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Lauren Kosrow and Lisa Hinchliffe, “Happiness Is . . . Library Automation”: The Rhetoric of Early Library Automation and the Future of Discovery and Academic Libraries” (2014). *Proceedings of the Charleston Library Conference*.

<http://dx.doi.org/10.5703/1288284315647>

# “Happiness Is . . . Library Automation”: The Rhetoric of Early Library Automation and the Future of Discovery and Academic Libraries

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## Abstract

During the second half of the twentieth century, the professional literature of academic librarianship imagined, speculated, and envisioned how impressive technological advancements might affect the future of academic libraries and the profession as a whole. Technology and automation, stalwarts of the Space Age, were portrayed as the panacea for librarians burdened with growing collections and overwhelming clerical processes. Many voices chimed in to predict how mechanization and automation would impact collections, communication, and information retrieval, as well as the role of academic libraries in the future. In this paper, we examine how library professionals predicted technology would influence the role of academic libraries in the past and in light of current conversations about collections, discovery, competition, and the future of academic libraries. By examining the rhetoric of past conversations through the lens of present dialogs, we hope to bring a new perspective, informed by the past, to the professional discourse as ideas regarding collections, discovery, and the future of academic libraries continue to be discussed.

## Introduction

The taste for such things grows on what it feeds, and the librarian who has invented an appliance for supplying his readers with books . . . by means of an automatic ticket-in-the-slot machine will not be happy until he has invented one which will, by the touching of a button, shoot the book into the reader's home.

—J. Y. W. MacAlister, 1897

Surrounded as we are by an exploding technology which constantly increases the flood of library materials and library service demands, we may be hurriedly unaware that we in the midst of a recent but astonishing accelerated technology of our own. . . . Library technology sprints ahead. We must run if we hope to see it fully and intelligently used for the sake of the book.

—R. Kingery, 1959

With references to exploding technology, increasing flood of materials, and rising demand for services, the quotation above could easily be describing the current milieu of academic

libraries. However, instead of sparking discussions surrounding the integration of e-books and innovative discovery systems, as one might expect, Kingery was championing the use of the Xerox copier, punched cards, and a sorting machine. The article, appearing in the May 1959 issue of *Library Journal*, utilized rhetorical strategies that, upon closer examination, are rampant in the professional literature throughout the following decade. Amidst the glamour and glorification of technology during the Space Age, librarians like Kingery recognized the relationship between emerging technologies and library services, envisioned the role of automation in library services, and, most importantly, speculated about how these impressive technological advancements might affect the future of academic libraries and the profession as a whole.

The desire to predict the future of academic libraries is not new, and professional librarians have consistently engaged in this speculative practice for decades, contemporary company not excluded. In the introduction to the *Ithaca S + R Library Survey 2010: Insights from U.S. Academic Library Directors*, the authors acknowledged, “many studies have tried to re-imagine the future of the academic library.” They continued on to assert the “purpose of the *Ithaca S + R Library*

*Survey* is to provide data that will focus these questions about the future of the library” (Long & Schonfeld, 2010). In July 2014, *portal: Libraries and the Academy*, published by Johns Hopkins University Press, dedicated an entire special issue, titled “Imagining the Future of Academic Libraries” to the popular practice. In this issue, guest editor Damon E. Jaggars explains that authors “from different sectors of academia, publishing, and technology share their thoughts about the future” and “explore the possibilities of what academic libraries might become.” Similarly, in 1956, *Library Trends* distributed a special issue titled “Mechanization in Libraries” in hopes that “the articles presented here will not only supply useful information on the subject but that they will stimulate ideas and experiments which will provide further impetus to the trend towards mechanization of library operations” (Trotier, 1956). In both the second half of the twentieth century and the first half of the twenty-first, librarians have recognized the intimate connection between the technological breakthroughs of the period and the future projection of academic libraries. We too are in an age of exploding technology, and, surrounded by giants like Google and Amazon, librarians are seeking to understand how technology today will impact the future of academic libraries. However, as technology “sprints ahead,” librarians do not always agree on what it means for academic libraries to run after it—or if libraries should even be in the race.

