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Geeks and Luddites: Library Communication and Culture

Daniel Gall
University of Iowa

Donna Hirst
University of Iowa

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By Dan Gall and Donna Hirst

Introduction
The modern history of technological change has significantly influenced library culture. With this cultural evolution communication between systems staff and other librarians has changed as well. In this chapter the alpha geek and the Luddite archetypes are used to illustrate these tensions over the years. Current library culture mirrors the culture at large with ever increasing needs for effective communication by the systems librarian. In the 21st century library the pervasive culture is user-driven and clearly influenced by spontaneous communication technologies like wikis and blogs that put more control in the hands of library users.   In order to maximize their effectiveness, systems librarians must become more collaborative in their interpersonal styles and must increase their public face, roles which have been historically limited or prohibited.

Definitions
Although the topic of library culture is a serious one and worthy of consideration, please understand that this chapter considers the perceptions of various librarian roles – perceptions that can often be difficult to pin down. The use of slang terms like "alpha geek" may add an element of levity to the discussion and make it easier to discuss librarian archetypes which are often ill-defined. To make this discussion a little easier to follow, it may help to define some underlying terms.

Library Culture
As with Supreme Court Justice Potter Stewart's 1964 definition of hardcore pornography, most people would have a difficult time defining the concept of "library culture," yet library staff know it when they see it. For MacDonald and Thomas, library culture is overly-focused on copyright and patron privacy which impedes support of collaborative research communities (2006, p. 5). For others, library culture can be defined by the Unshelved (http://www.unshelved.com/) web-comic which portrays the staff of a public library. The Librarians in the Movies filmography (http://emp.byui.edu/raishm/films/introduction.html) gives an overview of how librarians are portrayed in popular culture. For the purposes of this chapter, library culture is the multifaceted relationship between librarians and library staff and users of library materials and services - hereafter called library users.

Alpha Geeks
According to the Net Lingo online dictionary, an alpha geek is, "The most knowledgeable, technically proficient person in an office or work group." The term is normally used in a network administration or computer science context and already has a touch of irony to it. In the library context, alpha geeks are most likely systems librarians who keep vital technology running. The role of alpha geek is based on context, though, and an alpha geek in the reference department might be the librarian most comfortable with new technology.

As technology has become more prevalent and important in library culture, the role of the systems librarian has become more important even if it has not always become more prominent. The role of the alpha geek, however, has become more prominent as technology-dependent library staff turn to the most knowledgeable and accessible person around - an alpha geek - for help with their technology problems.

Luddites
According to the Encyclopedia Britannica Online "The term Luddite is now used broadly to signify individuals or groups opposed to technological change" (Encyclopedia Britannica Online, 2009). The original Luddites were not strictly against new technology *per se.* They did react, sometimes violently, to technological changes that hurt their standing or security in society. The Luddite movement in the early 1800s was a reaction against real changes in society and many of the Luddites' worries about the effects of technology were legitimate and, indeed, prophetic.

While the original Luddite movement may have been more nuanced than the modern perception, this chapter focuses on the modern meaning of Luddite.

> Luddism is portrayed as all that is negative, hopeless and deluded. It is unintelligent, probably violent; indiscriminate and futile; the action of ignorant, backward-looking workers; anachronistic, brutal and destructive, lacking in imagination; opposed to progress. The accusation of "Luddism" has become a ritual incantation that forecloses debate on the social and political meanings, the causes and effects, of technological change (Webster, 1986, p. 2).

Jones (2006, p. 231) suggests that, "Many people who identify with the term 'Luddite' just want to reduce or control the technology that is all around us and to question its utility — to force us not to take technology for the water in which we swim." Jones (2006, p. 174-175) also indicates "Modern (and now postmodern) technology is routinely understood as an autonomous, disembodied force operating behind any specific application, the effect of a system that is somehow much less material, more ubiquitous, than any mere 'machinery'."

