

The following two articles look closer at intrinsic and extrinsic motivation.

**AGREEMENT SUPPLEMENTS** 335
MOTIVATION THEORIES

MAP LOCATION
D, 2

THREAD LOCATION
Page 26

SCAPE

Figure 182

MUSIC CENTER

MAP LOCATION
F, 3, 4

THREAD LOCATION
Page 100

SCAPE

Figure 183
NEED FOR AN EXECUTIVE DOCTORATE

MAP LOCATION
E, 8

THREAD LOCATION
Page 184

SCAPE

Figure 184

NEED FOR AN EXPANDED DEFINITION OF LITERACY

MAP LOCATION
F, 1

THREAD LOCATION
Page 73

SCAPE

Figure 185
NEED TO EXPAND THE EDUCATIONAL LADDER

MAP LOCATION
D, 8

THREAD LOCATION
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Figure 186
OBLIGATION OF LEADERSHIP

MAP LOCATION
F, G, 7

THREAD LOCATION
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OPEN SOURCE

MAP LOCATION
F, 5

THREAD LOCATION
Page 87

SCAPE
**OPENNESS**

**MAP LOCATION**
H, 3

**THREAD LOCATION**
Page 121

**SCAPE**

![Diagram of Core Values and Openness]

**PARAPROFESSIONALS**

**MAP LOCATION**
D, 9

**THREAD LOCATION**
Page 177

**SCAPE**

![Diagram of Ability to Work in Interdisciplinary Teams and Paraprofessionals]

**Figure 189**

**Figure 190**
Pressure for Participation

as seen in

Physical Environments

a strategy is

Topical Centers with Curriculum

Figure 191
Importance of Action and Activism

POLICY

MAP LOCATION
F, 6

THREAD LOCATION
Page 125

SCAPE

AUTHOR
William Zayac
CONVERSATION STARTERS

1. How much should policies change over the years? How often do changing circumstances actually require policy changes?
2. How should policies initially be set? Should they reflect a current culture of the library, past trends among the library, future possibilities within the library, or the trends in the library world? Should they be preventative, proactive, or reactive? Where would the balance lie?

RELATED ARTIFACTS


Annotation: This website includes links to several library policy websites (general policies and specific policies) for public libraries in the Washington, DC, metro area. Sadly, some of the specific policy links are outdated and others are incomplete. These do, however, include a variety of types of policies (from comprehensive policies to display and grievance-reporting policies) from these websites. Certain libraries, such as Richland Public Library, simply state the policies and provide little information about reporting occasions when the rules have been broken, whereas others explain the contextualization of such policies and the policies concerning policy address (as with the Spokane County Library District).


Annotation: This article simply includes two examples of AALL policy concerning Intellectual Freedom and Information Management, providing examples of the policies of a large nongovernment library group.


Annotation: Hitchcock traces the various changes in the ALA’s policy on labeling from the 1948 version of the Library Bill of Rights to the 2005 revision of the position document and their effects on the strength of the idea. Some of the changes seem to have been purely superficial (stemming from a feeling of the statement being “dated”), whereas others have focused on the changing labels already provided on materials and constantly used otherwise in culture (such as the MPAA film ratings). The latest revision proves itself to be problematic because the wording could be construed to mean that catalog records are improper labels.


Annotation: Trina Magi designed and executed a nonrandomized survey of 213 library directors in Vermont concerning the strength of their libraries’ patron confidentiality policies and practices when they have one (of which 149 returned surveys were studied and compiled for their results); 46% of the libraries had received one request for patron information from various groups, although more may have been addressed from government agencies but suppressed by gag orders. Overall, 48% of responding libraries stated that they had written policies or procedures concerning this, whereas 35% of libraries without written policies were planning on developing them within a year. Also, the libraries with MLS-holding directors were nearly twice as likely as those whose directors did not hold these degrees to have patron confidentiality policies. Why did so many libraries not have patron confidentiality policies? What made these differences? Magi does not explore these questions; she only reports on the studies.


Annotation: This article provides an example of an actual conflict in policies that occurred, prompting the U.S. Copyright Office and the U.S. Patent and Trademark Office to call a public meeting about the applicability of copyright legislation on works for the disabled. It also addresses the problem with this decision and its lack of addressing the potential for accessible copies created for international users, which are restricted by trade laws. Another example of public policy explained within this article is the ALA support for the Digital Millennium Copyright Act 1201 exemption for faculty members concerning audiovisual copying to make compilation tapes to be used in physical classrooms.


Annotation: This article explains the problem of little-visible library policy or, at least, one that seems to be seldom enforced. Sharon Cook and several other library workers at the Jessamine County Public Library decided to circumvent the normal book-removal policies and removed the graphic novel The League of Extraordinary Gentlemen, Volume IV: The Black Dossier from circulation themselves, one worker even removing a hold that had been put on the book by an 11-year-old (whom she did not believe should be exposed to the “explicit sexual content” of the graphic novel). The two ladies were fired for their actions, but they claimed that they were unaware that they were doing anything wrong.
Although experts in postmodern theory cannot agree on a strict definition of the term “postmodern,” many aspects of postmodernism appear in different cultures. As stated in the Mission Thread section of the Atlas, some postmodern thought may be recognized in the reference interview. According to the Stanford Encyclopedia of Philosophy, two main roles in postmodernism are the “expert” and the “philosopher,” both of which serve roles within the reference interview. The expert knows both the breadth and limitations to his knowledge, while the philosopher learns what is known and must be gained through questioning.\(^1\) By seeking to better understand these roles, the librarian can become more comfortable and adept in the reference process and in the creation of searching tools and guidance tools. Understanding how people seek information is also integral to creating good cataloging and classification systems for its constantly changing users, especially considering the increasingly global community many large libraries now serve.

 Appropriately, the growing trend of postmodern thinking in overall academia are leading to further research and rethinking of traditional librarian tools. Postmodernism reinforces the idea of constant change and adaptation to increase knowledge in people and to improve the process by which people can gain access to appropriate information. As such, American librarians are looking into how they can better adapt systems of organization (such as the Dewey Decimal Classification system) and reference transactions to serve increasingly diverse patrons. Many academic libraries are beginning to form research help areas such as Bird Library’s Learning Commons at Syracuse University, where students may find guidance and help in learning to

better search for and identify appropriate resources for projects. As the world changes, the reflective and adaptive nature of postmodern thinking encourages libraries to adapt to better serve their patron base.

**CONVERSATION STARTERS**

- Where in the library can postmodernism most appropriately be applied? Are there good systems in place in certain facilities that may not benefit from “overanalysis”? In certain libraries or societies, many patrons may have adapted well enough to the current system that they could navigate it better than they would be able to with such a severe change.

- How does one introduce postmodernism appropriately and accurately to “traditionalist” librarians? Might there be those, like a former English student, who are frightened by the very word? What kind of “cushioning” might one use to prevent fear? “Postmodernism” is a broad concept and presents quite a few problems with definition and presentation. In fact, most of the Web sites I consulted to find a basic definition of the term were either too broad or were so full of philosophical jargon that they were difficult to understand. Most librarians may become confused if the concepts are not presented correctly.

**RELATED ARTIFACTS**


Annotation: Bodi and Maier-O’Shea explore the repercussions of postmodernism in the organization and management of academic library collections, from providing multiple access points to providing a more information-centered environment in libraries because of the changing culture of universities and colleges and the increased movement toward an experience-based management philosophy. When academic libraries shift toward postmodernism, should they still simply support the school’s curriculum or should these libraries also change toward the overall learning outcomes emphasized by the school (if the two differ)?


Annotation: Cullen uses postmodern theory to analyze how most modern libraries perform assessments and deconstruct the traditional modes of assessment available to librarians, asking whether the “tried-and-true” methods of the past are providing enough accurate data and whether libraries are making vital enough changes called for by the data collected. She also makes suggestions on how to bring current evaluation practices up to a greater and more effective standard for libraries and information services, including tailoring the library’s mission to reference the need it serves in the community before considering how well the library lives up to its community’s expectations.


Annotation: Deodato attempts to explain the growing influence of postmodernism on the archival community. He acknowledges the effect of the postmodern mindset on selection and appraisal of new artifacts and attempts to further the incorporation of these values into the description and arrangement of artifacts through addition to traditional finding aids and expanded records concerning them. Deodato also provides some beginning guidelines for creating a more comprehensive record of the artifacts in a collection that not only acknowledges the social conditions under which the writer of such a record created it but also allows for future changes that may help users understand the collection and artifacts more thoroughly because artifacts can seldom be objectively identified due to their socially constructed identities.

Taylor, M. J. (2002). I’ll be your mirror, reflect what you are: Postmodern documentation and the downtown New York scene from 1975 to the present. *RBM, 3*(1), 32–52.

Annotation: Taylor discusses the nature of the contents of libraries as a reflection of culture, questioning the nature of such a reflection of culture. By deconstructing the concept that a library is the repository of culture, Taylor explores the quality of the cultural reflection through possession of artifacts, asking whether the significance or meaning of the artifact is affected by its incorporation into a larger collection. When looking into the reflection of a culture, he says, one must remember that the viewer is reflected as well, and the view of an item by any one person (or group of people) is inherently biased. Ensuring that both the archive (or library) workers and the patrons of an archive (or library) understand and recognize this idea is the only way to provide a better understanding of the artifacts contained there.
The Mission of Librarians is to Improve Society through Facilitating Knowledge Creation in their Communities.
The Atlas notes that although public libraries come in a variety of shapes and sizes, their unifying function is to be the intellectual glue of a community. In this agreement, I look at some of the efforts made by libraries to understand and respond to their communities’ needs. The literature discussed here is in agreement with the Atlas’ ideas on surveying the community and creating innovative services and spaces.

Evaluation of the community’s satisfaction is one area the Atlas emphasizes for public libraries. Lankes notes, “When determining whether or not to deploy a given feature you must do careful analysis of what users are trying to accomplish.” In his study of Australian public libraries, Bundy (2006) agrees. He found that the proportion of primary and secondary students using the public library was quite high, and those numbers are only increasing. He discovered that users were generally satisfied with the libraries’ wide range of services—but that they also needed more IT support and study space. He also finds there needs to be more libraries in less developed places. Fisher (2003) also concurs with Lankes and Bundy on the importance of surveying the community. She examined how members of a school library community thought of and used the local public library. Unfortunately, she found a high level of dissatisfaction with the library. But, she notes, this information is important in deciding how the library should plan for the future.

The results of surveys like these have an impact on how the library serves the community. In the Atlas, Lankes calls for libraries to create a “seamless interaction of digital and virtual, with physical spaces feeding into digital worlds, and vice versa.” He also notes that participatory tools are popular not simply because people “love” technology but because they fulfill a social need for people to connect with one another. Public libraries are adapting to this new reality in an increasingly electronic world. In this same vein, Cook and Ellis (2008) write of their own experiences updating their public library’s Web site and learning of its teen population’s deep dissatisfaction with it. They found that the teens wanted a more progressive Web site to connect with the library. To investigate their need, Cook and Ellis began exploring tools such as del.icio.us and Flick. Cook and Ellis found that by applying these tools, they were able to encourage participation by members of the community. Buhmann et al. (2009) agree with the work of Lankes, Cook, and Ellis. Buhmann and his colleagues write of their experience with Skokie Public Library’s creation of SkokieTalk, a Web site that allows patrons to interact with one another and add their community-related information. It started in 1994 when members of the community bemoaned the lack of a central source for community information such as child-care options, grocery stores, public transportation, medical facilities, and so on. It
began as a simple directory of links and has since grown into a much richer collaboration among participating members of the community, one that more efficiently directs patrons to library resources.

Public librarians have also applied their knowledge of the community to create more innovative uses of library space. As Lankes argues in the Atlas, spaces must be organized “to aid like conversations to progress from agreement to agreement… [towards] the topics that your community sees as crucial not simply to support, but to showcase and move forward.” Blumenstein (2009) is of the same opinion. She documents how the Pearl Avenue Branch Library in San José, California, was able to incorporate environmentally friendly art and architecture in the San Jose libraries. The city of San Jose has a city-wide green building policy. Because of the constituents’ commitment to environmentalism, the community was deeply engaged with the building of the library. Similarly, the people of Eckhart Public Library in Auburn, Indiana, rallied to transform a dilapidated garage (originally to be used for library vans) into a space for expanded children’s services (Bushnell, 2009). The library radically changed its construction plans for the garage. Later the community asked that it be environmentally sustainable as well. Following the community’s wishes, today the garage is a certified green building.

