This proceedings report provides the papers presented at the 1990 spring meeting. Titles and authors of the seven papers are as follows: (1) "Marketing without a Plan: Seizing Outreach Opportunities as They Occur" (Joan Giesecke, Gail Egbers, Kay Logan-Peters, and Debra Pearson); (2) "Historians and the Academic Library: Traditional Research Patterns and the Transition to the Automated Age" (Gretchen Holten); (3) "Vertical Files in Midlands Academic Libraries" (John Lillis); (4) "Value of Library Services: Implications for Academic Libraries and Librarians" (Janice Boyer); (5) "New Instructional Video Tape at UNO (University of Nebraska at Omaha)" (Thomas Tollman and Marilyn Hautala); (6) "Not Just a Pretty Face: Redesigning the Bibliographic Record for an Online Catalog" (Gregory Wool); and (7) "Anticipating the Impact of Automation in Technical Services: An Historical Perspective on a Task/Personnel Study" (Georgene Fawcett and Audrey Newcomer). Each of the papers includes a list of references. (MAB)
"ACADEMIC LIBRARIES: REACHING UP AND STRETCHING OUT"

1990 SPRING MEETING

PROCEEDINGS

NEBRASKA LIBRARY ASSOCIATION
COLLEGE AND UNIVERSITY SECTION

DOANE COLLEGE
CRETE, NEBRASKA
MAY 25, 1990

BEST COPY AVAILABLE
"ACADEMIC LIBRARIES
REACHING UP AND STRETCHING OUT"

PROCEEDINGS

From the

1990 SPRING MEETING

of the

NEBRASKA LIBRARY ASSOCIATION

COLLEGE AND UNIVERSITY SECTION

Held at

DOANE COLLEGE
CRETE, NEBRASKA

MAY 25, 1990

Joan Giesecke
Editor
INTRODUCTION

The theme "Reaching UP and Stretching Out" provided the basis for a diverse set of papers presented at the Nebraska Library Association College and University Section Spring meeting, May 25, 1990. The keynote speaker, Jacque Mundell of the Nebraskas Library Commission looked at "Networking in Nebraska: the Art of the State". Jacque reviewed the many developments in technology that are bring our institutions closer together and connecting us to the national information networks. She also reminded us that networking is also a "people process". Here, Jacque looked at the variety of networks in the state that facilitate interlibrary loan. She also provided an overview of recent developments that will lead to some cooperative collection analysis projects, union lists of serials, and other activities that will facilitate the sharing of information and resources throughout the state. As Jacque concluded in her remarks, networking is as much an art as it is a technology.

The selected paper in this session, "Marketing with a Plan", provided an overview of one way to cope with marketing library services in the midst of rapid change. After presenting information on how to plan out a marketing strategy, the presenters from UNL explained how they had spent the past year learning marketing by doing marketing, or marketing without having a set plan in mind.

In the afternoon sessions, presenters touched on the hi tech issues of automation and its impact on technical services, on how online catalogers are changing how we view bibliographic data, and on the problems historians have in incorporating new technologies into traditional research approaches. Others showed us the changes that have occurred in library instruction, particularly in how we can use videotapes presentations for basic instruction session, explored how vertical files are used in midlands academic libraries and examined the question of how to value library services.

The Executive Board of the College and University Section would like to thank Doane College for hosting this year's conference and to thank all those who helped make this conference a success.

Joan Giesecke
June, 1990
NEBRASKA LIBRARY ASSOCIATION
COLLEGE AND UNIVERSITY SECTION

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MARKETING WITHOUT A PLAN:
SEIZING OUTREACH OPPORTUNITIES AS THEY APPEAR

Joan Giesecke
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ABSTRACT

With the advent of technology, libraries are exploring new options for service. To make sure these services reach the greatest number of users, marketing strategies, long the bastion of business, are being employed. Often times, as was the case for UN-L Libraries, marketing activities were carried out on a unit by unit basis. With the formation of the Outreach Group at UN-L, our efforts have become more structured and goal-oriented.

Because of time and budgetary constraints, our marketing plan is informal at best. Much of it involves realigning resources we have on hand and taking advantage of campus-wide opportunities to make users aware of what we have that they can use. We are working on making the library more visible to special groups, such as new or returning students. In the future we
plan to emphasize the potential of an integrated automated library system and related information on retrieval services to users on and off campus. This paper will review marketing concepts and explain the approach we have taken here at UN-L to reach out to our patrons.

MARKETING PLANS

In the past, the term marketing has been used almost exclusively in the context of business-for-profit related activities; specifically buying and selling. Within the last five years, with the explosion of new technology, and an entrepreneurial push in the information retrieval fields, libraries of all types are discovering that marketing is an important tool for them as well. Marketing is a way for an organization to fit into and to contribute to its environment (1). It is the result of researching user requirements and developing a new service or advertising an existing one, that will satisfy those requirements.

Librarians traditionally have been confident that their product had such intrinsic merit that clients automatically would be attracted, or in a more moralistic vein, believed people "should" use the library. Many librarians associate the concept of
marketing with that of hucksterism; sinking to the level of snake oil salesmen. Given the competition we face in the information environment, this is outmoded thinking. (2) It is time for even academic libraries to become savvy in the ways and nuances of marketing (3).