In the promising years after the invention of the computer and surrounding the launch of the first online catalog by OCLC in 1971, the late 50s to early 70s were a unique period that stimulated wild speculation, hopeful visions, and harsh criticisms of how technology would impact the role of academic libraries. On the one hand, technology and automation, stalwarts of the Space Age, were portrayed as the panacea for librarians burdened with growing collections and overwhelming clerical processes. Others cautioned and, at times, scathingly criticized, what was perceived as the pursuit of automation simply for the sake of automation. Many voices chimed in to predict how mechanization and automation

would impact academic libraries, the role of librarians, and information retrieval in the future.

This paper will examine how library professionals predicted technology would influence the future of academic libraries and the role of librarians in the past, with current conversations about collections, discovery, and competition in mind. This paper will draw on an analysis of the rhetoric in the professional literature, primarily from articles, editorials, and letters to the editor in popular publications such as *Library Journal*, *Library Trends*, and *College & Research Libraries*, in order to gain perspective of this issue from the widest audience. Additional relevant journals, as well as conferences held on library automation, were also consulted. The scope for this project focuses on the 1960s to 1970s as this period reveals the shift from conceptualization of automated libraries to implementation. In order to focus specifically on early automation rhetoric, conversations regarding microfilm and other technologies during this period are considered outside the scope of this paper. By examining the rhetoric of past conversations through the lens of present dialogs, this paper will bring a new perspective, informed by the past, to the professional discourse as ideas regarding collections, discovery, and the future of academic libraries continue to be discussed.

### **The Library of Tomorrow**

In the 1956 special issue of *Library Trends* titled “Mechanization in Libraries,” editor Arnold Trotier posed the introductory question, “Does automation offer any possibilities in the foreseeable future with respect to any major library operations?” Over the next decade, librarians flooded the professional landscape with discussions of how, when, and, most importantly for this discussion, why libraries should pursue automation projects. Early arguments for automation focused primarily on mechanization processes that would improve circulation procedures, serial handling, acquisition, and accounting, in response to swelling collections and

escalating clerical tasks.<sup>1</sup> The solution? Automation. “By automating,” proclaimed Rodney Waldron in a 1958 issue of *College & Research Libraries*, “librarians can spend more time with their books and their contents—returning to the age when the librarian was an intellectual, a knower of language, and spent less time with clerical mechanics.” Similar rhetoric continued throughout the decade in an attempt to push libraries to adopt automation. In 1966, Douglas Bryant, on the pages of *Library Association Record*, urged readers to “look forward to the time when machines will have freed the human members of library staffs to do more of those things that only a human being can do with is mind. When this day comes, and I believe it will come sooner rather than later,” he suggested, “librarians will be free to devote their energies and time to the sensitive book selection and provision of reference and bibliographic assistance of closer application to the scholars with whom they are associated.” The appeal of alleviating the repetitive, clerical tasks required of librarians was a consistent argument for why libraries should embrace early mechanization efforts, invest in automated systems, and, ultimately, purchase computers for their libraries.

Visions of what automation might do for the mechanization of clerical processes quickly escalated to dreams of what computers could do for information retrieval. In a 1962 issue of *Library Journal*, Marjorie Griffin, librarian of the Advanced Systems and Research Library at IBM and member of *Library Journal*'s editorial consultants, wrote an article titled, “The Library of Tomorrow.” In her essay, she describes libraries of the future as “pulsating communication centers where transmission hook-ups with regional, national, and international centers will make current information as immediately available as information of the past.” Griffin predicted that by the late 1970s, not only would technology in libraries “have surmounted the present hurdles in library service”—including backlogs in cataloging, redundancy in catalogs, and lack of shelf space—

but “we can expect technology to be so far advanced that a vast transmission network will make into a reality the possibility of calling upon total global resources to locate information.” Expectations were fueled by the early success of projects such as the National Library of Medicine’s MEDLARS project, an input and conversion system that required indexers to enter unit records into a computer, which then stored the information on reels of magnetic tape and was used to retrieve journal information. By the early 60s, the MEDLARS project was producing the *Index Medicus*, an index of over 2,000 journals that was distributed to medical libraries across the country (Schiller, 1963). The MEDLARS project solidified earlier conjectures that computers, indeed, had a role to play in libraries and became a launching point from which speculations of how computers might be used in the future were discussed.