Keeping an eye toward the community’s needs also affects the services the public library offers. In the Atlas, Lankes argues that increased member usage comes from members being able to influence their educational system. In documenting the story of Studio I at the Public Library of Charlotte and Mecklenburg County, Czarnecki (2009) finds this to be true. Open since 2005, Studio I uses several forms of technology to allow teenagers to tell new kinds of stories using video cameras and animation software. At Studio I, adolescents are allowed to shape their own learning experience and even contribute to the department by interning or volunteering there. Echoing this idea of pioneering services is the work of the teen services department at the County of Los Angeles Public Library (Delatte, 2009). The theme of the summer reading program of 2008 was “metamorphosis.” Going off the beaten trail, the department created a program that went beyond reading and more toward creating. It created “Project Morph.” Modeled after the television show “Project Runway,” teens brought old clothes to the library and had an hour to reinvent their clothing. Afterward, they walked a catwalk to simulate a fashion show. The project meant that the library had to buy nontraditional items—like fabric markers, assorted trim, and gems—but the program was such a hit that 30 libraries followed suit.

CONVERSATION STARTERS

1. Fisher finds that the surveying library is disturbed to discover that the community is unsatisfied with its level of service. I think this is why more libraries don’t evaluate themselves. It’s a fear a lot of libraries have—they are afraid of what they might find. How can libraries overcome this fear? Is there a strategy to accepting negative results and moving on from there?

2. Buhmann et al. describe how SkokieNet has become an impressive platform for community members to connect and learn from one another. But how does this tool differ from Facebook, or other social networking applications that are now in existence? Does SkokieNet better meet the community’s needs? If so, does the fact that it’s locally made—by and for the people of Skokie—have anything to do with its success?

RELATED ARTIFACTS


PUBLIC SERVICE

MAP LOCATION
E, 4

THREAD LOCATION
Page 154

SCAPE

Transition of Traditional Skills such as Public Service such as Reference

Figure 196

PUBLISHER OF COMMUNITY

MAP LOCATION
F, 3

THREAD LOCATION
Page 67

SCAPE

Access exemplified as Publisher of Community demonstrated the concept of

Figure 197
REFERENCES

**MAP LOCATION**
G, 4

**THREAD LOCATION**
Page 60

**SCAPE**

![Diagram 1](image1)

**RELATION TO OTHER DOMAINS**

**MAP LOCATION**
D, 9

**THREAD LOCATION**
Page 170

**SCAPE**

![Diagram 2](image2)
RISKS OF DATA

MAP LOCATION
F, G, 7

THREAD LOCATION
Page 131

SCAPE

Creating an Agenda  however, must avoid  Risks of Data

Figure 202

SCAPES

MAP LOCATION
F, G, 3

THREAD LOCATION
Page 53

SCAPE

Reference  might become  Scapes

Entailment Mesh  need system to capture meshes

Now can search on meshes

Reference Extract

Figure 203

AUTHOR
R. David Lankes
**AGREEMENT DESCRIPTION**

The following questions and answers about Scapes development are derived from a consideration of a proposal before the MacArthur Foundation. There are two answers to each question. The first is the quick answer, followed by a more in-depth response that contains more technical detail. It should be noted that these questions and answers, although useful generally, were focused on a single development effort for Scapes.

**Who do you see as your primary audience for Scapes?**

*Quick response:* The initial audience for Scapes will be library learners—those individuals using library services for formal (e.g., K-12 and college students) and informal education (e.g., members of the general public engaged in research).

*More Detail:* This population is chosen for a few reasons:

- The library community is a coherent and easily engaged partner in the process. Initial discussions of the Scapes concept within this community have generated enthusiasm, and it is believed that libraries will be willing to provide input, testing, and resources into all phases of development. Further, libraries have experience in evaluating software.

- Libraries have a known need for this type of software. Libraries know they need better systems to engage users in their learning processes. There is wide discontent with current catalogs and virtual reference software. Scapes can help fill these needs.

- Libraries represent a diverse user population. Although the library community is coherent (it shares an education base, it has a lot of professional structures such as conferences and associations), their reach is diverse. Libraries can test Scapes in populations of students, government workers, lawyers, scholars, and more.

- Libraries have resources that can seed initial user-generated scapes. Libraries not only hold a large and diverse set of materials, they have well-structured metadata for these collections that will make inclusion in Scapes relatively easy.

For these reasons, libraries are seen as an ideal target audience and initial set of partners, but that does not mean that the utility of Scapes is limited to libraries. Once the initial infrastructure is in place, Scapes is seen as general-purpose software that is functionality useful in any knowledge representation endeavor.

Some examples might be useful. It should be noted that the illustrations are just simple ideas—sketches really. The final interface will be determined by the specification and implementation processes.

**K–12 Example**

Riley is doing a report on global warming. In his school library, he searches the catalog for books on the topic. He finds a few promising titles and adds them to a new scape right through the catalog’s web interface. He then checks out the books. At home, after reading the books, he opens his web browser and brings up the scape he started at school (he also has scapes for personal projects and other classes). Right now it is little more than a scattered collection of “nodes,” each representing the books he checked out.

Riley now deletes a text that wasn’t relevant and begins to sort the remaining books. He puts all the books on weather effects into one pile. He draws a line from that pile to another book that refutes global warming and labels the line as such. Now he begins searching his library’s online databases through the web-based Scapes interface for articles on the topic. As he finds relevant articles, he drags them into the scape he is working on and connects them with links such as “Global Warming in Politics” and “The Science of Global Warming.” He ends up with a Scape that looks like the one found in figure 204.

At this point, Riley could simply add his teacher to the list of those authorized to see his Scape and submit it as his assignment; however, his teacher wants a written report. Riley exports the Scape as an outline. The links become major headers in the report, and each node (book, article, etc.) is listed as a citation. He opens the outline in his word processor and begins to write.

The use of a tool like Scapes in K–12 education is not completely without precedent. Scapes is similar to mind mapping already in wide use in K–12 education. There are, however, some key differences. These differences range from the model of representation—mind or concept mapping requires a “root node” from which all ideas must stream—to the technical—most mind mapping applications do not work with computationally useful nodes, rather focusing on visual maps.

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1. Throughout this document “Scapes” with a capital S is used to refer to as the software product; “scapes” with a small s is referred to as a document types (so Scapes produces scapes).
“The Earth’s atmosphere is so thin that we are capable of dramatically changing its composition.”

The author believes that global warming is part of the natural cycle and cannot be attributed to man.

It has been estimated that there are at least 1,000,000 known organic compounds, and this number is increasing rapidly each year.

Figure 204
College Course

Sue is a college professor preparing a course on global warming to be offered during the next semester. The normal procedure would be to write a syllabus with a course introduction and list of readings, put the readings on reserve with the college library, and upload additional materials in an online course management system like Blackboard. This setup already requires students to go to three separate sources for course information.

Instead, Sue creates a Scape for the course, linking in her content, as well as readings on reserve at the library and on the web. This Scape is not a simple list of readings but a connected system that shows how the readings and course content are related. Also, since the Scape will be made available to Sue’s students, it is interactive. The students can connect the course Scape to their own Scape with assignments, discussions, and reactions. Sue can also use the chat functionality of the Scapes software to work with students remotely.

So the initial Scape might look like the screenshot in figure 205 from an early mockup.

Figure 205
One of Sue’s students can then connect his or her own Scape (using the previous K–12 example) to the class scape found in figure 206.

What’s more, all of these scapes can be made public within the college to represent what the college community knows and its approach to a given topic. Now anyone who finds Sue’s course syllabus can also see examples of student work (if the students give permission). This would allow for better program accreditation and evaluation.

Community Organizing

Syracuse, like many urban centers, has a youth violence issue. The mayor has task forces, community groups are involved, and the University wants to help. One of the first steps to combating any problem is understanding what it is. When combating a problem requires multiple groups to be involved, a shared understanding of the problem is essential.

http://wikipedia...

Copyright 2006

The author believes that global warming is part of the natural cycle and cannot be attributed to man.

2. See question 3 for more on public and private scapes.
The public library creates a scape of the youth violence issue. The librarians pre-populate it with articles and books that might be helpful. Experts are asked to contribute to the scape, and community groups are asked to join in mapping the issue and possible solutions. Governmental agencies add information on existing programs. Community foundations add the outcome of their funded work, as well as information on possible resources available to combat youth violence. Where disagreement occurs, new scapes are created to represent divergent views. Over time, these differences are discussed, and most of these alternatives are incorporated into a common view.

As a plan emerges, it is tied back to the literature, best practices, community agencies, and planning documents. Videos of town hall meetings are added to the scape to provide a crucial memory for the long-term plan. As new services are created, tried, and evaluated, they too are pointed to from within the community scape.

This could have all been done with a wiki of course. However, a wiki would not allow the visual representation, or, more important, the intelligent use of objects such as materials, ideas, people, and organizations. Because this information is within a scape, other communities tackling the youth violence issue can reuse it. Agency names and contact information can easily be changed, with Syracuse acting as a template for other urban centers. Other tools can also be used with the scape, for example, placing agencies and resources on a map or exporting portions of the scape for grant applications or reports.

The scape on youth violence can also be linked into other community-wide efforts in economic development, beautification, education, transportation, and so on. Although this can be done with today’s web-based tools, the links are one way, as opposed to bi-directional, and would require a multitude of interfaces and systems. Scapes can act as not only a high-level view of a problem but a sort of glue to a vast variety of resources.

Can you expand on how people would use/access Scapes? We’re having trouble understanding how this would be implemented.

Quick Answer: The initial deliverable will be a website where users can log in and create their Scapes. This website will present users with a view of (1) all the public Scapes being created, (2) the Scapes that the user is working on (individually, as part of a group, or simply public Scapes the user contribute to), and (3) finally the actual interface for building and editing Scapes. This can be seen in figure 207.

![Figure 207](image-url)
This centralized site will also allow organizations to integrate Scapes’ functionality in their own sites like they can now include maps from Google and videos from YouTube. For example, a library might include a link to the Scapes site right in its catalog. A user clicking on the link would be taken to the Scapes site and shown a set of all the scapes containing the object selected in the catalog (see figure 208).

Once a user creates a scape, he or she can embed an interactive version of it in his or her own site with a simple cut and paste (just like YouTube). With this embedding capability, just about anywhere a user can cut and paste HTML code, he or she can include a fully interactive version of the scape. For instance, a user could paste it into a blog entry (see figure 209).
So the community group from the previous example could include its joint scape on its team’s webpage, or MacArthur could create a scape of all its grants and grantees in a given area (say on credibility) and include it in a listing of the grants.

The Scapes server software will also be offered as a download so that anyone can download and create his or her own scapes site (or integrate scapes into his or her own site). Like the web, which creates a set of connected pages on different sites, the Scapes specification and software will enable easy linking between sites. This arrangement will allow organizations concerned about security or reliability to set up internal Scapes systems.

A good analogy would be Wikipedia. Users create accounts and contribute to the Wikipedia site, but anyone can download the software used to build and maintain Wikipedia, called MediaWiki.3

The Scapes specification can also be used so that people could write their own software that can create interconnected scapes. Thus, one might imagine a Scapes desktop system that would allow users to create scapes when disconnected from the Internet, say on a plane.

More Details

Scape implementation consists of really four parts: a specification, a reference server implementation, a reference user interface, and a facilitating infrastructure. Each is explained below.

Specification

When the web was initially developed, it was little more than a multipage document of specifications. These specifications outlined the basics of how to mark up documents (HTML) and a protocol for sending data across the Internet (the HyperText Transfer Protocol [HTTP]). It was this specification developed by Tim Berners-Lee that was adopted by the National Center for Supercomputing Applications (NCSA) and used to create Mosaic and the first web server.

Today, it is the specifications that underlie thousands of different web servers (with Apache and Microsoft’s Internet Information Server being the most widely deployed) and the various web browsers (Internet Explorer, Chrome, Firefox, Farari, Opera, etc.). It is the web specification that enables Google and MacFound.org. It is the specification that will ultimately dictate the success and shape of Scapes.

The Scapes specification will need to define the file format of a Scape. It is currently assumed that this will involve RDF and an XML application. Think of this as the file format of a Scape that could be copied onto a hard drive and e-mailed around. This format will have to accommodate node descriptions, bidirectional linking (so both an object pointing and being pointed to are aware of the link—this allows for the easy identification of dead or altered links as well as enhanced search).

The specification will also have to define minimal interactions with Scapes such as adding a node, adding a link, describing a link, deleting nodes, and so on. The idea is to, like HTML, keep the specifications simple and allow for rich interactions through combining interactions.

Perhaps the most important part of the specification will be in how Scapes work in a networked environment. This part of the specification will have to link up the different anticipated Scapes servers together. The initial thought (described more fully under infrastructure) is a central registry system. Here the different Scapes servers would communicate what Scapes are available and where to find them. The network part of the specification will have to handle questions of unique identifiers for Scapes and nodes within a Scape. This portion of the specification is also, frankly, where much of the lessons learned about the deficiencies of the web standards can be addressed in terms of searching across Scapes and dead links.