Over the years, librarians have been doing many things that would now be classified as marketing. Almost any professional journal table of contents contains an article by a librarian or administrator who describes PR campaigns, marketing strategies, etc. Often these marketing strategies concentrate on particular services, such as bibliographic instruction, the bringing up of a new online public catalog, or recruiting new library users.

However, the development of an overall marketing plan or strategy for an academic library is not all that common. Gradually librarians are becoming increasingly familiar with terms such as target audience, clientele, and product. As businesses have clientele, libraries have users. Their target audiences are our user groups. Our products may be associated with materials (books, software, etc.), access channels (reference assistance, computer searches, etc.) and programs (instruction, demonstrations, etc.). (4)
There is one thing, however, that makes libraries different from business -- our goal is service, not profit. This makes our position an interesting one--our competitors may well be other libraries working cooperatively towards the same service-provider goals.

Marketing is different from selling a product. Marketing is creating a need; selling is filling that need. Marketing is a perspective that involves a change in how the library interacts with its parent institution. It is a process that helps the library develop a partnership with the institution in order to provide services to faculty, staff, students, and other client groups. Effective, formal marketing begins with the development of a plan. The plan should first complement organizational goals and objectives, and provide strategies for the library to use in promoting its services. The next step is to identify specific user groups. Marketing efforts achieve more efficient and effective results when they are directed toward a subgroup of the general population (5). In most cases, this step is usually the easiest, especially in academic libraries where groups fall into certain patron types: faculty, staff, graduate students, undergraduates, and community users are some obvious examples. In the case of UNL, we have some interesting
sub-groups we have identified as even more specific user groups. These include freshman coming to the University for orientation, non-traditional students, those involved in the Greek system, high-school age minority students, and new faculty.

Now comes the more creative part - finding the methods to ascertain the users' needs. Users rarely are able to articulate what they would like. They may not even know the full range of services available to them currently. Therefore, research is necessary to find out what they are doing, how they are doing it, and to provide new opportunities for them to do it better, more quickly, or more thoroughly. This needs assessment can be accomplished using a variety of methods. Surveys would seem to be a viable tool, but often times their construction is not conductive to getting valuable feedback. We at UNL have used another method; that of interaction with the target group. This interaction can be formal or informal and can take place within or outside of the libraries. Examples of interaction include participation in workshops, orientation sessions, campus-wide committees --- just about any opportunity that arises. Basically, a continuing involvement by library staff in the life of the
institutions are essential aspects of marketing the library (6).

As information concerning user needs is collected, a review process should be put into place. Evaluation should center on questions such as: What are our strengths and weaknesses? What services do we have that we can make our users more aware of? What new services could or should we market? What services does it appear our users want that are not currently available? What implications might new services have on staffing and budget?

As these questions are considered, some thought must also be given to the realities of financial support. Not only must there be sufficient funds to initiate the services, but enough to provide for maintenance, staffing and upgrading of the service over the long term.

Once conclusions have been drawn, a marketing plan can be established. The plan should be simple with the goal of managing demand, not necessarily stimulating demand. (7). In fact, sometimes libraries may want to decrease demand when resources are inadequate to meet user needs. Charging non-University patrons for library cards, for example, is one way libraries can control demand or "demarket" a product. Next, objectives
should be achievable, and flexible enough to accommodate unanticipated events and circumstances. Monitoring the plan is also important. This ensures that goals are being set and met, that contingencies are being developed, and that time lines are being honored.

In brief, then, developing a marketing plan and evaluating the results of marketing activities provide the library with avenues for identifying, assessing, and meeting their user's information needs, while promoting library services.

OUTREACH ACTIVITIES AT UNL

Although we have just described how a marketing plan should be done, at UNL, we did not follow this path. Instead, given our time and budgetary constraints, we decided to take a different approach to the problem of designing a marketing plan. Adopting the strategy that some action is better than no action, we chose to first go out and try to promote our services as we assessed our users' needs, and then to develop a plan for marketing based on our actual experiences.

In self-defense, we should point out that, at UNL, as part of our overall planning process, we had often considered the need for a formal marketing plan. We had
tried to obtain help from university experts, tried to find a marketing student intern to help us design a plan, and tried to interest a marketing class in taking us on as a project. None of these low cost avenues worked and we were left with either developing in-house expertise by assigning the project to a member of our staff, or of finding a consultant to help us. Both options would have involved extensive use of library resources.

Since we did not have these resources, in August, 1989, we formed an ad hoc group and gave them the responsibility for identifying and participating in opportunities to market the library. The group consists of Gail Egbers, Library Instruction Coordinator, Deb Pearson, Head of Circulation, Kay Logan Peters, Architecture Librarian, and Joan Giesecke, Associate Dean, and is known as the Outreach Crew.

The Outreach Crew made a decision shortly after it was formed to avoid trying to plan for or anticipate all of our outreach activities at the beginning of the year. Instead, the Committee members agreed that when an opportunity to market our library services became apparent, we would act first and evaluate later. This way we did not have to try to identify what
opportunities would arise during the year. Research about marketing opportunities was kept to a minimum.

Our decision to keep our plans flexible and "unplanned" was partially based on time constraints. At UNL we are in the midst of bringing up IRIS, our new automated library system. With the advent of IRIS, we have more reason than ever before to be marketing our services.