Technology marches inexorably on, even in the world of librarianship. Libraries no longer relied on scrolls following the advent of the book. Although library staff may admit to often wanting to kick their computers, anyone working in a modern library must realize that not even the most technophobic library staff could really be considered Luddites. Technology is too critical to libraries for the term Luddite to be anything but a very ironic term. Still, those ironically labeled "Luddites" in a library setting may not be against technology or change so much as they are worried about the implications of new technologies on library services, professionalism, standards, scholarliness, privacy or other things held important in library culture. That said, changes in library technology and practice over the last 30 years have defined library culture as differentiated between computer power-users and those who keep up with technology out of necessity.

To illustrate this point it might be helpful to think of two opposing camps: alpha geeks vs. Luddites. Both camps share the same environment and have the same goal of accomplishing the library's mission. They may view the world in very different ways, but they need to work together effectively. Keeping in mind that these two opposing camps are extreme caricatures, the alpha geek camp can roughly be described as systems librarians and other technologists while the Luddite camp would encompass librarians and staff, whether they are in public services or behind the scenes, who must use technology to do their jobs but do not, necessarily, embrace it. We've created two librarian archetypes to represent these camps: Annie AlphaGeek and Larry Luddite. These characters represent extremes and do not represent any individual either author knows.

Shift in Focus from Library Processes to Services

The original Luddite movement occurred as the Industrial Revolution was shifting the British economy from a rural/agricultural base to an urban/industrial base. Today, economies in the developed world are similarly shifting from industrial to service economies. The role of libraries continues to shift from primarily being storehouses of information (in print or electronic formats) to being providers of services: access to aggregator databases, expertise in finding and evaluating information, and more. This shift in the role of libraries is, of course, changing the day-to-day work of library employees at all levels of the organization and it is affecting employees in different roles in the library in different ways. One constant, however, is the increasing involvement of the library user in all types of library work.

Reference

The pop culture stereotype of a librarian with a hair-bun shushing library users and making sure every book is back in its place on the shelf is modeled on a reference librarian. An illustrative example is provided by the head librarian in the 1992 movie "The gun in Betty Lou's handbag" who believes that the goal of every library book is to be returned to the shelf un-mutilated. (Gun in Betty Lou's handbag, 2003). While the stereotype is, of course, overblown, there is a grain of truth in the traditional role of the reference librarian. Far from being happy when all books are back on the shelves in their proper order, most librarians are happier when the collections are being used. Perhaps the grain of truth in the stereotype comes from library culture's emphasis on quality and completeness of information over speed. Among reference and instruction librarians in academia, there is also a debate about whether their primary role is to provide information to the library user or to teach the users to find the information themselves. In the not-so-distant past, reference librarians were called on to know their collections and, in many cases, look up relevant information for library users. As information shifted from print to electronic formats, librarians became the gatekeepers - the experts who knew the most efficient techniques for doing pay-per-search research on systems like Dialog. Information seekers needed to go through librarians to get the information. (Goetsch, 2008, p. 158). As information becomes increasingly electronic, networked and ubiquitous, the role of the

reference and instruction librarian is shifting from being gatekeeper to guide. Information seekers no longer need professional library expertise to find a place to look - Google is everywhere. Library users no longer operate in an information desert but now drown in a sea of web pages, Wikipedia articles, online newspapers and articles in aggregator databases. In many ways, this is a wonderful time to be a librarian and have a world of opportunities. Libraries are making efforts to use technology like electronic resource management (ERM) systems and full-text finders to give more direct access to library users and remove librarians further from their gatekeeper role. In many academic libraries, budget pressures and new technologies are "…making it essential that students, faculty and staff can access these resources without assistance from librarians." (Fuller et al., 2009, p. 387) Now it is more important for reference and instruction librarians to teach library skills to library users and focus on teaching users to evaluate the quality of what they find.

<u>Access services</u>
Access services departments composed of circulation, course reserves and interlibrary loan are similarly finding their roles increasingly devolving to library users.

> As user-generated renewals and self check-out systems are advancing in library services, the environment remains dynamic. In addition, consortium agreements and access to member library catalogs with holdings information blur the lines between reference and access services. (Su, 2008, p. 78).

Interlibrary loan systems such as Illiad now allow library users to start their own requests for books and articles from other libraries. The OCLC system, formerly the secret weapon of ILL librarians, has morphed into http://worldcat.org, where information seekers can search across several library catalogs for books in their area and, at times, bypass ILL altogether. More advanced circulation systems are allowing library users to place books on hold or request delivery of books and articles through the library catalog. Library users can check their circ records, pay fines and, of course, complain, all through sophisticated circulation systems. As e-books and online articles become more widespread and accessible, even course reserves systems are becoming a more user-oriented library function as instructors use persistent URLs to link their students to online readings in course management systems.