Reference Server Implementation

However good a specification is, without real software and real examples, it will go nowhere. From experience with many projects such as AskERIC, the Gateway to Educational Materials, and the Virtual Reference Desk, the team behind Scapes has learned some valuable lessons that will be brought to Scapes. The first is the need for real software that is functional from the start. It is much harder to convince anyone else to implement specifications without having done it yourself. There is a need for examples. What’s more, there is no sense in low-balling the example. That is to say, the example should strive to be the best in class. This way if there are initially few others building servers, the one built by the project is more than adequate for satisfying user needs. Also, the first mover in a given space on the web tends to gain a large user base, so you want the majority of users using the best software.

For this reason, the reference server implementation will strive to be the best central system for creating Scapes. It will need to provide for user accounts (including sophisticated identity management as discussed in question 3), rich interactions, embedding of Scapes within other systems and pages (as discussed in the “Quick Answer”), powerful searching across Scapes, and easy expansion (via APIs as discussed in question 4). The server is anticipated to be a LAMP implementation (LAMP is short for Linux, Apache, MySQL, and PHP and describes a widely available server environment so that people can easily implement Scapes on their own servers).

Reference User Interface

The interface developed by this grant will be web-based. These days highly interactive and “desktop-like” user interfaces through a web browser are attainable through the use of technologies like AJAX. AJAX (short for Asynchronous JavaScript and XML) is a set of existing technologies that allow users to drag and drop objects, as well as manipulate interface elements through a web browser just as they would in a drawing program or a word processor. If you have ever panned and zoomed a map through the web, you have experienced AJAX.

The user interface for Scapes will consist of the construction space of the Scapes (adding, linking, and describing nodes), as well as a means of managing multiple Scapes by a single user and millions of Scapes for the entire web community. In essence, all of the diagrams used in this addendum are simplified initial guesses at what the user interface will look like. It is also assumed that others using the Scapes specification can create a whole raft of new user interfaces including interfaces for mobile phones, differing operating systems, and more.

Infrastructure

To fully realize the potential of Scapes, there must be not only several implementations but a way of tying an active development and implementation community together. To maximize the diffusion of Scapes, there must be infrastructure to keep the differing scapes connected. As alluded to under specifications there will need to be some technical infrastructure in place to stitch together Scapes. This includes a registry
of Scapes implementations, a system to assign unique IDs to Scapes and their objects, and a sort of interchange for linking. This link interchange will monitor the objects being linked across all Scapes and notify users (and servers) if either end of a link has changed. This will allow for services like leak deletion, creating cached version of objects to maintain the integrity of Scapes, and search services.

All of these parts are represented in figure 210 with the deliverables of this grant outlined in the dotted line.

Other infrastructure will not be technical. This will include a clearinghouse on Scapes development and implementations, an ongoing body to discuss extensions and alterations to the Scapes specification, a directory of Scape extensions, and other ways of tracking a community engaged with Scapes.

All of this detail may seem burdensome or grandiose. The philosophy is to plan for success but guarantee initial utility. That is to say, build a tool that can be used right away. If a community of developers and other Scapes implementations do not emerge, the central site will still have great functionality. If the community does develop, the growth can be managed.

Could there be a “public Scapes”—one that you share with others—and a “private Scapes”—one that you use only to organize your own research/work/relationships?

Quick Answer: The short answer is yes. Scapes files can be private, shared with a group, or public. Likewise, a Scape can be shared in full or read-only.

More Detail: To do this, the Scapes specification will have to include a common way of handling “identity management.” Every Scape will have to have an identity or identities associated with it. This will allow functionality such as notifying Scapes creators of changes to items and other Scapes they might have pointed to (thus avoiding the dead link problem or pointing to outdated URL’s in the current open web).

It is worth noting that “identity” is not the same as “person.” Identities may be as simple as a username or an e-mail address. However, as they get more complex, they can allow for greater access to resources. For example, if a Scape author provides a university ID, he or she can get the full text of articles in a Scape, whereas an anonymous user may simply receive the bibliographic information.

Are there challenges around interoperability and content access (some people have access to certain databases and others do not, how would Scapes deal with this)?

Quick Answer: Much of the interoperability challenges are alleviated initially by working with links to objects, as opposed to manipulating the objects itself (i.e., linking to book records, not editing the records or creating them). This is much like how a user organizes files and folders on his or her computer. The software creating the folders and letting the user drag files around does not have to open and/or edit these files, just know their locations and what piece of software to use to actually open and work with the file.

More Detail: There are always interoperability challenges to face in terms of software systems. The initial plan to address them consists of four approaches.

1. High-Level Pointers

Scapes, like the web, are based on a pointer system. It connects objects with contextual links creating a set of relationships. As such, it does not have to be able to manipulate the related items (documents) directly. Think of how you organize your files on your computer. File Explorer in Windows or the Finder in the Mac Operating System needs to know some basic information about the file (its size and its type) and its location. It does not need to edit PDF files, just know that they are PDF files and where they are. It doesn’t need to understand all the objects it encounters, just link to them. Scapes are the same way. As long as they know an object’s location and some basic details, they do not need to get bogged down in all the intricacies of the file formats and features. What they do need to be able to do is read and manipulate metadata (descriptive information about the files). Also, as the product matures, it can add greater item-level functionality (just as in operating systems that have evolved to provide previews of file contents or quick printing).

2. Adherence to Metadata Standards

What Scapes will need to do is intelligently read and manipulate a variety of object metadata. The most obvious is the MARC standard to make incorporating library objects easy. They will also need to understand Dublin Core and HTML metatags—widely used metadata..
The Earth’s atmosphere is so thin that we are capable of dramatically changing its composition.

The author believes that global warming is part of the natural cycle and cannot be attributed to man.

It has been estimated that there are at least 1,000,000 known organic compounds, and this number is increasing rapidly each year.
standards. This basic functionality will allow Scapes to take advantage of existing metadata in objects today. However, most of the objects that Scapes will encounter will have no metadata. This means the user will be adding metadata as he or she links objects together but in a different way from today’s object-centric approach to describing digital objects.

A normal approach to metadata is to use some separate editing program to describe an object—entering fields like title, author, and so on. This approach can take time, and the person describing the object has to anticipate all the potential uses of that object. Many people don’t realize this, but programs like Microsoft Word have this capability built in. Figure 211 is the screen that Word brings up when editing a file’s properties.

Figure 212 is the same functionality implemented in Adobe Acrobat.

The reason that people don’t realize these screens exist is because it is an often unused capability. There are many reasons for this, but this is territory well covered in the original proposal. The point of this response is that if someone takes the time to enter these data, Scapes will use it. If not, Scapes will create metadata from the linking between objects. This is more useful because it is all about context.

3. Adherence to Web Standards

The area of interoperability on the web has come a long way in the past five years. There are several widely available and followed standards that will aid in tying objects together in Scapes. The first is the suite of Semantic web standards such as the Resource Description Framework (RDF) and the extensible Markup Language (XML). These two standards provide a clear way of linking together a disparate set of resources without a great deal of customization. XML will allow records to be read out of proprietary databases and library catalogs, for example. RDF is a way of describing relationships among objects, terms, and even people. Open-source RDF tools will allow for rapid development of Scapes, as well as the reuse of Scapes data in other applications.

4. Building an Open Platform for Expansion

The last approach to interoperability will be the extensive use of good Web 2.0 practices. That is, making it easy for people to add new functionality to Scapes and to include Scapes functionality into their own applications. The primary mechanism for this interoperability
Agreement supplements

The use of well-documented and web-accessible Application Programming Interfaces (APIs). An API is little more than a URL where another program (or web page) can send a request. For example, Google Maps has an API so that, with the use of a single piece of cut-and-paste HTML code, you can include a map on your web page. With a simple piece of HTML, you can also include a book cover from Amazon, a song title from Apple’s iTunes, book information from OCLC, and more. It is the API that will allow people to embed a web version of Scapes in whatever page they want.

APIs will also be used to handle issues of authentication into proprietary databases and access into for-fee resources. This is not an approach unique to Scapes. This will build on efforts throughout the academic and library world built up over the past decade—technologies such as OpenURL and Z39.50, for example. APIs will also allow users to embed different search engines directly into Scapes such as Google or the proposed Reference Extract product.

Examples

In many cases, the real story can be hidden behind an alphabet soup of standards. The best way to show how interoperability can be achieved with existing technologies is to show an example.

The Ann Arbor District Library’s Catalog, found at http://www.aadl.org/catalog, might look like a standard catalog application, but it is not. It is actually a piece of open source software called Drupal. Drupal sits between the user and the actual catalog. When the user searches for a book, Drupal sends the request via an API to the catalog (a proprietary piece of software). The results of the search are then processed by Drupal and presented to the user with additional features such as tags, user annotations, full-text page scans from Google Books, and other reviews. These additional functionalities come from all over the web but are presented seamlessly to the user using APIs.

Figure 213 shows (1) the listing the user sees from his or her search—it is information from the library catalog but presented to the user by Drupal that also adds links to (2) a program the Ann Arbor librarians wrote to simulate a physical card in a card catalog, (3) a link that takes you directly to the full text of the book (if available) in Google Book Search, (4) user-supplied annotations produced by Blackwell’s Book Services, and (5) user-supplied tags and comments stored by Drupal.

If you are having a hard time following my diagrams, all you need to know is that at least five different systems are being utilized for this one book, and the user does not have to know. What’s more, the five different services don’t have to know anything about the other applications (in other words, Google has no idea that the Ann Arbor Library is pointing to its books). It would be a simple matter for the library to add a link to any Scapes that included this book, for example.

CONCLUSION

I hope these responses were clarifying. If not, please let me know, and I can try again. What I hope is that the core of the Scapes idea is not lost in the important details. Yes, there are many challenges to developing Scapes, but there are huge pieces of existing software and interoperability standards already available on which to build. As with any new software project, there are sure to be challenges and unanticipated problems. However, the core idea that we need systems that allow us to represent knowledge, not things, remains. The true mission of Scapes is not to demonstrate the power of APIs or the intricacies of metadata. The true mission is to unlock the knowledge present in our communities. The mission is to build tools that can begin to capture the conversations and contexts of people. The mission is to break from the strangle hold of things and objects and move to knowing and action. These may seem like grand missions, but that is the point. The web has shown us the emergence of social knowledge. Wikipedia, Google, Amazon, and more thrive in a world of connected ideas. The web did not create the notion of linking; it simply made the links evident. In the same way, Scapes does not seek to invent or change how people know; they simply make it easier to share that knowing. The Scapes concept is a result of theory, practice, and hard-won experience.

RELATED ARTIFACTS.


Children’s literature: a reader’s history, from Aesop to Harry Potter
Lerer, Seth, 1955-
1 copy available at Downtown 3rd Fl.
Based on 1 patron reviews

Tags
Harry

Patron Reviews
1-1 of 1

Reviewer: shelley wu (See all of shelley wu’s reviews)
This book is so fun. I like it.
No Comments

Agreement supplements 365

Figure 213
Issues of Institutional Repositories is influenced by Scholarly Communications

AUTHOR
Elizabeth Gall

Figure 214
In the section on Scholarly Communication in the Atlas, Lankes charges that librarians must participate in the scholarly pursuits driving academia rather than standing by and cataloging the results. He argues that librarians must take control of their role rather than wait for professors to approach them for help, input, and so on. Right now librarians are waiting to be invited to the table instead of pulling up a chair and inserting themselves into the conversation. The idea that librarians must redefine their role has come up again and again in the Atlas. Academic librarians can do so by becoming an essential part of scholarly communication at their university. As Lankes points out, it will benefit the librarian in multiple ways. It will not only integrate them into communities they previously had not been a part of, but it will also help librarians keep a better, more complete record of knowledge creation at the university. Hahn (2008) argues that this change is already happening, and librarians must be more aggressive in defining their new role. The Atlas discusses several areas where there is potential for librarian involvement in scholarly communication.

One way that librarians can get involved in scholarly communication is to take an active role in the process and documentation of funded research. By facilitating documentation of a project from start to finish, librarians can provide a valuable service to the research team while they build a collection of in-house research and findings. This prospect is especially appealing because the funding for these services could be written into the research proposal. It is a way for the librarian to become part of the conversation without requiring the library to take on a financial risk.

What can librarians do to break into the conversation? Courtois and Turtle (2008) discuss the success of faculty focus groups at Kansas State University. The focus groups at Kansas State were part of a scholarly communication program that was focused on issues surrounding journal publishing and included faculty from a variety of disciplines. These groups helped the librarians understand the needs of the faculty. In addition, areas where the faculty were confused and those library services they were unaware of were highlighted. Focus groups on scholarly research could be an effective way for librarians to enter the conversation.

Support of professors going through the tenure process is another area where librarians can easily enter the scholarly conversation. As Lankes points out, professors are more motivated and in need of help at this point in their career than at any other time. If librarians reach out to these professors, and if faculty support librarian involvement in the process, a myriad of benefits could follow. By performing a citation analysis for the professor, libraries can validate the results. Hopefully, professors who are successful in their bid for tenure will remember the librarian who helped them along the way and become advocates for library service. So many of the examples we have seen in our discussion of the Atlas suggest that face-to-face interaction is one of the keys to getting members to use library services. Let’s get professors hooked at the start of their career so they will continue to use, and facilitate the use of, library services.