Griffin, as both a librarian and an employee of IBM, characterizes the relationship between librarians and the technology industry that was cultivated by both parties during this period. Two conferences, the first of their kind, held in 1963 represented how librarians and the technology industry sought to create a more formal space in which members of both professions could engage in a dialogue around computers, data processing, automation, and the future of academic libraries. Both the Airlie Conference on Libraries and Automation, sponsored by the Library of Congress, the National Science Foundation, and Council on Library Resources, and the Clinic on Library Applications of Data Processing, hosted by the Graduate School of Library and Information Science at the University of Illinois, addressed the need for a meaningful dialogue between technologists and librarians in order to inform expectations of computer technology and explore its relevance to libraries. Presentations by librarians, IBM representatives, and other industry leaders celebrated the limited success of computer implementation into clerical processes and looked forward to more ambitious applications such as machine indexing, SDI

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<sup>1</sup> See Waldron, R. K. (1958). Implications of technological progress for librarians. *College & Research Libraries*, 19(2), 118-164; Griffin, M. (1962). The library of tomorrow. *Library Journal*, 87; Kraft, D. H. in Goldhor, H. (Ed.). (1963).

*Proceedings of the 1963 clinic on library applications of data processing*. Urbana: University of Illinois at Urbana-Champaign IDEALS.

systems, and information storage, specifically by those outside of librarianship.<sup>2</sup> In his presentation at the University of Illinois, Burton W. Adkinson, Head of the Office of Science Information Service at the National Science Foundation, remarked that, although the “relatively low-level use” of library applications of computers had been helpful, the “present day applications represent the crawling stage of development. . . . We must always look forward to the running stage” (1963). As librarians and technologists collaborated and occupied the same professional space, the push toward more advanced automation processes continued to influence and shape librarians’ expectations for what computers could do for the future of the profession.

### **Library Automation: “Rosy Prospects and Cold Facts”**

While the titans of technology championed the computer and its expected role in revolutionizing library processes, there were members of the library profession who cautioned against the rising expectations for automation and predicted the difficulty of automating work that dealt with dynamic components such as ideas and language, specifically in terms of information retrieval. In a 1956 issue of *Library Trends*, Melvin Voigt remarked, “Regardless of how well a machine can store information and in how little space, it is of little value unless it is possible to put information in the machine easily and efficiently, and, more important, retrieve it in usable form just as easily.” In an accurate description of future struggles in information retrieval, J. R. Pierce predicted that, until computers were more advanced, library users “would smother under the flood of information and misinformation it would produce.” In anticipation of a vast network of information, Pierce argued, “What the person who consults the library needs is not everything about a subject, but the best information about it or about the part of it in which he is interested”

(1963). Remarkably, before automated retrieval was possible, library professionals predicted foundational issues with retrieving relevant information. More broadly, Jesse Shera, in a 1961 issue of *Library Journal*, warned readers that the “overselling of an idea when it is still in its experimental stage will lead to sketchy and ill-defined programs, the prostitution of ideals, and a sacrifice of quality to the end that mechanization per se may be discredited and condemned for faults that are not inherent in it.”

Like Shera predicted, as the decade progressed, many initial attempts to mechanize remained stalled in the conceptualization phase and frustration with earlier promises heightened the rhetoric around library automation.<sup>3</sup> In 1967, Harrison Bryan, an Australian librarian, toured the United States in hopes of reporting on the wave of automation projects. “Projects which have all the recorded confidence of operating schemes turn out to be projects indeed,” he stated. “Systems reported in the full flush of initial optimism are found abandoned or modified out of recognition” (1967, p. 189). His observations were confirmed by many reports at conferences and in the professional literature during the second half of the decade.<sup>4</sup> In his 1968 article in *Library Journal* titled, “Automation: Rosy Prospects and Cold Facts,” Daniel Melcher confirmed Bryan’s report. “I don’t want to give the impression that we are disillusioned about the ultimate potential of the new technologies,” he informs readers, “but it is awfully easy to read the literature and the conference reports and get the idea that things are further along than they are” (p. 1105).