<u>Technical services</u>
Technical services departments are experiencing shifts in what they do, day-to-day, along with significant shifts in the resources used to accomplish their tasks. Technical services staff increasingly struggle with providing bibliographic control to electronic resources, e-books, and ever relocated print materials as space shortages define availability. Technology assists in providing control through data-loads and exporting data to various vendors and consortia; electronic templates organize incoming work. New metadata standards like Dublin Core and METS require additional staff education. Shelf Ready processing reduces the impact that staff has in preparing books for shelving. Budget cuts and outsourcing often result in reductions in technical services staff.

<u>Systems</u>
In addition to changes to the above cultural groups (reference, access services, technical services) the role of systems librarian is also changing. For several decades the systems librarian has focused on technology. Heid (2007, para. 1) indicates that:

> IT people and library people have not been inclined to come to the concept of service with the same view. For IT, it's been all about keeping the servers and systems up, the websites going, and the help desk calls and their turnaround times to a minimum. For library professionals, service has meant keeping multimedia information and reference accessible; books, tapes, CD's, and other sources in order; and the environment primed for research and study.

Systems librarians can even on occasion create the very systems that users and peers request. Systems librarians at many universities, for example, spearheaded the integration of SFX into their institution's research databases.

In recent years systems librarians have begun to develop a more public role from the previous wizard behind the curtain who magically made things happen.

History of Library Information Technology
<u>Evolution of technology in libraries</u>
Advances in technology in both the culture at large and within libraries have defined library staff positions and the services offered by libraries. Before the advent of computers, the availability of typewriters defined many tasks

performed in libraries. In centuries prior, the quill pen was a great breakthrough to aid in the accuracy and the speed of library work.

But this digression does not lead us forward. In the 1960s computers began to have an impact on libraries and by 1967 with the advent of OCLC and other large bibliographic utilities, 'systems librarian' began to emerge as a job classification in libraries. Library systems work involved working with remote host computers, interacting with computer vendors, and scrambling to keep up with the changing technology. In the early years of library computing, separately hosted services were available to assist with reference, collection building and acquisitions, circulation, and cataloging with the eventual creation of an online catalog. Available automated systems did not talk to one another. Library employees began to compete for systems positions which would have an impact in this new realm of library work. Some library staff preferred to distance themselves from this new technology and instead attempted to maintain the status quo (pre-computer) following historical patterns of service and preferring printed resources rather than information available through a computer.

> *It's the 1970's. Annie AlphaGeek spends late night hours trying to learn about OCLC while struggling with CLSI configuration tables during the day. Larry Luddite successfully hides from training and refuses to serve on task forces to define system options. He often complains to colleagues about problems with the systems, pointing out reduced service and increased complexity.*

System librarian as a hardware guru

When computers were introduced into libraries, the systems staff learned the technology "on the fly". Systems staff became conversant with DOS and later Pascal and later C. The systems librarian learned network and hardware details. Lavagnino (1997, p. 218, 220) indicates:

> The systems librarian… was concerned with mainframe and minicomputer systems development and implementation, and usually was found working for bibliographic utilities, vendors, or large university libraries developing in-house systems. The systems generally were developed to handle functions used by staff, such as circulation or acquisitions; few public services functions were automated. These systems librarians dealt mostly with technical issues such as setting terminal characteristics, managing appropriate inputs and outputs to and from the system, running indexing jobs, and backing up the system. This involved interacting with programmers in developing the system and with technicians in keeping it running, and sometimes in operating the system and training library staff. These early systems librarians did not interact with the public, the college or university students, staff, and faculty but instead were limited to working with library and computer center staff and faculty.

As libraries (and the culture at large) became more and more dependent on technology, the geeks and hardware gurus held the power to aid library staff charged with maintaining the day-to-day workflow of the libraries. Frequently the technical staff began to talk a special techno-speak while the general library staff believed that these technicians no longer knew how to speak English. Often the library staff became distrustful of the systems librarians. Several articles highlight this tension between library staff and library technologists including Davidson and Rusk (1996, p. 302-305) reporting that differences in underlying values and styles of librarians and technologists created difficulties in reaching consensus.