**CONVERSATION STARTERS**

1. Is there also a responsibility on the part of the professor to reach out to librarians and acknowledge the importance of the services they provide?
2. Do the professors need to reassess their perception of the status of librarians in order to take full advantage of what librarians have to offer them?
3. How can librarians insert themselves into scholarly communication when an increasing amount of research is done virtually?
4. Is this another argument for the embedded librarian?

**RELATED ARTIFACTS**


How are contemporary school libraries inviting and creating spaces for rich conversations that lead to learning with students? How can expanding the concept of information literacy act as a catalyst for knowledge construction? How might school librarians get away from the traditional emphasis on “information objects” in the library space and instead posit the facilitation of learning as the primary mission of the school library? If school librarians are in the change business, how can we disrupt a standardized test-driven culture in favor of an inquiry-driven paradigm that is directed by conversations rather than knowledge consumption? The concepts of new librarianship support school libraries’ efforts to achieve these program goals.

Creating Conversations for Formal Learning

The four major standards for 21st Century Learners from the American Association of School Librarians include:

- **Standard 1** Inquire, think critically, and gain knowledge
- **Standard 2** Draw conclusions, make informed decisions, apply knowledge to new situations, and create new knowledge
- **Standard 3** Share knowledge and participate ethically and productively as members of our democratic society
- **Standard 4** Pursue personal and aesthetic growth

These standards can be a vehicle for an inquiry-driven school library program that privileges questions and conversations. How do we use a framework of participatory librarianship to create conversations around these standards for learning with students?

One way that school librarians can create conversations about information evaluation and social scholarship is through the active creation and integration of research pathfinders into library instruction. By integrating traditional forms of information sources, such as widgets for databases and for the card catalog as well as emerging forms of social scholarship, such as RSS feeds from Twitter and blogs, or embedding YouTube videos, school librarians can open up conversations with students about the concept of authority. The use of both traditional and nontraditional information sources in research pathfinders provides a springboard for questions and discussions about when and how to use particular information sources for a range of information-seeking tasks.

School librarians can also create conversations about collaborative knowledge building using wikis and inquiry based activities that engage students through collaboration, cooperative construction, and knowledge sharing. For example, I created and facilitated a wiki to support tenth graders’ exploration of how individuals and groups are
using social media for social good. Through this wiki, students could share links to articles, videos, and blog posts that discussed ways that people are using social media for charity and social justice; through the wiki, students could dialog with each other about the ideas they were discovering in their research. School librarians can also integrate face-to-face learning experiences that support an inquiry stance on information literacy. To reinforce the discussions taking place on the class wiki, I borrowed an activity from Dr. Bob Fecho, professor of Language and Literacy Education at the University of Georgia, to spark conversations among students. The “speed dating” article activity involved students working in small groups to do rotating three-minute interviews of each other about the “social media for social good” information sources they had posted to the class wiki. As students interviewed each other, they took notes on the ideas that stood out in the interviews; the culminating activity was to then share these interview notes on the class wiki. This activity gave students the opportunity to converse and construct knowledge as they shared their findings and reflections on the ideas from their research.

School librarians can help students create conversations about adaptability and research strategies by teaching students blogging skills and strategies. As part of extended inquiry into issues facing Africa, students blogged multiple times each week. Some blog entries were reader response journals for the book they and their literature circle were reading; these books, fiction and nonfiction works, reflected one or more issues related to Africa and were selected from a menu of texts by each group. In addition, students engaged in conversations with themselves as well as their peers through weekly research reflections. In these blog entries, students wrote about challenges, successes, and questions they were encountering as they researched their chosen issue.

The school library is the perfect place to engage in conversations about digital citizenship and ethical use of information. If you are teaching presentation zen skills, ways to share and create new knowledge through new media tools like video, Glogster, or Voice Thread, seize these learning experiences to create conversations about fair use or Creative Commons licensed media. If you are facilitating the traditional research paper, create conversations about giving appropriate credit and ethical use of information through citation support tools like Noodletools or Zotero.

A participatory philosophy can support school librarians’ efforts to convey ideas about alternate representations of knowledge, organizing knowledge, sharing learning reflections, and sharing resources. Multimedia medium, such as VoiceThread, student-created videos, and Glogster, are tools that students can use to create learning artifacts that are not text-centric and allow for alternate ways of representing key information. Students can use music, images, and other sounds to represent and create conversations about learning. Video and VoiceThread can also be used for students to verbally share what they are thinking and to verbalize their reflections or thoughts about their knowledge-creation process. The use of cloud computing tools like Google Sites allow students to leave comments and develop conversational threads on specific web pages they create for learning and research portfolios; on a larger scale, they may invite conversation from the community because their Web sites are viewable worldwide.

Social bookmarking tools also create opportunities for conversations about knowledge and authority. At the Unquiet Library, I work with teachers to create class groups for research projects using Diigo; students can share bookmarked resources—whether they be videos, database articles, Tweets, blog posts, or web pages—with their peers in the group. Diigo also allows students to leave comments and indicate whether they “like” a bookmarked resource. Students can even share their sticky notes with their annotations of the web page with the general public, or they can share them within the class group. This form of note-sharing can be a conversation starter as students compare ideas and information.

Skype is another tool that has great potential for creating conversations within and outside of the physical library space. Many authors are now offering virtual visits via Skype in which they re-create their traditional physical visit. Students and the author can easily interact through verbal discussion via a webcam in real time, creating conversations about reading and writing. In addition, Skype can be a window to a world of experts on issues that students may be researching in which conversations can take place between students and scholars.

Creating Conversations for Community

One of the most popular tools for conversations I have used to create conversations about books, reading, and genres in my library is the use of book displays. Creative and attractive book displays not only draw foot traffic to specific collections or genres of books, but they also provide an opportunity for students to engage in conversations about books and authors with each other as well as adults, including teachers, administrators, and library staff. Physical arrangement of collection, such as bookstore-style shelving strategies, can also engage students in conversations about books and favorite topics, genres, or authors of interest.
Displays don’t have to be just about information objects for students. The display of student work, such as poetry and artwork, can be a catalyst for conversations about learning in the school library. Each spring, we support and host poetry readings in collaboration with classroom teachers that we record and share via podcasts and/or slidecasts to highlight student work. In addition, we have a “poetry clothesline” that we have in the commons area of our library featuring student-created poems as well as student-selected poetry of famous (and not so famous) poets. Inevitably, students are engaging in conversation with each other about their work and with library staff about the poems. We also host rotating displays of student-created artwork to celebrate student creativity while encouraging conversations about the artwork.

Celebrating student passions is another way to create conversations in the school library. We have adapted the Geek the Library campaign as a way of making what students “geek” or love visible in the library. Students can share what they “geek” with silver Sharpie pens and black construction paper; once they have completed their “geek” flyer, they hang it from our display clothesline in the library. The “geek” flyers are frequently the center of inquiry and discussion among students and teachers who visit the library.

Physical space also plays a significant role in supporting a conversation-friendly environment in the school library. Café-style tables, comfortable lounge seating, and strategic placement of seating can create spaces for learning that are conducive to collaborative work and discussions, whether students are simply hanging out, using our library laptops, or working in small groups. Students are encouraged to share suggestions for furniture purchases and physical arrangement; their input has been instrumental in the physical space we have today in our library and, consequently, the rise of our library as a popular gathering spot for informal and formal learning.

The library’s web presence and use of social media are important mediums for supporting and igniting conversations. Our patrons can dialog with us and with each other about resources, announcements, and library activities on our blog, Twitter, Flickr, Slideshare, Friendfeed, and our Facebook fan page. In addition, we host a Meebo chat room three nights a week to answer any reference questions students may have. Our YouTube channel also features student and teacher interviews, in which participants share ideas and reflections about library program activities and learning experiences. Students and teachers can also complete a Google form to submit materials requests for items they would like to see in circulation. I also frequently incorporate polls, such as PollDaddy, into our research pathfinders to get student feedback on the resources we are using and to know what is working for them as learners. Text-based polls with Poll Everywhere always get discussions started when used to introduce an information literacy lesson.

Play is another way of engaging conversations in the school library. One of our most popular areas is the puzzle table; at any given time, you will usually find a hive of activity and conversation happening here, whether it be students, teachers, or a combination of the two. We also use playful learning activities, such as Readers’ Theater, to help students learn and converse about information literacy topics through fun and creative student-performed skits. Lunch trivia sessions, complete with food, also bring in students and stimulate animated conversations as well.

Transparency of the library program is also vital for creating conversations with library stakeholders. Whether we are posting and blogging our monthly report in traditional text format or with video, the sharing of monthly reports can be a springboard to cultivating collaborative partnerships with faculty, administration, and partners in education, as well as district officials and fellow librarians around the world. Our social media presence is also an important vehicle for communicating what our library does for our students and school and to invite conversation about those happenings.

By establishing a climate of participation, risk-taking, acceptance of “messy” learning, and inquiry, we can create conversations that in turn create school libraries that are responsive and organic. A participatory approach to librarianship can ultimately lead to learning experiences that, in the words of Steve Jobs, “make a dent in someone’s universe.”
SCHOOL INFORMATION MANAGEMENT SYSTEMS

MAP LOCATION
G, 6

THREAD LOCATION
Page 113

SCAPE

Growing Importance of Two Way Infrastructure  
managing two-way information flows becomes complex  
School Information Management Systems  
will be influenced by  
Evolution of Systems

Figure 216

SELECTIVE DISSEMINATION OF INFORMATION

MAP LOCATION
E, 1

THREAD LOCATION
Page 72

SCAPE

Knowledge  
an example is  
Selective Dissemination of Information

Figure 217
“Sense-making” and “sensemaking” may be pronounced the same, are almost written the same, and are based on similar constructivist perspectives, but they are not the same. When speaking about individuals making sense of their world and their environment, two prominent ideas lead this discussion. The first is “Sense-Making” as championed by Brenda Dervin (Dervin & Nilan, 1986), and the second is “sensemaking” by Karl E. Weick (Weick, 1995). Sensemaking according to Weick will be the adopted approach, but because of the similarity in terminology and to remove the possibility of confusion, Dervin’s approach deserves a brief overview first.

Dervin’s Sense-Making focuses on the individual as he or she moves through time and space. As this happens, gaps are encountered where the individual must “make sense” of the situation to move, physically or cognitively, across the gap. The key components in this process are the situation, gap, and uses. The situation is the context of the user, the gap is that which prevents movement, and the use is the application of the sense that is constructed (Dervin, 1999). In this sense, Dervin’s approach is monadic because it focuses on the individual and the sense that the individual makes as he or she is trying to cross the gap. This is in contrast to Weick, who focuses on group sensemaking as at least dyadic but more often triadic or polyadic. In other words, Weick focuses on multiple people working together to make sense. Although this contrast between the group and the individual is significant, Dervin’s approach has the same philosophical roots as Weick’s. Dervin (1999) states: “I have described Sense-Making as a constructivist approach, while now I describe it as post-constructivist, or postmodern modernist” (p. 730). Although Weick and Dervin have both been associated with constructivism, Dervin does not directly link Weick’s sensemaking with her own Sense-Making but as one of many “parallel approaches” (Dervin et al., 2005).

1. Because the wording of Dervin and Weick’s terminology are so close, “Sense-Making” will be used when referring to Dervin’s concept and “sensemaking” will be used when referring to Weick’s concept. This follows each author’s conventions.
There are many uses of the term sense making as phenomena in the literature (spelled myriad different ways) which have no relationship to Sense Making Methodology. For example Weick's (Weick, 1995) Sensemaking in organizations looking at organizational life by examining the phenomenon [of] sensemaking. (Dervin, 1999, p. 729)

Although Dervin does not link Weick to her work, they both follow a constructivist approach. This is demonstrated especially by Weick's conceptualization of equivocality (Weick & Sutcliffe, 2001, p. 10). In contrast to Dervin, Weick's major works do cite Dervin or trace his conceptualizations to her work (Weick, 1969, 1993, 1995, 2003, 2005, 2006, 2007; Weick & Roberts, 1993; Weick & Sutcliffe, 2001; Weick, Sutcliffe, & Obstfeld, 2005; Wenger, 1999, 2001, 2005a, 2005b; Wenger, McDermott, & Snyder, 2002; Wenger & Snyder, 2000; Wenger, White, Smith, & Rowe, 2005). There are other constructivist approaches that one could consider, such as Habermas. However, as one researcher under the supervision of Brenda Dervin stated: “I suggest that current theory based upon Habermas’ theories of communicative action and the public sphere may be too limited for describing grounded communicative practice within online environments” (Schaefer, 2001, p. ii). In summary, Weick's view of sensemaking as a group activity is more relevant for library communities than Dervin's monadic approach, which focuses on individual Sense-Making. Therefore, the discussion now focuses on Weick.