We were also attempting to build on one of our public service goals for 1989/90 and a university initiative, that being the formalization of an outreach program. In the past, outreach activities for the libraries were not coordinated by an individual or committee, but were done on an ad hoc basis. Activities were rarely evaluated by a group; the pros and cons of particular outreach activities were not considered. We knew we needed to coordinate these activities even as we participated in them, so that we did not reinvent the wheel every year when a particular event, such as Freshman Friday or the State Fair, came around again. We needed to create "packages" of information to carry with us to our various activities, packages designed with each target group in mind.

In the past year, we have chosen to participate in many new outreach activities, as well as some
The types of activities we use to market our services range from informal presentations to small groups, to well organized and programmed library tours. We usually define our audience in advance and tailor our presentations and displays depending on the group. An effective means of communication used with large general audiences has been a standing display unit. We can vary the information on this display unit according to the sophistication of the user group. A large supply of handouts describing basic library services has proved useful for nearly all audiences, but we also have materials available for specific user groups which would not be of interest to a broader audience.

One of our most successful marketing efforts includes Freshman Friday, an orientation program instituted at UNL several years ago and aimed at incoming freshman. Freshman Friday serves as an opportunity for departments, services and organizations from the entire campus to distribute information to new students. For Freshman Friday, which is held in the Devaney Sports Center, we distribute library packets which include information on obtaining library cards, circulation policies, branch locations, and other general, but essential, information.
Another highly successful marketing tool is the General Orientation Tours program. These are offered regularly at the beginning of the semester and have proved to be successful. Many new students are introduced to the library system in this manner. Tours are advertised using flyers distributed campus wide, through the staff newsletter, and are open to everyone.

We also are providing outreach services to incoming freshmen through the New Student Enrollment program. This program was developed by the Campus Activities and Programs office and includes orientation programs and campus tours aimed at new students and their parents. Tours are conducted by student tour guides, and faculty act as hosts to parents for lunch in the residence halls. With this program, many library faculty have had the opportunity to interact with parents of incoming students, letting them know about the University Libraries and our many services available to students and to the community.

With another audience in mind, the University Libraries started to address the needs of new faculty. All new faculty are invited to attend an orientation program sponsored by the Office of Academic Affairs before school starts each fall. We include handouts about the libraries in the information packets.
distributed at that orientation. Three years ago we decided to invite new faculty to the library as well, and introduce them to the library system in a more personal way. At the reception we serve coffee and cookies and give subject librarians the opportunity to introduce themselves to new faculty. We also use this time to do computer search and CD-ROM demonstrations, and to give library tours. Each year we have evaluated the reception and considered small changes to improve the event. We feel that this has become a necessary and successful outreach and marketing activity.

While many of the events such as Freshman Friday and the General Orientation Tours are marketing activities we have utilized for several years, we also have added some new activities this year. We participated in orientation programs for new Graduate Teaching Assistants, supplementing work we have done in the past with new faculty members. Another area of emphasis which we have concentrated on is that of high school students. This year we attended Red Letter Days, a program designed to recruit prospective high school juniors and seniors. We also worked with gifted high school students through the Lincoln Public Schools.
Furthermore, in 1989, the University Libraries joined many other departments and colleges on campus to present the second annual SPICE (Summer Pre-College Instruction and Career Experience) program. The week-long program, coordinated by the University's Multi-Cultural Affairs Office, is designed to promote the value of higher education to tenth and eleventh grade racial minority students in Nebraska by giving them a sense of what a college education involves. The Libraries chose to present a three-hour workshop for the 28 eleventh grade students. This workshop included a brief tour of the library, the exercise of doing research using a workbook, and a wrap-up session to discuss the research process. We also made up packets for the students which included handouts on finding scholarship information and facts about library careers. We did not expect the students to read all of the materials while they were at the library but hoped they would use the workbooks as resources when they returned to their high schools. The entire SPICE project is a type of marketing plan for the University as a whole and the UNL Libraries plan to continue to participate in this vital, growing program.

Not all of our outreach programs have proven successful. A reception was planned for the graduate
teaching assistants before the start of classes in the fall. By the poor turnout we were able to gauge the disinterest on the part of the graduate teaching assistants in such an event. The adult student organization also asked the Libraries to give a presentation. This, too, was poorly attended. After assessing our programs for these two population groups, we decided that we need to go to them, rather than asking them to come to the library. In 1990 plans are being made to include the libraries in the groups' regular programs. The Graduate Teaching Assistants have a 2-day, intensive orientation process and we have asked to be included on the program. The adult students regularly meet in a brown-bag session at the Union. We feel it is "safer" and more effective to talk to the adult students there, in one of their regular sessions, rather than offering a separate, more elaborate search strategy instruction session in the library.

Many of our activities have taken us off campus and into the community. This year we developed a display for the State Fair as part of the University exhibit. Although this is a very passive promotional strategy, at least it helps remind the University community that the libraries are a part of its overall
academic program. In addition, we consider our professional services activities as part of our overall marketing work. As is true for most academic libraries, members of the library faculty are involved in professional organizations which serve the entire state. All of these individuals are contributing to our outreach efforts and marketing our library system as they serve.