> *It's 1975. Annie AlphaGeek is the lady with the magic fingers. She can fix barcode scanners and test new network connections, while assisting the staff with their problems. Larry Luddite is able to continue to avoid most library technology and when required to use the circulation system he is so inept that he is not asked to assist with this work again.*

Era of the personal computer

The era of the personal computer began in 1976 with the invention of the Apple computer by Steve Jobs and Steve Wozniak. By the 1980s the personal computer was revolutionizing the culture, and libraries were quick to join the revolution. Word processing, spreadsheets and databases were creating a high-efficiency work force. Library employees were dependent on the special skills of the systems librarians. Many general library staff saw systems librarians as critical to their work. Yet some staff continued to be distrustful or unnecessarily demanding of technical staff.

> *It's 1980. Annie AlphaGeek has become exceptionally efficient at completing her demanding assignments using her top-of-the-line workstation. She emails vendors and colleagues all over the country to keep her various systems working smoothly. Larry Luddite has a personal computer but avoids using it for all but very routine tasks. Whenever possible Larry complains that the Systems Office is inept and unable to support library staff when they have problems.*

Integrated Library Systems

In the 1970's and early 1980's Integrated Library Systems began to appear. During the implementation of these large, comprehensive library management systems the systems librarian had a great deal of power, if not necessarily in-depth knowledge and technical training. The systems librarian often had responsibility for virtually all aspects of library processing including cataloging, acquisitions, and circulation. Library services such as reference and inter-library loan were very dependent upon tools created or managed by the Systems Office. Webster (1986, p. 149) states "…the online librarian currently receives much status from users who are dependent upon his or her expertise as the gatekeeper of the system."

> *It's 1990. Larry Luddite spends most of his workday on a computer connected to the ILS. He knows what he needs to know to do his job, but gets upset with changes to the software and panics when the system goes down. Annie AlphaGeek gets very frustrated with Larry since most of the library staff is flexible and understand that the system is always changing.*

Library culture mirrors the culture at large

Over time the technology advanced to incorporate the internet, networking within the organization and beyond to the far reaches of the globe. Libraries kept apace as print resources were converted to online versions. Online instruction and distance learning became commonplace. Email became a standard for both professional and personal communication. In the late 1990s Google launched a suite of online services which continues to expand. Social computing through Facebook, YouTube, Twitter, PDAs and similar software allows the computer to become an extension of the individual. Melchionda (2007, p. 125) adds:

> No one can deny the huge explosion of the internet, which has carried with it many contradictions - since the growth of networked technologies in libraries, there has always been a segment of library professionals expressing care - and sometimes fear - for the future of the profession, not to mention those traditionalists who almost despised the huge presence of internet-related technologies. Some were critical toward the internet because of its chaos, its lack of structure and of knowledge organization. Others were worried about the independence acquired by users, who are encouraged to access freely and use collections and electronic shelves and services without librarians' intervention.

> *It's 2000. Larry Luddite has joined the online community and relies on multiple computer systems to do his job and to have some fun when he's not working. He's continually asking the Systems Office questions about computing at work as well as at home. Annie AlphaGeek is feeling a new kind of strain as public services librarians and library users increasingly use social networking sites like Twitter, Facebook, Del.Icio.Us and others to share information and push the boundaries of library technology. Increasingly, she feels overwhelmed at the number of new technologies to keep up with but happy that the flexibility and creativity she learned over the last 30 years allows her to keep up. She's looking forward to the new ways that technology will allow people to use information more effectively.*

Role of the Systems Librarian

Systems staff have counterparts outside the library

Many positions in libraries are unique to libraries: bookstack supervisors, interlibrary loan coordinators, and reference manager librarians. The role of systems librarian often integrates tasks and responsibilities from non-library system departments such as database manager, application programmer, desktop support, system

administration, and network manager. A systems librarian must have knowledge and experience of libraries, but the critical component of the job is systems. A systems librarian must install, upgrade, and troubleshoot both hardware and software. The systems librarian must often train library staff in the various technical tools acquired by the library.