The theoretical framework for the organizational perspective of this study will be that of sensemaking as described by Karl E. Weick in Sensemaking in Organizations (Weick, 1995) and Managing the Unexpected: Assuring High Performance in an Age of Complexity (Weick & Sutcliffe, 2001). These works were foreshadowed in his first book, The Social Psychology of Organizing (Weick, 1969). Sensemaking had its foundations in several significant case studies where Weick investigated complex situations to understand how human beings tried to make sense out of seemingly contradictory information. The majority of Weick’s work was in “public sector organizations,” with only a few in “commercial” organizations (Weick, 2006, p. 1733). Unfortunately, he has not written about the nonprofit sector or libraries. Two significant examples of his approach are studies of the flight deck of an aircraft carrier (Weick & Roberts, 1993) and a firefighting disaster (Weick, 1993). Sensemaking does not have a strict definition per se, but here are several examples from Weick.

The basic idea of sensemaking is that reality is an ongoing accomplishment that emerges from efforts to create order and make retrospective sense of what occurs. (Weick, 1993, p. 635)

Sensemaking is about the enlargement of small cues. It is a search for contexts within which small details fit together and make sense. It is people interacting to flesh out hunches. It is a continuous alternation between particulars and explanations with each cycle giving added form and substance to the other. (Weick, 1995, p. 133)

To talk about sensemaking is to talk about reality as an ongoing accomplishment that takes form when people make retrospective sense of the situations in which they find themselves and their creations. There is a strong reflexive quality to this process. People make sense of things by seeing a world on which they already imposed what they believe. In other words, people discover their own inventions. This is why sensemaking can be understood as invention and interpretations understood as discovery. These are complementary ideas. If sensemaking is viewed as an act of invention, then it is also possible to argue that the artifacts it produces include language games and texts. (Weick, 1995, p. 15)

Sensemaking is about authoring as well as interpretation, creation as well as discovery. (Weick, 1995, p. 8) Organizational sensemaking is first and foremost about the question: How does something come to be an event for organizational members? Second, sensemaking is about the question: What does the event mean? (Weick et al., 2005, p. 410)

The constructivism is in part revealed in Weick by his emphasis on using gerunds as opposed to nouns (Gioia, 2006) and not using the term “is” but rather by giving descriptive statements about something or someone (Weick, 2007). Describing Weick's perspective, Dervin says: “There is no such thing as organization. There is only organizing” (Dervin, 2003, p. 116). The point in both cases is to move away from viewing reality as a collection of static, fixed entities (nouns) to viewing reality as ever-changing entities. “It is about the ‘process of becoming’ rather than the ‘states of being’ ” (Gioia, 2006, p. 1711). “Now when you think in terms of verbs and gerunds, it changes the way you talk about and understand phenomena. … The conversation changes when you emphasize verbs and gerunds. And that’s one of the main reasons why, when you take a ‘Weickian’ view, you cannot help but see things differently” (Gioia, 2006, p. 1711).
These descriptions of sensemaking speak of creation, sharing, interacting, cyclical activity, and people engaging each other to create a better understanding of their world and their work. Weick identifies seven distinguishing characteristics of the sensemaking process:

1. Grounded in identity construction
2. Retrospective
3. Enactive of sensible environments
4. Social
5. Ongoing
6. Focused on and by extracted cues
7. Driven by plausibility rather than accuracy (Weick, 1995, p. 17)

Having provided a brief overview of sensemaking, it’s time to examine the constituent parts of sensemaking.

Identity Construction

The issue of identity begins with Weick’s iconic question: “How can I know what I think until I see what I say” (1995)? In this statement, all four pronouns are all “I.” Sensemaking begins with the individual and the sense that the individual makes of a situation. This discussion with one’s self is the first step that then allows one to make sense with others. Sensemaking is a complex process by which the individual, through interaction with self and others, defines the self. “The trap is that the sensemaker is singular and no individual ever acts like a single sensemaker. Instead, any one sensemaker is, in Mead’s (1934) words, ‘a parliament of selves’ ” (Weick, 1995, p. 18). This follows the logic of Pask and conversation theory as described in the Thread on conversation. This is the conversation with self. Likewise quoting Knorr-Cetina (1981, p. 10), Weick identifies with the understanding that “the individual is a typified discursive construction” (Weick, 1995, p. 20). Even when individuals are “alone,” they are engaging themselves because every individual is a collection of selves. In other words, no individual is truly a lone sensemaker. Although this may seem to simply lead to schizophrenia, the “more selves I have access to, the more meanings I should be able to extract and impose in any situation,” and “the less the likelihood that I will every find myself surprised” (Weick, 1995, p. 24). “Thus, identities specify relationships that are central to the social nature of sensemaking among diverse actors” (Weber & Glynn, 2006, p. 1646). Identity construction is about making sense of the entities, individuals, and organizations in the sensemaking situation. These identities are constructed by looking back on what has been said, as the initial questions implies. There can be no sense before the conversing begins. In Weick’s terminology, this aspect of sensemaking is retrospective.

Retrospective

Sensemaking is ongoing and retrospective, making sense of what has happened (Gioia, 2006; Weber & Glynn, 2006; Weick, 1995). It is not a prospective activity. Individuals make sense of what people have said and done and therefore cannot make sense about what has not yet been said or done (i.e., the future). “Sensemaking involves the ongoing retrospective development of plausible images that rationalized what people are doing” (Weick et al., 2005, p. 409). In summary, individuals consider and contemplate the conversations, artifacts, and happenings and try to make sense of them. It is the process of attending to that which has occurred, looking back from the now to the past, recognizing that it is subject to the fallibility of memory, and can be very misleading (Weick, 1995). Although this process may seem hopeless, humans are nevertheless able to navigate the world despite the weakness of the incompleteness of the individual’s ability to understand what has happened. This leads to the need for other voices to assist in sensemaking as described above. The “more selves I have access to, the more meanings I should be able to extract and impose in any situation” and “the less the likelihood that I will every find myself surprised” (Weick, 1995, p. 24).

Enactive of Sensible Environments

Sensemaking is a combination of “action and cognition together” (Weick, 1995). Weick refers to this as “enactment.” This speaks to the fact that individuals participate in their environment. As they are creating their environment, they are also making sense of it. People are making sense of dynamic environments “not some kind of monolithic, singular, fixed environment that exists detached from and external to those people” (Weick, 1995, p. 31). The individual is part of the environment through the process of co-constructing it with fellow sensemakers. This is why sensemaking is not just interpretation. Interpretation is about reading a “text.” Sensemaking involves not only understanding the text but also creating the text.
Enactment is the stubborn insistence that people act in order to develop a sense of what they should do next. Enactment is about two questions: What’s the story? Now what? When people act in order to answer these questions, their acting typically codetermines the answer (Weick, 2003). Sensemaking is not simply interpretation because it also includes “the ways people generate what they interpret” (Weick, 1995, p. 13). The sensemaker makes the environment, and the environment makes the sensemaker. From this perspective, individuals can never fully be neutral or objective about themselves or their sensemaking process. “If this is ontological oscillation, so be it. It seems to work” (Weick, 1995).

Social
Sensemaking is “both an individual and social activity,” and it is unclear whether these are separable because this activity is “a durable tension in the human condition” (Weick, 1995, p. 6). It is an individual and a collective process at the same time. Sensemaking recognizes that “the social context is crucial … because it binds people to actions that they then must justify, it affects the saliency of information, and it provides norms and expectations that constrain explanations” (Weick, 1995, p. 53). As Weick says, “Sense may be in the eye of the beholder, but beholders vote and the majority rules” (Weick, 1995, p. 6). “What is especially interesting is that she tries to make sense of how other people make sense of things, a complex determination that is routine in organizational life” (Weick et al., 2005). This is essentially second-order cybernetic systems as described by Pask, systems of observing systems (Pask, 1975a, 1975b, 1976). This is the individual conversing with self about the conversing of others. In every case, conversation is at least dyadic because two or more parties are involved. From this perspective, sensemaking is most significant (as opposed to Dervin) for the organizational context that affects the sensemaking process in the library. The organization or library affects sensemaking because: “(1) institutions prime sensemaking by providing social clues; (2) institutions edit sensemaking through social feedback processes; (3) institutions trigger sensemaking, posing puzzles for sensemaking through endogenous institutional contradiction and ambivalence” (Weber & Glynn, 2006, p. 1648). Because libraries consist of individuals who are constantly making new “sense” of their situations, the whole process is ongoing. This takes place in the context of the library among its staff, members, and other stakeholders.

Ongoing
“Sensemaking never starts. The reason it never starts is that pure duration never stops” (Weick, 2006, p. 43). The sensemaker can only live in the here and the now. For the sensemaker, the “now” never really began, and as long as there is consciousness, it never really ends. One is always in the process of making sense. From this standpoint, sensemaking has no past tense. People were making sense, are making sense, and will be making sense but have never totally made sense of something. “Sensemaking is clearly about an activity or a process…” and not just an outcome (Weick, 1995, p. 13). As people are making sense, there are always new stimuli that affect the process and the sense. “The contrast between discovery and invention is implicit in the word sense. To sense something sounds like an act of discovery. But to sense something, there must be something there to create the sensation. And sensemaking suggest the construction of that which then becomes sensible” (Weick, 1995, p. 14). Although life provides the stimulus for sensemaking, the reason that sense must be made is because there is a continual gap, problem, or cognitive dissonance. As Weick says, “My one contact with the real seems to have been my dissertation in 1961 on cognitive dissonance” (Weick, 2006, p. 1734). That is, “the interruption, the inconsistent, the inexplicable,” which causes one to have to make sense of the situation (Weick, 2006, p. 1734). Because this dissonance is a recurring event, it leads to a “reciprocal interaction of information seeking, meaning ascription, and action” (Thomas, Clark, & Gioia, 1993, p. 240). Problems are “constructed from the materials of problematic situation which are puzzling, troubling, and uncertain” (Weick, 1995, p. 9). For the sensemaker to resolve the dissonance or problematic situation, he or she will look for clues in the environmental context as part of the sensemaking process. This is a continuing process because the problems forever present as long as there is movement through time and space.

Focused on and by Extracted Cues
When applying sensemaking, it is essential to look not at the act of deciding itself but the circumstance or context that resulted in that action. Understanding the contextual circumstances leads one to asking “how” the situation came to be rather than “why” a decision was made (Weick et al., 2005). This will help identify the clues that informed the sensemaking process. The context not only provides the cues, it contains the patterns of cue usage. The organizational culture may emphasize certain sources for cues and ignore others. In this
way, the organization tells the sensemaker where to look for cues. In Wenger’s terms, the sources of cue location are the result of reification as patterns are built through participation. To put it another way, “the social context is crucial for sensemaking because it binds people to actions that they then must justify, that constrain explanations” (Weick, 1995, p. 53). The context helps one determine where people are directing the focus of their intention, where the cues are coming from. In the library, these clues are created through classification schemes, signage, metadata, library catalogs, and all the other means that libraries use to guide, direct, and instruct their members.

**Plausibility over Accuracy**

When looking at the sensemaking process from extracted clues, one must remember that “sensemaking is driven by plausibility rather than accuracy” (Bansler & Havn, 2006, p. 61). Accuracy is secondary to plausibility for several reasons. First, people are constantly filtering the cues that affect their decision making. Next, people tend to link present cues with previous cues and build present sense on sense made in the past. Third, people often lack the time necessary for accuracy before they act. Their sense just needs to be good enough for the next step. Finally, accuracy is more relevant for short durations and for specific questions than for global circumstances (Weick, 1995). In short, the explanation of the sensemaking process must “make sense” not necessarily “be accurate.”

Sensemaking is about accounts that are socially acceptable and credible…. It would be nice if these acceptable accounts were also accurate. But in an equivocal, postmodern world, infused with the politics of interpretation and conflicting interests and inhabited by people with multiple shifting identities, an obsession with accuracy seems fruitless, and not of much practical help either. (Weick, 1995, p. 61)

While sensemaking, people “read into things the meanings they wish to see; they vest objects, utterances, actions and so forth with subjective meaning which helps make their world intelligible to themselves” (Frost & Morgan, 1983). When people are sensemaking, they are not striving for accuracy but rather plausibility and sense. If it seems plausible and is sufficient to provide the necessary meaning to take the next step, that is accurate enough for the person to act. Whether that is the “correct action” is a separate question. This was seen in the Mann Gulch fire. One plan of escape made sense to most of the firefighters. Although the plan for escape made sense to them, it was inaccurate and led to their deaths. The accurate plan did not make sense. This is a prime example of individuals acting on sensibility, what makes sense, instead of accuracy (Weick, 1993). So, when trying to understand what happened, one must consider what was plausible to the sensemakers even if their sense was or is inaccurate.

**Summary**

Sensemaking in organizations and libraries is an ongoing process that never begins and does not end as long as the organization continues. “First, sensemaking occurs when a flow of organizational circumstances is turned into words and salient categories. Second, organizing itself is embodied in written and spoken texts. Third, reading, writing, conversing and editing are crucial actions that serve as the media through which the invisible hand of institutions shapes conduct …” (Weick et al., 2005, p. 409).