CONCLUSIONS

Has this year of marketing research combined with promotion, or marketing without a plan been a successful outreach strategy? Generally we feel we have accomplished our objectives in the following ways. We have increased the visibility of the libraries on campus. We are becoming an accepted part of the university's outreach activities. We are included in on-going university events that provide us with an opportunity to market our services both to the university community as well as to the general public. We have gathered valuable information we can use now in developing a more formal approach to marketing our services. Our actions have given us the experiences we needed to help us in assessing our environment and in identifying channels to use in promoting our services.
In retrospect, would we use this same approach again in developing a marketing strategy? At times, organizations need to adopt flexible unplanned strategies as a way to deal with a changing environment. We need to let go of the need for rational, planned action in order to experiment with more risky ideas. We need to add elements of "play", or action first, evaluation second, into our organizations. Our activities this year emphasized flexibility and play, allowing us to lay a foundation we can use for a more formal program while taking risks in a changing environment. The approach has worked for us because of a number of key elements present in our own environment. First, we could build on a solid foundation of planning within the libraries. The libraries have used a planning model as the basis for organizational decision-making for the past five years. We have articulated our mission statement, goals and objectives, developed a vision statement of where we think we will be in the year 2,000, and have developed strategies for meeting that vision. Our outreach activities built on those objectives.

Second we had administrative support that encouraged us to take risks and try different approaches to outreach without having to justify every
request. We had the freedom to participate in activities without pre-approval. We could obtain some funding when we needed it, (keeping our requests reasonable), juggle schedules and tap colleagues for time and help with little advance notice. Strategies that were not successful were viewed as important experiments and not as opportunities to assign blame or to criticize our actions. Without a foundation of planning to work from and administrative support for our casual, seat of the pants approach to outreach, we could not have succeeded as well as we did.

Third, and perhaps most important for us, we were able to use each event as an information gathering activity. That is, the process of gathering information was more important to us than the actual success or failure of our promotional activity. After each activity we critiqued our participation, analyzing the information we gathered about user needs, noting what handouts were useful, what information we could have included, and what types of brochures we needed to develop for the next audience. We tried to avoid the "we should have done this or that" syndrome and instead asked "what did we learn about our users needs, and how can we incorporate that information into our marketing plans?".
Where do we go from here? Now it is time for us to step back and develop a more formal approach to marketing our services. We need to bring our ad hoc activities back into the mainstream of library planning and management. We are now in a position to identify groups we still need to survey to assess their needs and to incorporate the numerous pieces of information we now have about our environment, our services, and our clientele into a coherent plan. We are ready to return to the beginning and develop a true marketing plan.
NOTES


BIBLIOGRAPHY


HISTORIANS AND THE ACADEMIC LIBRARY: TRADITIONAL RESEARCH PATTERNS AND THE TRANSITION TO THE AUTOMATED AGE

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ABSTRACT

Recent surveys indicate that a significant percentage of the historians working at colleges and universities now routinely use computers for word processing purposes. There is additionally an increasing interest among historians in using computers for data manipulation and analysis in historical research. This paper will discuss how increased computer literacy among historians is affecting their traditional library and archival research methods. The development of online and other electronic storage mediums of bibliographic information useful to historians will be discussed as well.

TRADITIONAL RESEARCH METHODS

In the article, "The Museum of the Book," R.H. Super gives an impassioned plea for recognition of the unique nature of humanities research methodology in light of what he perceives are negative technological and organizational trends in today's academic libraries. Super, who is a Professor Emeritus of English at the University of
Michigan, centers his argument on the assertion that "you cannot force upon historical and literary scholarship the information requirements of the scientist." (1) The issue of how traditional humanities information-gathering practices may be affected by the changing environment in today's libraries and archives is a critical one. As more and more humanities scholars, including a significant number of historians, become computer literate through the use of computers for word processing and data manipulation, their interest in computerized methods of information storage, manipulation and retrieval has greatly increased. There are many humanists, however, who claim that by its very nature, humanistic research does not lend itself to the new technology. A number of studies conducted in the last two decades have attempted to approach this issue by investigating the nature of the humanities, identifying research methods common to humanists and probing the assumptions that humanists have about scholarship itself. (2) An intriguing factor common to several of these studies is that historians (well-represented in the survey groups) often emerge on the extreme end of the scales used to illustrate the information-seeking methods of each discipline in relation to the others. Thus, while historians share concerns with other humanists, it is important to consider those aspects of their information-seeking behavior which are unique as
well if we are to understand how they will react to and use new technologies for information storage and retrieval.

The University of Nebraska-Lincoln Libraries staff has created a user survey which is currently in the process of administrative approval. As there are a notable lack of up-to-date studies focusing solely on historical research methods, it is hoped that this survey will provide valuable data which could be used to form the basis of a current study of the information needs and research habits of historians. The University of Nebraska-Lincoln History Department would be an interesting survey group to use for an investigation of the relationship between historians and new technology because, significantly, 85% (17 out of 20) of its permanent and temporary faculty members have gained some familiarity with computers through regular use of them for word processing purposes (3). The purpose of this paper is to set the stage for such a study by presenting a brief overview of the nature of humanities research methods with attention to unique aspects of historical research and to consider some of the new technologies which are beginning to affect the way historians do research.