Changes in technology have defined the systems librarian

As technical library tools have advanced and as technology within the culture has evolved, the role of systems librarian has been stretched. Software to maintain security in the network and on workstations has become increasingly important in an environment of rampant computer fraud and abuse. Support for digital collections, electronic books, and online databases requires new expertise. Systems librarians find themselves supporting laptops, PDAs, FAXs, camcorders, elaborate scanning equipment, and high-end network printers. Software functionality continues to change; mobile applications become more important as many library users rely on PDAs for information. The library catalog evolves with new discovery tools and emerging software. The cost of hardware and storage regularly decreases resulting in the diversification of available technological tools and the creation of serious support issues for the systems librarian. Online problem reporting tools have become sophisticated and management tools have become more effective.

Changes in the needs of users have affected the role of systems librarians

More than in earlier decades, the needs of library users are shaping the role of systems librarian. Users want materials and services *NOW*. Users expect a broad range of technical support including customized printing, FAX, and scanning. They want searching to be not only intuitive but automatic. Document delivery allows faculty and students access without entering the library. Relevance ranking, as with Google, places the system in the position of identifying the best resources. Library users expect the computer to pull disparate but related resources together with link-resolvers like Ex Libris' SFX or EBSCO's LinkSource. Recommender services connect library users to other library users who have opinions about resources.

How does the systems librarian fit into the maze of requests and demands? Frequently the needs of library users are not the same as those of library staff who are hoping for support in doing their day-to-day tasks in the most efficient, automated way possible. Increasingly library administrators are saying that if the library doesn't offer a service that the users want, then the users will just find other non-library vendors, like Google or Amazon, to meet their needs.

Communication between General Librarians and Systems Librarians

If alpha geeks and Luddites form two separate tribes who work the same library environment, it is clear that they will have to learn to communicate and work effectively with one another. Indeed, as technology becomes more ubiquitous and new technologies increasingly bring systems librarians into closer contact with other library staff and library users, the interpersonal communication skills of both alpha geeks and Luddites will become correspondingly important.

Personality

There is little doubt that different personality types are drawn to different professions, even within the sphere of library culture. Williamson, Pemberton, and Lounsbury found in their 2008 study that:

> …high extraversion, low tough-mindedness, and high teamwork (among other variables for the various clusters) characterized person-oriented academic reference librarians, special librarians, public librarians, school librarians, distance education librarians and records managers. For the technique-oriented specialties operational work style and low customer service orientation characterized catalogers, and high assertiveness and high tough-mindedness characterized the archivists and systems librarians (Williamson, Pemberton, & Lounsbury, 2008 p.282-283).

High assertiveness and tough-mindedness are not typical characteristics which foster effective communication and collaborative work styles. Systems librarians will need to develop more inclusive communication styles in order to be a part of effective library-wide technological developments.

Channels of communication

An informal poll of systems librarians at six institutions was conducted by the authors. Responses revealed no clear consensus on the best methods for systems librarians and other librarians to effectively communicate. All respondents agreed that formal methods of communication, including a problem-reporting structure, were of

paramount importance. Structured communication allows for information to be standardized, tracked and monitored. There was reduced consensus on the benefits of informal or casual communication. The fear that informal channels of communication might lead to disorganization, extra work or favoritism is balanced by recognition that informal lines of communication promote new ideas, partnerships and progress. Systems librarians should, at least occasionally, forego efficiency in order to utilize more informal methods of communication, thus fostering partnership and creativity.

Communication is, of course, a two-way street and informal and formal channels of communication have costs and benefits for Luddites, too. Formal channels of communication, like problem-reporting forms or email announcements from the IT department, aid technologists by systematizing information and ensuring that there is enough detailed information for troubleshooting. Unfortunately, formal communication channels presume a basic level of knowledge on the part of the non-technologists. Problem-reporting forms, for example, are only effective if the person filling out the form knows enough about the problem to use the right form or give accurate information. Informal communication, while running the risk of inefficiency, at least allows the Luddite to explain problems and answer questions.