Through this process of sensemaking, decisions are made leading to behavior. However, sensemaking and decision making are not the same. The difference between decision making and sensemaking is that “the former prompts us to blame bad actors who make bad choices while the latter focuses instead on good people struggling to make sense of a complex situation” (Eisenberg, 2006, p. 1699). The goal of the library then should be to help the member make sense of the resources that the library contains, whether those resources are human, digital, or artifactual. This is an ongoing process that never ceases and requires conversing among all the library stakeholders. The requires librarians to embrace this dynamic, conversational process and understand that librarianship is about facilitating sensemaking and not about achieving a static state where every item finally has “the right label” and is “in the right place.”

**Related Artifacts**


Dervin, B., Fisher, K. E., Durrance, J., Ross, C., Savolainen, R., & Solomon, P. (2005). Reports of the demise of the “user” have been greatly exaggerated: Dervin’s sense-making and the methodological resurrection of the user-looking backwards, looking forward. *Proceedings of the American Society for Information Science and Technology*, 42(1).


Service is not Invisibility redefines therefore Importance of Action and Activism

Figure 219
SERVICE IS NOT INVISIBILITY

MAP LOCATION
F, G, 3

THREAD LOCATIONS
Pages 33, 119

SHARED SHELVES WITH THE COMMUNITY

MAP LOCATION
E, 3

THREAD LOCATION
Page 68

Scape Diagrams:

Figure 220: Service and Conversants

Figure 221: Access and Shared Shelves with the Community
SHELVING

MAP LOCATION
F, G, 8

THREAD LOCATION
Page 166

SCAPE

Agreement Description

See also Shared Shelves with the Community

Related Artifacts

SHIFT IN INNOVATION FROM ACADEMY TO UBIQUITY

MAP LOCATION
D, 8

THREAD LOCATION
Page 178

SCAPE

Figure 223
SOCIAL JUSTICE ISSUES

MAP LOCATION
F, 7

THREAD LOCATION
Page 124

SCAPE

![Diagram showing Importance of Action and Activism leading to Social Justice Issues]

AUTHOR
Jocelyn Clark

Figure 224
Broadly speaking, social justice issues reflect movements that push for greater voice and more representation for underrepresented or underpowered communities. Because libraries and librarians are tasked to serve all communities, we are inherently involved with and must be aware of issues of social justice. Ideals near to the heart of social justice advocates are egalitarianism, balance of power, social advocacy, public service, and diversity awareness. All of these issues are reflected in the work that librarians do to serve our communities. Specific social justice issues encompass many areas, and I list a few here just to help guide our thinking: racism, poverty, ageism, immigration policy, sexism, civil rights, mental health activism, homelessness, labor law, environmentalism and environmental justice, and so on. There are many ways in which librarians can address social justice needs with community, and I present some of them below.

Promoting awareness of social justice issues is one way to “improve society” because awareness of an issue is the first step to education and change. However, discussions around social justice can be fraught with controversy. Clearly, not everyone agrees with the basic assumption of creating a more egalitarian society, and even if they do, the methods to achieve change are controversial. You can start by discussing Spanish-language services and services to undocumented immigrants to see the sparks fly. However, the existence of controversy does not release us of responsibility to address issues of social injustice, provide services to ALL of the community, and maintain awareness of the impacts of our work.

One of the traditional ways to support social justice in a library is collecting and providing access to materials that specifically address social justice issues. People often look to the libraries when researching topics such as immigration policy. To effectively support a debate or conversation about a social justice topic, librarians can provide access to conversations, thoughts, and materials with multiple viewpoints. Libraries and librarians have a responsibility to be knowledgeable about the current social issues such that they can provide access to materials that represent the debate. This is more or less the traditional role of the librarian, to provide access to all viewpoints without inserting oneself in the debate. We have to keep reminding ourselves that only with access to ALL material can we truly understand the issue. Yes, both the Rush Limbaugh book, *The Way Things Ought to Be*, and Al Franken’s, *Rush Limbaugh Is a Big Fat Idiot*, should be in the library—despite with whom you agree. Librarians engaged in social justice issues, such as Kathryn de la Peña McCook, advocate developing information resources around legislation and political action as another method of furthering social justice. To engage in conversation around social justice issues, the conversants should have access to up-to-date information on the current political situation.

School library media centers have gained a lot of attention lately as vehicles to address social justice issues. Bush (2009) gathers a number of writings together from American Association of School Library’s journal, *Knowledge Quest*. These articles address issues of civic responsibility in school libraries. Moffat (2005) also addresses integrating social justice programs and resources into a school media center.

Another method to support social justice is through reference work and research. Topics around social justice are rife with inaccuracies, hearsay, rumor, and propaganda—just like many other topics. Providing authoritative and reliable materials to dispel inaccurate information is essential to supporting social justice. The conversation on a particular topic should be based as much as possible on fact rather than propaganda. Inaccurate and unsubstantiated resources do not necessarily have a place in the discussion, and it is up to librarians to decide which resources will be made most accessible and to encourage our members to choose resources appropriate to the discussion.

One of the more active ways that librarians can engage in social justice activities is by designing outreach services that meet the needs of underrepresented communities. In-home delivery service to seniors, non-English-language services, even Internet access services can all be argued to be services for communities with unique needs. Stoffle (2007) addresses the use of new digital technologies to address the needs of underserved populations.

To take this a step further, by abandoning the role of unbiased mediator and taking positions on issues of social justice, we can use our roles to work for change. Several professional organizations support librarians who choose to combine their professional and personal political beliefs. I’ve listed at least some below, including the Progressive Librarians Guild and Radical Reference.

Last, I’d like to call attention to one individual who led the way in activist librarianship: Sanford Berman. I’ve listed only one of his many writings in the Resources section (Berman, 1993), but there is a Web site, http://www.sanfordberman.org/, which has an interesting biography and collection of works. Sanford Berman is an activist librarian/cataloguer who worked on revising the Library of Congress Subject Headings to remove bias. McCook and Phenix (2007) pre-
pared a list of other activist librarians and their contributions to human rights through their professional actions.

CONVERSATION STARTERS

1. How do librarians promote issues of social justice while also promoting a balanced perspective?
2. Can and should you keep your own moral/ethical/religious values from influencing the goal of knowledge creation?
3. What is the difference between taking a position advocated by a profession versus a personal position? How do librarians determine whether to represent their own moral position or that required by the responsibility of the position/profession? Are guerrilla librarianship tactics ethical?
4. Does taking a position on social issues help or hinder the ultimate goal of knowledge facilitation in the community? How does the perception of a librarian as activist change how a community might view his or her work?
5. Is it our job to see both sides of a debate and represent each equally? What does it mean to represent a fair and balanced perspective on an issue?

RELATED ARTIFACTS


Annotation: Discussion of the life-long efforts of Sanford Berman to rid the Library of Congress subject headings of those with historical or social bias. There are many of Sanford Berman’s writings available in other forms and places.


Annotation: A collection of mini-biographies of various librarians involved in working for human rights and social justice.


Annotation: A study of the academic experiences of lesbian, gay, bisexual, transgender, and questioning (LGBTQ) individuals and an examination of the role that LIS professionals can play in forwarding institutional change using the following LIS roles and services: (1) collection and resource development, (2) social and community information sharing, (3) social justice representation and advocacy, (4) outreach and community building, and (5) information dissemination.


Annotation: This chapter provides some specific ideas about methods of bringing social justice issues into a school library. She also provides lists of resources on particular topics.


Resources

Peace Project list of DVDs. http://peaceproject.com/books/av.htm
Social Justice Lecture Series/District of Columbia Public Library

Blogs

Librarian at the Kitchen Table: http://librarianoutreach.blogspot.com/
Union Librarian: http://unionlibrarian.blogspot.com/

Library Activist Groups

Information for Social Change http://libr.org/isc/

Annotation: From website: “Information for Social Change is an activist organization that examines issues of censorship, freedom, and ethics among library and information workers. It is committed to promoting alternatives to the dominant paradigms of library and information work and publishes its own journal, Information for Social Change.”
This group is in liaison with the UK library organization: Chartered Institute of Library and Information Professionals (CILIP).


Annotation: From website: “Librarians for Peace is an ad hoc group of librarians and library workers, mainly Americans but also people of other nations, using the internet to organize and lobby against armed conflict where we consider it unnecessary, with a focus on our own country and its allies.”

Library Underground—a guide to alternative library culture.
http://www.libraryunderground.org/


Annotation: The development of public libraries was initially spurred by popular sentiment, which for one reason or another held that real democracy requires an enlightened citizenry and that society should provide all people with the means for free intellectual development. Members of PLG do not accept the sterile notion of the neutrality of librarianship, and we strongly oppose the commodification of information that turns the “information commons” into privatized, commercialized zones. We will help to dissect the implications of these powerful trends and fight their anti-democratic tendencies.


Annotation: Mission statement from website: “Radical Reference is a collective of volunteer library workers who believe in social justice and equality. We support activist communities, progressive organizations, and independent journalists by providing professional research support, education and access to information. We work in a collaborative virtual setting and are dedicated to information activism to foster a more egalitarian society.”

Social Responsibilities Round Table of the ALA. http://libr.org/srrt/

Annotation: “SRRT is a unit within the American Library Association. It works to make ALA more democratic and to establish progressive priorities not only for the Association, but also for the entire profession. Concern for human and economic rights was an important element in the founding of SRRT and remains an urgent concern today. SRRT believes that libraries and librarians must recognize and help solve social problems and inequities in order to carry out their mandate to work for the common good and bolster democracy.”

The Network: Tackling social exclusion in libraries museums, archives and galleries
http://www.seapn.org.uk/

Annotation: Mission from website: “To assist the cultural sector, including libraries, museums, archives and galleries, heritage, and other organizations, to work towards social justice.”
The Atlas defines Social Literacy as (i) the power of identity in groups, and (ii) the process of defining and expanding social groupings to further our aims (p. 93). Although the recent emergence of online social networking tools has reminded us of the need for librarians to facilitate social literacy, it is an issue that has been present and in need of attention in libraries much longer than Facebook has been around.

The Atlas argues that literacy is a radical topic and librarianship is a radical profession. The truth of this statement shines through in the argument that librarians must work to facilitate social literacy within the profession in the same way they facilitate the social literacy of members. There are some serious issues with social literacy in libraries, and librarians cannot ignore them if they want to facilitate social literacy among members. In the library, there are librarians and nonlibrarians, and the groups are clearly defined. This division affects members, nonmembers, paraprofessionals, and librarians alike. If social literacy is the power of identity in groups, the social literacy of libraries is divided and ineffective. If the librarian and nonlibrarian groupings identify themselves as separate groupings that simply function in the same space, neither will be able to clearly define themselves or their aims. Ultimately, the library will not function in a way that serves the needs of its community.

As librarians define their identity as separate from the rest of the library staff, members, and nonmembers, they deny those groups’ input in defining their identity. Let’s return to the Atlas’ other definition of social literacy, the process of defining and expanding social groupings to further our aims. If librarians want to play a role in this process as they facilitate other groupings’ social literacy, they must open their own grouping first so they can learn what their new role is and embrace it.
If librarians are to facilitate social literacy, must they participate in defining member groups? Can they define these groups if they are not a part of it? Reason says no. How can you define a group if you do not have intimate knowledge of it from within? Imagine defining a word after seeing it written alone, without a context. Instead of defining librarians based on their title, libraries are beginning to define their role based on the groupings they serve. As their role is redefined, librarians are becoming a part of these member groupings. Instead of reading one word, they are reading a paragraph.

One example of active library participation in member groupings is embedded librarianship. Kesselman et al. (2009) define embedded librarians as those who provide information services as a part of the group. They further explain, “Embedded librarians are, first and foremost, integrated into their settings, be they traditional or nontraditional” (Kesselman et al., 2009). They argue that, for librarians to find their place in our increasingly digital and constantly changing world, they must actively engage with the populations they serve regardless of their location, purpose, or aims. Embedded librarians can function in a range of intensities. They may manage a grouping’s online presence and provide digital resources to meet their needs. They may attend regular meetings or simply read a group’s monthly newsletter. No matter what, they must become a part of the groups they serve to facilitate social literacy.

Forrest (2005) discusses a library that took a different approach to librarian involvement in member groups. The Generals Libraries at Emory University found that it is better able to serve the university community by creating market councils for different member groups. By becoming directly and continuously involved in the groups, librarians are better able to define them and provide services that best suit their needs. Two years after the implementation of market councils, the General Libraries at Emory University found they are an effective way to respond to and serve different member groups. Regardless of the setting, librarians must redefine their own grouping and become a part of other groupings if they want to facilitate social literacy.

RELATED ARTIFACTS


Annotation: The General Libraries at Emory University realigned its organizational structure along functional processes. It created market councils for different segments of the university population. The population was divided by area of study as well as certain demographics, undergraduate, international, and so on. The councils’ goal is to ensure that the functional units of the library are aligned with the needs of the subset of members the council serves. As a result, the functional units define themselves according to, or dare I say as a part of, the member group it serves. As a result the library is user-focused and better able to define and serve the needs of different groups on campus.