A point which is made repeatedly in the literature on humanities information-seeking behavior is that the process of hands-on research is more critical for
humanists than the basic retrieval of specific pieces of information. As Susan Guest has noted, "For the humanities scholar, the direct and sustained encounter with primary sources is indispensible for the production of insights and ideas and therefore information retrieval becomes a crucial task in itself but more in the nature of an undefined odyssey." (4) The literature of the humanities is diffuse and cumulative and the humanist, who tends to work alone, is frequently unable to define what he is looking for or communicate specific information needs to others. It is often noted in the literature that many humanists find it extremely difficult to delegate their searching to others. According to Carole Smith, who studied historians at the University of York, "the history researcher very rarely likes to delegate searching for secondary, let alone for primary sources...the chief reason for this is that the kinds of questions historians ask are not answerable from obvious sources." (5) Bernard Fabian explains, "The point to note is that in pursuing his question the (humanities) scholar is led from one item to another...he charts, as it were, a course through 'pertinent' material, which for him consists of a multitude of texts not previously arranged for his specific purposes." (6) The basic contention is that selection of sources in humanities research results from the process of research itself and is an ongoing endeavor.
based on the intellectual connections made the scholar. The humanities scholar may be concerned that by delegating his information search, he will lose some control over the direction it takes. It has been argued, for example, that "historians only allow others to search for them to a limited extent, otherwise the interpretation process starts earlier and becomes part of what the supplier, rather than the requestor does." (7)

The Information-seeking behavior of historians is often unsystematic, propelled by a combination of intuition and serendipity. Browsing, according to user surveys, plays an important role in historical research. Historians' frequent use of browsing in research may be due in part to the fact that they do not have a shared terminology to work with akin to those that scholars in such social sciences disciplines as psychology, sociology and education have. Historical research is somewhat additionally complicated by the fact that every subject has its historical facet.

Corkill and Mann have broken the humanities down into the following types: the "Chronicle Type," the "Critical or Comparative Type," and the "Contemplative Type." History, they assert, fits into the "Chronicle Type," a type which is based on the investigation of a large number of widely scattered texts, documents and records. (8) History is unique in relation to other humanities subjects
in the extent to which its research materials are dispersed. It has been traditional for humanities scholars to build up personal collections of unique materials relevant to their research interests. In the ACLS Survey of Scholars, 76% of the humanists queried responded that materials in their personal collections were of "great importance" for their teaching, research and keeping up in their field, whereas only 46% listed their institution's library as being of "great importance" for these purposes. (9) Although the ACLS survey unfortunately does not break these figures down by discipline, in Information Needs in the Humanities: Two Postal Surveys, Corkill and Mann found that historians relied much less upon materials in their own possession than any of the other humanities subject groups. (10) A related finding was that historians were the most likely of all the humanists to travel to libraries and other information repositories in addition to using those attached to their own institutions. In fact, 72.1% of the history faculty and 87.3% of the history graduate students surveyed stated that they were using unique (letters, official records, etc.) materials in their current projects and that the use of 95.9% of these items required a visit to another institution. (11) Although they travel more in conducting their research than scholars in many other fields and are heavy users of interlibrary loan, historians have traditionally
been recognized as heavy users of their own institution's library collections as well. The picture that emerges when one thinks of the stereotypical historian is of a person suffering from severe eyestrain who regularly plows through great heaps of library and archival material.

It is also interesting to consider the types of materials that surveys have found to be the most heavily utilized by historians. Margaret Steig, a Columbia University Professor of Library Science, conducted a survey of 767 historians from the Directory of American Scholars. The results, published in Steig's 1981 article "The Information Needs of Historians," are extremely useful due to the wide variety of specializations within history that its 360 respondents represented.

In the questionnaire, the historians were asked to rank their use of materials by format and then specify those formats which were the least convenient to use. The results were that books were ranked #1, followed by periodicals, manuscripts, newspapers and microcopies in that order. Theses and dissertations and government documents tied for sixth place. Microcopies, manuscripts, and theses and dissertations were overwhelmingly agreed upon to be the least convenient in terms of use. Steig received many impassioned comments in reference to the evils of microforms in particular, including the following
(rather typical) complaint that "Librarians, gung-ho for microfilms, rarely read the damned stuff." (13)

For purposes of comparison, it is interesting to note that in the study, "The Characteristics of the Literature used by Historians," which focused solely on scholars in the specialization of English History, respondents' rankings of sources for usefulness were similar to those in the Steig survey; monographs were rated #1, followed by periodicals, printed documents and calendars, and manuscripts. (14)

One of the thought-provoking findings of the ACLS Survey of Scholars was that 57% of the historians surveyed agreed with the statement "It is virtually impossible to even minimally keep up with the literature in my field." (15) This sentiment would seem to point to the need for an efficient current awareness service in history.

Although the ACLS survey does not include an investigation of the sources which historians use in their attempt to keep up with the literature in their field, such an analysis is a major focus of Steig's survey. Her findings were that historians considered bibliographies or references in books or journals to be the most useful source for finding current information in their field and for discovering publications relevant to their research. (16) This finding corresponds with a study of a select group of humanists published in 1989 in the article
"Patterns of Information Seeking Behavior in the Humanities," by Stephen Wiberly and William Jones. Wiberly and Jones found that the members of their survey group regularly consulted bibliographies as a convenient method of current awareness and that these bibliographies tended to be serials published by the scholar's professional association which specifically covered the scholar's long-standing research interests. (17) The Urban History Newsletter, which periodically publishes a selective bibliography of history/sociology titles of interest to urban historians, is an example of this kind of bibliography.