### **“Kicking the Ostrich”**

As initial automation projects lagged behind hopeful expectations, two camps formed within the profession in the eyes of those who desired library automation—“those who espouse the future and the mechanization and automation

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<sup>2</sup> See Adkinson, B. W., Griffin, M., & Kraft, D. H., in Goldhor, H. (Ed.). (1963). *Proceedings of the 1963 clinic on library applications of data processing*. Urbana: University of Illinois at Urbana-Champaign IDEALS.

<sup>3</sup> “See Parker, R. H. (1963). In Goldhor, H. (Ed.). (1963). *Proceedings of the 1963 clinic on library applications of*

*data processing*. Urbana: University of Illinois at Urbana-Champaign IDEALS.

<sup>4</sup> In addition to Byrn’s remarks, see also Fielding, D. (1969). American automation updated: A second report on automation in action by a librarian ‘down under. *Library Journal*, 94.

which will surely come, and those who look toward the past and cling mightily and forlornly to the manual methods which they have known for so many years" (Wright, 1964). Although efforts to automate libraries had been largely unsuccessful up to that point, proponents of library automation continued to look forward to what computers would do for libraries in the future and described those who did not gaze favorably upon automation as backwards, narrow-minded, reluctant to change, and suffering from "psychosomatic myopia" (Kaiser, 1962). Metaphors ranged from the demise of the ancient Aztec empire to those who failed to immediately embrace the horseless carriage or ostriches with their heads in the sand.<sup>5</sup> Regardless of the rhetorical technique, the message was the same—unless libraries changed and adapted, they would be left behind. "If librarianship does not meet this challenge and fill the need for professional knowledge," predicted Robert Hayes at the 1964 Clinic on Data Processing in Libraries, "someone else will."

### **A Gentleman's Opinion**

However, by the late 1960s and early 1970s, the high cost of automation, perceived inefficiency of failed automation projects, and lack of widespread success of library automation promised at the beginning of the decade brought scathing critiques of library automation as a whole. This sentiment is best captured in Ellsworth Mason's contentious article in a 1971 issue of *College & Research Libraries* titled, "The Great Gas Bubble Prick't; Or, Computers Revealed—By a Gentleman of Quality." After completing a seven-month report on computers and library processes at ten large university libraries, Mason concluded, "all the promises offered in its name are completely fraudulent" and "it has been wrapped so completely in an aura of unreason that fine intelligences are completely uprooted when talking about it" (1971). Draped in his infamously harsh, yet entertaining, diatribe against the use of

computers in libraries, Mason's fundamental assertion was that, as a profession, librarians "were ignorantly imitating industrial research and development, which comprise our systems programming, and that we were wasting money on a faith the exact equivalent of a witch's faith in flying ointment" (1972, p. 5). To either the robust applause or profound vexation of many of his colleagues, Mason's numerous criticisms brought an interesting discussion to the forefront of the field—were libraries simply imitating industry? What was the end goal of automation? Was the price tag of automation projects ultimately worth it?

### **"Information Now": The Users' Role in Shaping the Library of the Future**

Mason's attack on automation efforts occurred at a critical moment, appearing just as this period of conceptualization was shifting toward implementation, signaled by the success of the first online catalog through OCLC the very same year. A closer look at the literature toward the end of the 1960s and in the early 1970s reveals an important shift in the rhetoric surrounding library automation that could—and did—respond. Stern rebukes such as Mason's, rooted in rising costs and inefficiency, urged those advocating for automation to refocus the rhetoric on users. Without discrediting the cost of automation, Wright revealed this shift by asking, "Isn't our responsibility to our public, whoever that public may be, much greater than our responsibility to our institution? Is service not more important than cutting costs?" At the Meeting on Automation in the Library, held at Purdue University in 1964, C. D. Gull insisted it was critical for the profession moving forward "to define what we wish to accomplish by automating libraries and information services and equally important to discover what users want of libraries today and of automated libraries tomorrow." As a result, visions surrounding the future of academic libraries and the role of librarians shifted towards projected user needs and demands. At the