Annotation: Kesselman et al. first define the embedded librarian, next examine the role of the embedded librarian in higher education, and finally discuss the practical implications of embedding librarians. A librarian can be embedded in any kind of library, within any community, and part of any group. An embedded librarian is one for whom a regular part of work is to provide information and information services as part of a group. Embedded librarians function as part of member groups on an increasingly frequent basis. These librarians facilitate social literacy as parts of the groups they are defining. Some librarians are extremely involved in the groups and others are less active participants, but they are all developing the social literacy of librarians along with that of the groups to which they belong.
AGREEMENT DESCRIPTION

One way that libraries can look at social networking is to see how the business world is beginning to utilize social networking, and how they wrangle with the issue of language levels, because businesses each have their own specialized L₁ language, just as libraries do. However, they also have to be able to talk with other businesses and to people outside of their realm of business who are likely to have a different L₁ language, just as libraries and librarians need to be able to communicate to other libraries with different “dialects” (especially internationally) and to members whose language capabilities range significantly.

From the business side of social networking comes a few NPR shows: Conan’s “Social Networking Grows Up” (Talk of the Nation) discussion of social networking sites between businesses and individuals in different business (Yelp, LinkedIn) serves as a nice counterpoint to “When Is Social Networking Kosher in the Office?” (All Things Considered). Although both deal with how business language and communication styles are being enhanced by social networks, each discusses radically different uses of the sites and even, for that matter, radically different styles of social network sites. The twitter-like Yammer used by the businesses featured on All Things Considered illustrates an already-standing group using previously known language with people they already know in some context. In this case, the program, by its very nature, allows for use of L₀ language (when addressing those outside of your department) or sophisticated L₁ language depending on how the users wish to utilize the tool. Essentially, each company that uses the Yammer can use its own specialized L₁ language within the L₀ language of the tool to create a sophisticated in-company social/business network. The social networking tools mentioned in Talk of the Nation, in contrast, apply standard L₁ language for businesses to connect new people, create conversations that likely otherwise wouldn’t occur due to lack of connections, and enhance those that would have taken place in a traditional setting (What does everyone candidly think about Person X as a worker? What are your skills?). The online forum actually encourages new connections to be formed and for members to discuss items candidly.

In both cases, the user’s experience can, to an extent, be customized. The Yammer users can decide who to ignore and even who they wish to “follow” while being placed in/joining specific groups based around their company’s current organization structure (which I am sure creates real-life conversations and informs others about people’s proclivities), whereas the Yelp and LinkedIn users have relatively the same level of experience customization as Facebook users. They can decide to only search those people they already know, or they can find others based on experience, skills, and so on, to increase their known web of people on the site. What is interesting about the business-oriented tools is that they all have “tiers” of customization based on whether you pay for extra capabilities. A tiered style based on whether you pay for it may not be useful to librarians, but one based on how much you wish to share or a member/librarians’ level in the organization could be useful if a social network of libraries were to be set up.

In the more public realm of Facebook, a customized L₁ “tier” (group) could be created to allow librarians to talk to each other using their specialized language without flooding the members’ accounts with so much techno-jargon.

Olwen’s article about LibraryThing brings up a different idea worth looking at—that of deliberate use of language to achieve a certain effect. Here, it is the act of bringing people together through casual connections that is emphasized, rather than the specific connections the NPR shows seem to focus on. It also displays how language helps you learn and form connections more so than the other two. In contrast, Rolla’s article, “User Tags Versus Subject Headings: Can User-Supplied Data Improve Subject Access to Library Collections?,” provides a more scholarly look at LibraryThing and the differences in language use in the tags the site allows users to add to titles. More than the other articles, it discusses the user’s ability to customize the site and add knowledge to it—in this case, through the use of tagging. Unlike Olwen, Rolla sees LibraryThing’s deliberate rejection of library “rules” as something that libraries should consider trying themselves or at least figuring out how to add members’ contributions to the system to help facilitate knowledge generation, conversations, and build wider networks of people searching for similar items. These two articles may have radically different views about the merits of tagging and the use of social network ideas/usage in a library setting, but both question how language use affects the users of the site. Also, both lead to the question of how a learning space can be created, which appeals to all members just as much as it does to librarians. L₀ language is universal but may lack the specificity required, especially when searching for particular editions on LibraryThing. Also, the same “tag” can mean many different things to many people; even if typically recognized as L₀, much vocabulary plays into individuals’ L₁ languages, making a “standard” the ideal. But whose standard should be used to satisfy all users? Should a new L₁ be created or an already existing one be put in place? The same questions apply to libraries using sites such as Libr-
anyThing to add, show, and share information to other library professionals and the public, as well as to libraries considering adding such features to their own Web sites (see limitations of tagging section).

Kanuka and Anderson’s article provides the theory behind the concepts the other articles look at but never mention. Dated though it may be, it provides a different, more scholarly, look than the other articles on what forms relationships and where people go within and without their social networks for information. The tenets of their work are played out in the Talk of the Nation show, although there are several notable differences, including the willingness of people to seek help outside of their already-established, real-life social networks and how learning is different in the online sites versus a personal network. Kanuka speaks of people’s unwillingness to look outside of current networks, whereas the online social networks of today encourage such behavior to the point where it is almost the norm. Yet the same things are often at stake, and the person still puts him or herself “out there” when a question is asked or any information is shared. As is noted in Talk of the Nation, “You can build your own network of contacts through a social network in the way that you couldn’t with use in other traditional bulletin boards. You can amass a friends’ list. You can join groups within the network. You can share photos. It’s much more of a personal experience.” Within the traditional sphere of social networks, so much information was rarely given out even to those within the sphere, let alone to contacts outside of it.

CONVERSATION STARTERS

1. How different are the actual conversations that occur on a business-based social networking site, a site for your business, or a purely social site for something that interests you? Is it merely the language level (or what L1, language you use) that differs or does the entire learning process change?
2. Does entering a site for, say, equestrian fans demand an L1 knowledge of the subject, or can anyone figure out what’s going on with a little time?

ARTIFACTS/CITATIONS


Annotation: This article is a bit older than would be preferred, and it doesn’t mention social networking sites as we know them today and instead focuses on an online forum. However, it does provide a good summary outline of the basic research behind how people learn in an online space. However, I do wonder whether it is too dated to be of use.


Annotation: This brings up a new mode of communication at use in office situations. The offices have applied social networking forms of communication (specifically, Twitter) to the office situation as a way to cut down on e-mail. Interestingly, although it’s a very “unofficial” mode of communication, most of the posts given out are related to the office and in the L1 language of the office as well. A few posts still come in about what employees are eating, showing a lingering disconnect between tool and language (and perhaps workplace etiquette), but those are the exception.

Interoffice conversations are now sent out to everyone, rather than a select few, which may seem confusing, but it eliminates the problem of deciding who (and in what order) to send an item to people, along with reducing e-mail boxes (which was the point in the first place). The conversations are both larger and smaller. People can, and likely are, ignoring a good deal of the posts that come to them in this way, but every conversation posted is open to a much wider number of conversants than before. What was once strictly a two-person dialogue “Do you happen to know X?” becomes a much larger conversation that all employees can note. Even the log of messages becomes part of an internal dialogue for each person because they can see what their coworkers are up to. One of the interviewees, for example, mentioned that he can use the log to see what each of his employees is doing when, bringing what may not have been noticed before or just internally noted up front where he can examine it.

I found this interesting because of the application of social networking styles of communication to the business world and how easily most of the employees seemed to take to it. I also found the few irrelevant posts interesting because they were the now stereotypical posts about what someone was eating or what they were doing on their free time. I wish that the show had gone on to talk about how it changed the way the offices in question worked, beyond smaller e-mail in-boxes.


Catherine Holahan, a staff writer for Business Week. Tom Watson, the publisher of OnPhilanthropy.com.

Annotation: The host and guests discuss social networking sites as allowing users to create their own spaces with larger ones, using their individualistic L1 languages. It goes into specified sites for certain interests, business-oriented sites, and the customization available in large sites, such as MySpace and Facebook. Knowledge is formed both online and offline in these sites, with people meeting people they “know” from the sites to continue conversations about their topic of choice, as well as to enhance knowledge about each other. People post items related to shared interests, sparking dialogue and informing others. Although, technically, most of the conversation is internal (Person Y reads Person X, Z, and B’s notes on an upcoming dressage competition on an equestrian site and then, with that information, questions whether he should go), there is a lot of dialogue created in bulletin boards, walls, etc…. One of the guests brings up the effect of this level of customization: “I think that one of the biggest differences between the old bulletin boards and the newer social networks is the fact that you can build your own network of contacts through a social network in the way that you couldn’t with use in other traditional bulletin boards. You can amass a friends’ list. You can join groups within the network. You can share photos. It’s much more of a personal experience.”

Here’s one anecdote I found particularly interesting:
MARCY: Well, I am the online publisher and editor-in-chief of a magazine called Root Magazine: Global, Dance, Culture, Where Humanity Comes Together in Movement. And our address is rootmag.typepad.com. And I find my writers, my musicians and dancers through MySpace and TribeNet, online forums and chat rooms and…

CONAN: Wait. You find dancers on MySpace?
MARCY: I do. I find dancers online. There’s a huge network of dancers that talk about their trials and tribulations of the business, costumes…

CONAN: But how do you audition a dancer online?
MARCY: Oh well, that’s very easy. A lot of dancers are uploading videos and specifically on their MySpace pages. So I can see what their troupe does, what they look like, solicit them for possible articles in magazine, find about their influences, their loves, their travels, everything. And I’ve got connections in Africa, Amsterdam, South America, you name it.

[…]

CONAN: And so this has changed the way you do your business.
MARCY: Exactly. It’s absolutely incredible and I find to talk this (unintelligible) as well. So I have to say that without social networking sites, I would be a little bit in the dark on research. And, you know, answers that I have regarding, you know, certain things that might be culturally sensitive, I can immediately go to these online forums and networking sites and ask these questions and get answers (unintelligible).

Marcy uses MySpace as a research center, finding out more about the dance troupe she hires through their sites than she would through a visit to the studio or a traditional interview. It is all information that the troupes readily give, but she feels as though she’s able to learn answers to “culturally sensitive” questions more easily through posting on their websites or forums than she would otherwise. I believe that she, as many others, feels more comfortable soliciting potentially uncomfortable information via these networks than through something as “personal” as a telephone call or e-mail. At the same time, however, she is interacting more personally with the troupes she looks at and may be able to gauge how to ask such a question in a more sensitive manner (or even find the question already answered for her).


Annotation: The differences between the controlled vocabularies of libraries and the very different (L₀ and L₁) languages of library members is discussed, as well as the implications for library catalogs. It provides a very nice review of recent library literature dealing with tagging and brings the user’s ability to customize and control information on social networking sites to the foreground.


Annotation: This article provides an interesting example of the deliberate use of L₀ language in a social networking site. LibraryThing, used by many libraries and librarians, rejects L₁, library language, and in fact some practices, to embrace a wider audience. At the same time, however, it uses the British Library’s bibliographical data and makes joyful use of library cataloging standards. What is most interesting to me is not that it chooses to reject such language and conventions, but that it states that it is doing so on purpose. Although the author is a cataloguer who finds the whole affair slightly sinful, LibraryThing’s choices are deliberate. They were created to aid the average user with creating his or her own collections, as well as to make the site more of a true social network than place with individual lists of books. I question whether, up to some point, LibraryThing’s refusal to “use the library’s rules,” as it were, actually harms rather than hurts it because it’s harder to search for specific editions or covers with their search terms.
Source amnesia is something that most, if not all, people experience in their lifetimes. Because of how the human brain works, repetition becomes one of the most effective ways to emphasize an idea over time, and unless it is thought of in relation to the original context enough, it may lose the connection to how it was learned, often leading to the idea that “I think I read it somewhere….” In some cases, facts may be misremembered or the source may be misremembered. In other cases, pure fiction may become part of someone’s memory or false memories may be created because of the strength of the repetition and the emphasis on the actions.¹

In fact, this is how many urban legends are started and maintain a presence in the cultures in which they exist: Somebody hears something—or thinks they do—and attributes it to an obscure relation through which it may or may not be able to be verified.² Another important qualification to the development of an urban legend is that it must make sense in the culture and to those who spread the information—if it is truly unbelievable, it will not be believed and will not be passed along.³ A common attribute with information that falls victim to source amnesia as well.⁴ Other misattributions may take place as well: One might even confuse what a famous person had said with something an imitator of that person said (specifically citing the power of Tina Fey’s mocking of Sarah Palin on many Saturday Night Live skits during the 2008 election season).