Language itself is often a barrier in technical communication between Luddites and alpha geeks. Leaving aside the issue of jargon, which might make up a chapter on its own, even relatively straightforward terms may have nuances or differences in meaning between technologists and library staff, potentially causing confusion. A podcast, for example, might mean that thing you watch on your computer to a Luddite while an alpha geek knows that it is an RSS-based serialized set of things to watch on your computer.

Core competency

Many libraries have developed Core Competency standards which define the level of technical competency for non-technical staff. Training programs often accompany the establishment of a core competency program. One significant advantage of core competency training is the establishment of a common vocabulary and a common understanding of technical processes between the general library staff and the systems librarian. For example, learning to determine the domain in which an application resides or how various removable storage devices work provides a common base from which technical staff and general staff can discuss problems.

Planning and goal setting

Annual or periodic goal setting offers many opportunities for communication between systems librarians and units or subgroups and also between individuals. Often formal systems for gathering input on goals are in place, but periodic *ad hoc* reviews allow library staff to offer opinions while new system developments are in process. In the author's poll, one participant indicated that people at all levels of the organization can make their requests known to the dean through the proper channels of departmental hierarchy. Additionally work groups, when used effectively, can make suggestions during the design of systems. Many organizations also provide opportunities for everyone to make suggestions during the goal planning process, typically through departmental channels.

Technical tools

Many staff, both systems librarians and general librarians, are shifting their communication to new technologies. Through an informal survey of systems librarians, wikis have been determined to be marginally effective communication tools. Instant Messaging exchanges were identified as effective and efficient in responding to the immediate call for help. Intranets allow more complex communication to a large audience of staff or departments by allowing the posting of documentation, special notices or other more extensive communication.

Conclusion

This chapter highlights the history of library information technology, utilizing Annie AlphaGeek and Larry Luddite to illustrate the transitions in communication as well as the technology. Library culture is a microcosm of society at large, and, as in the larger society, people are rarely cleanly divided into two distinct and opposing camps. Most

systems librarians do not see all new technology as an inherent good and most Luddites in libraries accept the benefits of many new technologies.

The role of the systems librarian has changed over time but has particularly been influenced by the new technologies which have become popular with library users. The systems librarian works within a grid of reference librarians, technical services librarians, access services staff, and others. Each staff member experiences shifts in their profession and the resources with which they work. The systems librarian must refine communication skills and must work to understand the issues confronting the general library staff in order to successfully meet the technological needs of the library.

In discussing collaborations between librarians and information technologists, Lippincott indicates that each individual needs to emphasize "… the complementary expertise that each member of the team brings, the need for open and easy communication, the opportunities for mutual teaching and learning, and the development of trust and respect" (Lippincott, 1998, p. 438). Communication within a context of trust and respect can bridge many differences.

Communication and computer technology have evolved during the last several decades, and those changes have both driven and been driven by changes in our society and culture. It is tempting to say that the one thing that has not changed is change itself, but that cliché overlooks several factors that the authors believe libraries and librarians hold as guiding principles. Regardless of the technologies used or the information sought, librarians' guiding principle has been and remains helping people find the relevant information they need. Regardless of which tribe they belong to, Luddite and alpha geek librarians work together to make library materials available to library users. The emergence of social media has accelerated a trend of making library users more directly involved in using library resources and finding their own information and has, as a result, changed the day-to-day jobs of all types of library staff, including systems librarians. Whether an alpha geek, a Luddite, or somewhere in between, librarians adapt to changing circumstances and the changing needs of library users through effective communication and by maintaining a healthy sense of humor.

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About the authors

Dan Gall
During his after-school job shelving books in his local public library, Dan Gall vowed never to become a librarian. After earning his MLIS from UW-Milwaukee in 1995 he has worked in public and academic

libraries in Botswana, Minnesota, Michigan and Iowa where he is now the Distance Education Librarian at the University of Iowa, working closely with both alpha geeks and Luddites.

Donna Hirst
Unlike her co-author, Donna Hirst's early library experiences helped her realize that her fate would be tied to libraries for many decades. Her first full-time job in libraries in 1972 and the completion of an MALS in 1976 offered her in-depth experience in libraries without computers. From 1986 she worked in systems at the University of Iowa and managed many automation projects which helped her to realize that communication is far more important than electricity.