Book reviews were ranked by historians in Steig's survey as the second most useful source of current information and, surprisingly, as the third most important way to identify publications useful for their research. Specialized bibliographies, such as Writings in American History and discussions or correspondence with acquaintances elsewhere were also ranked high for research and current awareness by the historians. The fact that indexes and abstracts were only ranked fifth for research and current information is significant. (18) The literature indicates that many historians find the subject headings and arrangement of these indexes cumbersome. The relatively light use of indexes and abstracts has implications for the use of online bibliographic databases.
but Steig does not include an investigation of online database use by historians in her survey. In fact, it is difficult to find mention of historians and online bibliographic database searching in the literature. The ACLS Survey of Scholars found that 17% of the respondents in history used computers to access online databases through service networks but it is not clear whether this figure is limited to online bibliographic databases or if it includes online statistical packages, such as SPSS, as well. (19)

Steig's identification of the sources used by historians for research and current awareness matches up roughly with the findings of Carole Smith in her study of historians at the University of York. Smith found that the historians at York usually got their information by scanning current journals, book reviews, publishers catalogs, and library shelves as well as through interaction with scholars in the same field of research and contact with their professional associations. (20)

TECHNOLOGY

Having summarized some keys points of the literature on the information-seeking behavior of humanists with attention to unique aspects of historical research, it is now possible to consider how new technology fits into the picture. Granted that the traditional research methods of
Historians may not seem to involve much technology, there are a number of technological developments which provide more efficient ways to carry out certain aspects of historical research.

Historians who have struggled through the cumbersome and confusing National Union Catalog of Manuscripts Collections (NUCMC) should be relieved to learn that the creation of an Archives and Manuscripts Control format enables archival repositories to enter machine-readable records onto RLIN (the Research Libraries Information Network). There are now over 200,000 records describing primary source material located in over 70 archives, museums, libraries and historical societies. A scholar looking for the papers of a particular person, for example, can easily enter the name of their subject on a personal computer connected to RLIN and not only find out where the material is located but also see a description of the material from the collection level down to the item level. Although there are millions and millions of archival records which are not yet accessible through RLIN, significant progress is being made. Recently, current NUCMC cataloging was inaugurated on RLIN and the National Union Catalog has begun to enter its descriptions of records, as well, so that the records of many repositories that are not members of RLIN will be available on the network. The RLIN database contains
numerous other items of use to historians. In addition to accessing records of books, serials, sound recordings, visual materials, and maps held at participating institutions, users can access the Eighteenth Century Short Title Catalog. Work is in progress toward making the Incunabula Short Title Catalogue, which contains references to English and European imprints through 1501, and the National Register of Microform Masters available on RLIN. A highly useful current awareness service on RLIN is the Research in Progress Database which enables scholars to access citations and abstracts of articles have been accepted by a journal but are waiting for publication. Finally, in addition to bibliographic data, projects are under way to include actual primary source material in RLIN. A project that should be extremely useful to historians is the Medieval and Early Modern Data Bank. This data base will include such primary sources as wills, taxation records, household and estate accounts, exchange rate quotations, and calendars of dates for the time period 500-1800.

A number of online bibliographic data bases available through DIALOG are useful for research into secondary source material. The main data bases that cover history are America; History and Life, Historical Abstracts, Arts and Humanities Citation Index, Social Sciences Citation Index, and Dissertation Abstracts. Use of America;
History and Life and Historical Abstracts would be greatly facilitated by the creation of a thesaurus of indexing terms and an improved ability to specify time periods in searches. The implication of a lack of shared terminology in history would seem to be that the CD-ROM format, which allows for prolonged low cost browsing of citations, descriptors and abstracts, would be preferred by historians to high cost online databases, which are more suited to systematic search of specific subject headings.

Many historians work at institutions whose libraries now have computerized card catalogs. In the ACLS Survey of Scholars 40% of the scholars surveyed said that all or part of their library's card catalog had been computerized. Surprisingly, 8% of the respondents said that they did not know if their library's card catalog was computerized or not. (21) Historians who are connected to their library's catalog through their personal computers will be able to browse the library's shelf list by call numbers from their home or office. Given the high value that historians place on browsing, this should be a welcome development. As more libraries and special collections automate their card catalogs and historians are able to link up with these catalogs through computer networks, the range of titles that historians will be able to browse will increase dramatically. A number of new
technologies for information storage and retrieval such as optical character recognition and optical disk storage will undoubtedly increase historians' access to sources that are now difficult to obtain.

CONCLUSION

Although some historians may never take advantage of the possibilities for research that are offered by new technology because they do not want to alter their traditional research tools and methods, many historians are simply not aware of the new technologies available to them. It is indicative that 46% of the scholars who responded to the ACLS Survey of Scholars said that no effort was being made at their institutions to acquaint faculty with new technology. (22) Librarians should actively market new technology to historians not only through faculty liaison on campus but also by participating in the conferences held by historical associations and by publishing in the journals that historians regularly read. Such interaction could additionally increase librarians' understanding of the information needs of historians. Finally, historians and librarians should work together to insure that the new technologies are designed with historical research needs in mind.
REFERENCES AND NOTES


3. The author arrived at this figure through an informal query of UNL History Department. It is interesting to note that the ACLS Survey of Scholars, conducted in 1985, found that 14% of of the 611 historians who responded to the
survey routinely used computers. Use was primarily for
word processing purposes. Morton and Price, *ACLS Survey*,
p. 33, 36.