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<sup>5</sup> For metaphorical references, see Kaser, D. E. (1962). Automation in libraries of the future. *Tennessee Libraries*, 14, 79-84; Wright, J. H. (1964). Kicking the ostrich. *Library*

*Journal*, 89; Melcher, D. (1971). Cataloging, processing, and automation. *American Libraries*, 2, 701.

Preconference Institute for Library Automation before ALA Annual in 1967, Joseph Beck, in his keynote address, predicted the impact of future technological developments on expectations of users for libraries: “the ability to broadcast information to those who need it when they need it is likely to turn libraries and information centers into communication centers.” In his article titled, “Library of the Future,” J. G. Kemeny envisioned the impact of future information retrieval methods on the librarian’s role within an academic library. “Once we have perfected the search technique, I am certain that a session of ten minutes at a terminal could accomplish more than hours of poring through library catalogs and thumbing laboriously through books,” Kemeny asserted. This system, he predicted, would not eliminate the need for reference librarians, but would substantially change their role. “It would no longer be their job to find items for customers but instead to aid them in the computer search” (Kemeny, 1972).

In addition to adjusting predictions for the future to align with user needs, it was also critical that librarians recognized the agency of users in the present and, more importantly, in the future. “The library’s clientele is changing its expectations,” argued Allen Veaner at the Preconference Institute in Library Automation before ALA Annual in 1973, “the public will no longer be satisfied with any kind of library response that smacks of being plodding or bureaucratic. People want information *now*, not tomorrow or next week. If they can’t get what they want from the library, they’ll go to the computer facility.” This sense of competition with other information sources did not dissuade librarians, but motivated them to pursue automation in order to meet their users’ changing expectations. In response to a *Library Journal* article echoing Mason’s sentiments on the enormous costs of automation, I. A. Warheir wrote a letter to the editor to address why library automation must persist: “The stockbroker today is completely dependent on his cathode ray tube terminal to bring him instantaneous, up-to-date information. He can not rely on yesterday’s *Wall Street Journal*.” According to Warheir, the cost of automation was, in fact, worth reaching the end

goal. Why automate? “To make library services available to more people” (Warheir, 1971).

## Conclusion

In a 1967 article titled “Librarians and the Everlasting Now,” L. Quincy Mumford, Librarian of Congress, pondered the cyclical nature of the issues that plague libraries. “Our problems repeat themselves over and over in every age,” he mused. “It seems probable, for instance, that medieval monks were plagued with a temperature problem.” On a more serious note, Mumford stated, “Challenges which will face the librarians of the future have been outlined more or less in detail by other prophets.” The desire to look forward to predict the future of academic libraries is prevalent in our profession, but so should the practice of reflecting on past conversations. In regards to automation, discovery, and competition, the themes that emerged within the professional discourse during the 1950s to the 1970s seem, at times, to be prophetic of the current professional landscape. Although the “push for automation” looks quite different, the rhetoric surrounding fear of being left behind or considered irrelevant is remarkably similar. Also emerging from this decade of conceptualization is the need for librarians to continuously reinvent themselves, the profession, and role of the library in order to compete with other information sources, such as “the computer facility.” During the present “Amazonification” of libraries, questions about discovery system, costs, and user expectation echo from earlier conversations on automation: are libraries simply imitating industry? What is the end goal? Is the price tag of automation projects ultimately worth it? Do we need to compete? Can we? If libraries exist only to serve users, as Vickery asserted in his 1966 article, “Future of Libraries in the Machine Age,” then “it is the user who must decide—what is the cost to him of our *not* being automated?”

More work needs to be done in order to fully explore what these past conversations mean for the future of academic libraries today. As in decades past, library technology continues to sprint ahead—“we must run if we hope to see it fully and intelligently used for the sake of the book” (Kingery 1959).

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