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³. Ibid.
Many political figures use source amnesia to help spread ideas helpful to themselves or harmful to their opponents that may or may not actually be true.\(^5\) This approach may be particularly effective because of the potential for memory manipulation that occurs even when refuting the idea. As with R. David Lankes’ personal story in the Knowledge Creation Thread, this may occur even with the most astute of researchers and students while performing research, and they may not notice the error until it has been pointed out by other people. At this point, the citation may have already been seen by others and has already become a resource that may, in the future, be further cited with the same incorrect information and citations. While the citations may be checked by some researchers, others may simply take the researcher’s reputation for granted and assume that the citations are correct. In this way, source amnesia can become contagious and may, in fact, spread through even the best-intentioned members of a field.

**CONVERSATION STARTERS**

With the rise of electronic resources, can librarians and database managers help monitor and correct erroneous citations caused by source amnesia? It may be one of the few ways to prevent the spread of the erroneous information and incorrect citations. Perhaps if an author or a publisher is notified and a retraction is printed it could be annotated to the original article’s citation in the database. If this does not work, how else could the external effects of source amnesia be limited?

What obligation do librarians have to prevent source amnesia from affecting academic writings? Whose responsibility is it to teach this carefulness to students without overstepping the boundaries of standard librarian values? Whose responsibility is it to monitor retractions and corrections so erroneous citations do not pass through another level of writings?

**RELATED ARTIFACTS**


Annotation: This blog post, as it says in its entry title, examines the political ramifications of source amnesia manipulation and political tactics that utilize the tendency toward source amnesia. It even describes how harmful it may be for news reports and articles to present controversial ideas in sensationalistic ways and then refute them at the end of the article.


Annotation: This article explains the power of source amnesia and unconscious images and why it is difficult to counteract these types of misattributions. Although psychoanalysts may be able to break through previous mental blocks against memories, the power of repeated information remains distinctly powerful, and implicit memory may affect preference and recognition.


Annotation: This website gives a basic definition of source amnesia while also describing the courtroom science implications of how a person’s distant memories can be manipulated through suggestion. For example, a clinical therapist may be able to “uncover” a person’s “repressed memories” through repeated sessions with intense questioning, but there is also a good chance that the “victim” has become susceptible to suggestion and the questioning led him or her to believe he or she was abused in some way. This may be good reason to be careful wording interview questions and have even larger implications for how librarians may present information to patrons.

SPECIAL

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AUTHORS
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Figure 228
This Atlas agreement is focused on special librarians. In 1909, John Cotton Dana and 26 other librarians decided that there was a need for a type of librarian who focused on special topics and interests. The event, which has become known as the “Veranda Conference,” laid the foundation for the Special Libraries Association and for the terms “special librarians” and “special libraries.” The term “special librarian” has come to define librarians and information professionals who work in a wide range of institutions and environments, including corporate, government, judicial, science, military, and academic settings. Although many special librarians work in departments that resemble “traditional” libraries providing library services, many others work as information analysts, chief information officers, researchers, trainers, records managers, social media consultants, web developers/webmasters, and more. A study completed for the Special Libraries Association in 2008 found that its members had more than 2,000 job titles, which is a testament to the variety of positions that special librarians hold. Because of the breadth of positions, some feel that the term “special librarians” no longer applies, and so the term “information professional” is often used to describe this type of librarian. That term, however, can be used more broadly to describe many other positions where an MLS is not preferred.

What are the characteristics of a special librarian? These librarians usually have a focus on a specific area that may be broadly or narrowly defined (e.g., transportation, legal, sports, or geography) yet is outside the areas typically covered by (for example) public or general academic librarians. Some special librarians are focused not on a topic but on the needs of the parent organization. For example, a corporation might include a business or technical librarian who provides information to corporate employees for use in their work no matter what that work may be.

For many special librarians, their users aren’t just those who visit the library physically; they also interact with the library and its staff via telephone, e-mail, fax, and an increasing number of social media tools. Understanding the needs of their users—including resources, types of interaction, information-seeking skill levels, etc.—helps special librarians ensure their continued relevancy. It is important that special librarians be relevant to their users both today and in the future. Therefore, understanding user requirements is vital for their continued existence.

A special library may house physical and digital resources that will be important to its users but is trending more toward the virtual. The ability for users to access materials virtually has led special librarians to use an increasing number of digital resources that can be accessed from any location to meet their users wherever they are. An unintended result of the ability for users to share digital resources and to use library staff physically located at other locations has been the closure of some special libraries. Organizational budget tightening led some to encourage users to rely on library resources housed elsewhere. In some cases, those resources were made available through third-party companies (e.g., information brokers or independent information professionals). In some cases, although the physical library may have closed or been reallocated, the librarian was integrated into the user base so the organization didn’t lose the skill set of the special librarian.

Although special librarians will certainly continue to exist, how they operate will continue to change, possibly dramatically. Technology will continue to have a major influence on how users interact with library materials and alter user expectations. The need to be subject-focused will continue, but there will be an even more increased need for these practitioners to work virtually, embed themselves into organizational units, and meet user requirements no matter where that user is.

How can Special Librarians Make a Difference?

Every organization is drowning in information, even those that do not feel they have enough. It has become easier for organizations to capture as well as acquire information and to do so more quickly than ever. This, however, does not mean it is useful to the organization; while they are drowning in information, they lack knowledge. Knowledge can be described as synthesized information. It is information that a person has ingested and merged with other known information and then finally put into context with that person’s specific spin. Although it can be effective to use information to build your own knowledge, most organizations do not have the time or resources to do that. Instead they need to tap into the knowledge of others.

Special librarians, whether embedded or in a separate library, can help their organizations acquire information as well as connect the organization to people who already have the needed knowledge. Organizations value those who are seen as “connectors.” Although librarians are generally seen as connecting people to information, special librarians also need to connect people to people; people who want knowledge to those who already have it. This is a skill that is not taught in library science programs, yet special librarians learn quickly.
that it is a skill they must have. Special librarians dive into topics that are important to their organizations, learn the resources and the people behind those resources, and then create networks that will allow them to locate the right knowledgeable expert when needed. They are, if you will, the keepers of the organizational memory net.

Why Should You be a Special Librarian?

It is while studying for a master’s degree in library science that most LIS students encounter the idea of a being a special librarian. But why would someone decide not to pursue being a school or public librarian or a general academic librarian? Consider the impact that a special librarian has. The special librarian doesn’t just impact another person, but impacts an entire organization. A special librarian provides information as well as connections to knowledgeable people who help the organization make decisions about new products, markets, inventions, directions, and more.

Special librarians:
- Provide research to doctors that help them develop new forms of treatment
- Connect attorneys to case law that can be used in litigation
- Locate experts who can assist a company with new product development
- Help an architect uncover the history of a building before it is renovated
- Work with legal counsel to locate reasons (prior art) that a patent should not have been granted
- Help organizations ensure that they do not spend time “reinventing the wheel” (products and services that already exist)
- Connect the research of two parts of the organization that may speak different languages (e.g., engineers and scientists)
- Administer the centralized engineering database for a construction project
- Investigate (and play with!) new technologies and new applications of existing technologies to see how they can be used to benefit an organization
- Ensure that their organizations know who the movers and shakers are in their industry

QUESTIONS/CONVERSATION STARTERS

1. What skills do institutions require in order to organize their knowledge? Where do those skills reside in the institution?
2. How do special libraries advance the mission of their institutions?
3. What activities occur in a special library that do not occur elsewhere in an organization?
4. Rather than being their own entities, how are organizations embedding the functionality of special libraries into their structures?
5. How do special librarians differ from other information professionals? What unique skills and values do they embody?

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SYSTEM VIEW

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Evolution of Systems

System View

User-Based Design

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TCP-IP

MAP LOCATION
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Infrastructure Providers

TCP-IP

Figure 230
THE MISSION OF LIBRARIANS IS TO IMPROVE SOCIETY THROUGH FACILITATING KNOWLEDGE CREATION IN THEIR COMMUNITIES

MAP LOCATION
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THREAD LOCATIONS
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SCAPE

The Mission of Librarians is to Improve Society through Facilitating Knowledge Creation in their Communities

Knowledge is Created through Conversation
Pressure for Participation
Importance of a Worldview
Core Skills
Importance of Action and Activism
Means of Facilitation

Figure 231

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TOPICAL CENTERS WITH CURRICULUM

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Figure 232

TRANSITION OF TRADITIONAL SKILLS

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Figure 233
TRUE FACILITATION MEANS SHARED OWNERSHIP

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Figure 234
TRULY DISTRIBUTED DIGITAL LIBRARY

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USER

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AGREEMENT DESCRIPTION
See Internet Model Example Agreement Supplement

See Internet Model Example Agreement Supplement

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Figure 236
USER SYSTEMS

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User-Based Design

User Systems

Social Network Sites

Figure 237
USER-BASED DESIGN

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CONTRIBUTOR
Amy Edick

RELATED ARTIFACTS


Annotation: This article went over the second leg of the experiments on user-based design. I think this article was important to include because it went over actual user-based input that was being used. It showed the stages and what it takes to include it.


Annotation: For some reason, I am always drawn to case studies. They seem to work no matter what topic you are using. I picked this study because it went through the process that is involved with user-based design.


Annotation: This article goes over the working between the manufacturer and the user when creating the product needed. They make a good point that “user needs” change so much that it is hard to put out a product that is at the same level for everyone.
VITAL ROLES OF MENTORS

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WAREHOUSING FUNCTIONS

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WEB 2.0

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SCAPE

![Diagram](image1)

Figure 241

WRITING CENTER

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SCAPE

![Diagram](image2)

Figure 242
For more than a year, this manuscript has been a passion and, frankly, an obsession with me. I have written it in my office, late at night at home, on trains, on planes, and even on an iPhone next to a pool in the summer. I have slipped out of parties, events, and even church to scribble down some idea.

In many ways, it has been a process akin to sculpture. I rough in the basic shapes and forms, and then I go over and over it, tweaking, smoothing, and refining. I could spend easily another year in the process. The Agreements Supplement in particular cries out for more citations and more depth. But to continue to do so only continues a conversation with close colleagues and myself. It is time to invite the wider community in to continue the work and expand that conversation.

What lies ahead in that conversation I cannot say. Will it be contentious? Riotous? Resigned? Quiet? Apathetic? I don’t know. I do know that if you wait for it to happen or if you wait for it to finish, it will never occur. If you remain on the sidelines, how can you expect others to jump into the fray? If you sit quietly with your criticism or comment, you abdicate the future. Let me say that again. By not choosing to engage in the conversation on the future of librarianship, you abdicate your power to shape it.

In our field, we have examples of those who chose to shape librarianship and strive for a better world. We can think of Dewey, of course, or of Cutter or Ranganathan. But I ask you also to think of Dinberg, von Dran, and Taylor.

When Donna Dinberg was diagnosed with terminal brain cancer, she did not quit, she did not hide. Instead, she worked until she was not able to, and then she told doctors to try any experiment they may have; if being a test subject to a possible cure for others was all she could do to improve the world in her final days, then she would do it.

Unlike Donna, Ray von Dran didn’t have forewarning when pneumonia took his life, but he must have sensed something. Days
before he died, he decided not to sell his dream car to a colleague but instead offered it to a staff member battling breast cancer because “she could use a pick me up.”

Bob Taylor spent his last few days in Francis House. There was a memorial service a few months later for a man who in his career had been a sports reporter, an intelligence officer in the army, a librarian, a professor, and a dean. In his years, he can be easily credited for reinventing reference with his question negotiation work, LIS education by creating the first information school in the states, and beginning the era of user-based design with his work on value-added systems. Instead, those who talked spoke of a kind and thoughtful man. A man who, years earlier, on withdrawing from academia, devoted his life to care for his wife dying of Alzheimer’s.

I retell these events to show you that Taylor, von Dran, and Dinberg are not just names but real people. They created a legacy not just through writings but actions and values that went beyond their professional lives. All of these people furthered the conversation of librarianship. They all faced struggles, they all faced resistance, and they all persevered.

Dewey, Cutter, Ranganathan, Dinberg, von Dran, and Taylor all created a legacy that we, by calling ourselves librarians, have become stewards to. This legacy is one to be respected and continued not simply enshrined and frozen. All of these giants, on whose shoulders we now teeter, never saw the field as finite, fixed, or passive. Unlike some fine sculpture or glorious piece of architecture, we preserve the legacy of these librarians by constantly tearing down convention for efficiency, structure for effectiveness, and past assumptions for future success.

I end the way I began the Atlas, with Israel Zangwill’s quote¹:

The Past: Our cradle, not our prison; there is danger as well as appeal in its glamour. The past is for inspiration, not imitation, for continuation, not repetition

Be proud of your heritage as a librarian. Ours is an old and noble profession that can count among our members radicals, missionaries, teachers, and more. They have started for you an amazing conversation full of richness and history. They have written this conversation into our values, our institutions, and our education. But they did not complete the work or finish the conversation. They held it open for you, for those you mentor, and for those who they mentor. The conversation that is librarianship is alive and waiting for your voice.