5. Smith, "Problems of Information Studies in History," in


p.57.


p. 50.

p. 93, 116.


Literature Used by Historians," p. 141.


17. Wiberly and Jones, "Patterns of Information Seeking in
the Humanities," p. 641.


20. Carole Smith, *Information Officer in History at York
Research and Development Department, BLRD report no. 5599.
Text-Fiche.


VERTICAL FILES IN MIDLANDS ACADEMIC LIBRARIES

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ABSTRACT

This paper reports the results of a survey of all non-medical academic libraries in Nebraska, Iowa, and Kansas, and outlines prevailing patterns of organization and use of vertical files in academic libraries in these states. While most academic libraries still have vertical files, there is little uniformity of practice in their management, composition and use. Although vertical files are heavily used and can be a useful tool, they are viewed as "low tech" and appear to occupy a low position on most libraries' lists of priorities.

The use of vertical files in academic libraries has not been extensively explored in library literature. Some investigators suggest several reasons for this. Hodgson and Caroogian suspect that the minimal interest in the subject reflects "a basic indifference to this type of material which is seen as lacking in 'scholarly virtue'". According to Still, disdain for vertical files may stem from the perception that "To many libraries, the vertical file doesn't fit into the age of online searching and portable PC's. It appears a throwback to the days of hand-typed catalog cards and the stereotyped

shushing, sour-faced librarian...It is perceived as a low-tech tool in a high-tech world." Clark suggests that vertical files may be in bad odor because "...too much time and energy [is] needed to maintain materials which may have only a momentary value." Others view vertical files as more appropriate for school or public libraries. Certainly, for whatever reasons, vertical files are not usually viewed as one of the "glamor areas" of library service, especially in academic libraries, and especially in this period in which the attention of academic librarians has been directed almost entirely to library applications of advancing technology. Work with vertical files is not seen, says Still, as a stepping-stone to career success, and librarians are not, at best, eager to become involved, and, at worst, actively avoid using and, especially, managing vertical files.

Nevertheless, the few studies which have been done on vertical file usage in academic libraries indicate that vertical files seem to be filling a need, since they are heavily used. Since vertical files do fill a need, how do they serve it? How are academic libraries organizing and using their vertical files to meet this need?

A two-page survey was developed to collect information on the organization and use of vertical files in Midlands academic libraries. It included a collection management section with questions on acquisitions, weeding, size, nature, and management of the vertical file, and a user service section with questions on frequency of use, statistics keeping, types of users, circulation, and security. In addition to its main purpose of attempting to get an overall picture of vertical file organization and use, one thrust of the survey was to get a feel for the extent to which vertical files are successfully


integrated into libraries' basic reference service and collections. Are vertical files in academic libraries peripheral or essential? Are they heavily used, and, if they are, what has been done to make them so useful?

Another additional purpose of the survey was definitional: what do librarians consider the vertical file to be? The usual definition, "a collection of pamphlets, cuttings, correspondence or similar material arranged on their edges in a drawer or box" seems only to hint at the great variety of materials sometimes considered "vertical file" materials. Are corporate annual reports considered part of the vertical file? What about maps, government documents, and Newcomen Society addresses? Or is a vertical file item simply something that is not cataloged but is still worth keeping, for a while?

The survey was mailed to all non-medical academic libraries in Nebraska, Iowa, and Kansas. Libraries were selected by using the 1989-1990 edition of American Library Directory. The survey was extended beyond Nebraska for two reasons: first, to ensure a large sample, and second, to reveal possible interstate variation in responses. I chose these three states because of their proximity - I was interested in how vertical files are handled by academic libraries in this particular area, with a view to improving service at my own library.

Of the 137 surveys mailed, 127 were returned, or almost 93 percent. I believe the high response rate is due to four factors: first, it was sent to librarians, who, as a class, are noted for their willingness to help; second, a stamped, self-addressed envelope was provided for the surveys' return; third, I offered, in my cover letter, to provide a copy of the results to those surveyed whether or not they completed the survey or even had a vertical file, if they wanted a copy; and fourth, the survey was

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The 31 questions occupied two pages, and could be answered in a few minutes. Of the 127 respondents, 109 had a vertical file and 18 did not. However, this does not give a clear picture of the trend, which seems to be away from vertical files. Several of those without a vertical file commented that they had recently discontinued theirs because of time constraints, and several to those who do have a vertical file indicated they were considering discontinuing it for the same reasons. None of those without vertical files said they were considering establishing or reestablishing them. The main libraries at the University of Nebraska and the University of Iowa report having no vertical files. The reported size of vertical files varied from less than one file cabinet drawer to 96 file cabinet drawers, with roughly equal numbers reporting that their vertical files occupied two to four file cabinet drawers, five to eight drawers, nine to 16 drawers, and more than 16. One library reported using shelves rather than drawers. A simple scatter diagram showed a very rough correlation between the institution's enrollment size and the size of its vertical file. Only 11 of the 109 libraries with vertical files reported having a written policy governing the purpose, scope, and management of their vertical file. Although at first glance this may be surprising, a reasonable surmise seems to be that it may reflect the fact that libraries often operate understaffed and seldom have time to draft and, still less often, to implement written policies governing their activities, despite the enthusiastic recommendation of this approach in the literature. The absence of written policies may also be an indication of the vertical file's relatively lowly status in academic libraries. Half of the libraries with vertical files report that only professional librarians can decide to add items to them, with the rest extending this privilege, in declining order, to support staff, student assistants, faculty, volunteers, students, former librarians, and...
library majors. Of those who reported the number of people who can make this decision, two-thirds said it was restricted to one or two individuals, with one library reporting six.

What do these people put into vertical files, in terms of subject? All but nine of the libraries with vertical files gather material on "topics in demand for student papers-themes-speeches" and over three-fourths of them collect material on local and state history. About half include material on the current debate topic, local business and economy, local biography, geography and wildlife, and the history of their institution. A few libraries reported including religious material, corporate annual reports, health materials and job-hunting aids.

In terms of formats included in the vertical file, about a third of libraries reported systematically reviewing and clipping one or more newspapers. The most frequently clipped non-local newspapers were the Wall Street Journal, Christian Science Monitor, USA Today, and New York Times, which at first glance is surprising since indexes for three of these are available. Most of the newspaper-clipping libraries clip three or fewer papers, but six reported reviewing and clipping more than five.

Almost all vertical files contain pamphlets and brochures, and about three-fourths include maps. Half reported holding special periodical issues and bibliographies, and a quarter reported the presence of photographs. A dozen libraries include journal or periodical articles, and eight include corporate annual reports.

Less than half the libraries used LC subject headings for their vertical files, and half create their own headings. One library, in a fit of honesty, said that it used both LC subject headings and "no organized system".

Libraries do not cooperate with other libraries in maintaining their vertical files. Seven said they did cooperate, and of these, six commented that the extent of their cooperation was simply to use interlibrary loan to supplement their files.
Just over half the libraries reported weeding their vertical files on a regular basis, with five-sixths of the weeders doing it annually. Only five libraries reported having a written policy governing the weeding of their vertical files. When weeding, almost all libraries consider the age of the material, about half consider its topicality and availability elsewhere, and a third consider its frequency of use. All libraries discarded weeded items rather than storing them elsewhere.

Three-quarters of libraries maintain some sort of index to their vertical file materials. Of these, 62 use index cards or a paper index. Fifteen libraries use computers to maintain their vertical file indexes, with 13 different software programs reported in use. A tenth of the libraries guide users to vertical file materials by means of cards in the subject catalog, but in only a tenth of the libraries does the vertical file itself provide references to other library materials on vertical file subjects.

A third of libraries said they had an organized method of acquiring items for their vertical files, and of these, 19 use the Vertical File Index, and nine mentioned clipping newspapers. Other sources mentioned by more than one library were mailing lists, federal government documents, state government documents, writing for free material, tourism bureaus, and the Educator's Index to Free Materials.

In terms of using their vertical files, nine-tenths allow items from the vertical file to circulate, with the most common period being one week. Most libraries allow users to access vertical file items themselves, rather than having staff members retrieve items for users. When items or folders are removed from the vertical file for use, signout is required in seven-eights of libraries with vertical files.

A third of libraries report that their vertical files are located within 10 feet of the reference librarian (or equivalent)'s usual service location, a third report between 10 and 20 feet, and a third greater than 40 feet.
How often are vertical files used? Twelve libraries reported once a month or less, 15 reported two to four times a month, 32 reported two to five times a week, 25 reported two to five times a day, and 18 reported more than five times a day. Several respondents made notes in this area such as “have never considered this” or “good question.” However, most responses to this frequency-of-use question are probably “best guesses,” since four-fifths of libraries report that they don’t track how often the vertical file is used. A simple scatter diagram indicated little correlation between usage and size of the vertical file.

Seven-eighths report that their heaviest users are freshmen and sophomores, but this reflects the heavy representation of community colleges in the sample. Members of the public and library staff were reported as the heaviest users by about a tenth of the libraries. A quarter of libraries reported having problems maintaining security for items in their vertical files, but most of these don’t consider the problems serious.

What sort of picture does this survey provide of vertical files in Midlands academic libraries? Three tentative conclusions might be drawn. First of all: diversity. Vertical files vary widely in terms of content, usage, size, and management. There is no standard: libraries mold and use their vertical files to meet their own needs, hardly ever cooperating with other libraries.

A second factor that emerges is that vertical files are not generally closely managed. Most libraries have no written policies governing content or weeding of vertical files, and most have no organized method of acquiring materials for them. Circulation periods vary widely. Subject headings do not, in most cases, follow standards widely accepted in the broader library community.

Third, and perhaps most significant, is that vertical file usage is not generally monitored. Empirical information on actual use of the vertical file is not generally collected, and librarians necessarily make decisions based on their personal “feel,” which may or may not be accurate.
As far as the position of vertical files in academic libraries is concerned, there seems to be a recognition of their value, simply by virtue of the fact that 87% of libraries still have them. Another evidence of their usefulness might be that in most libraries they are physically located within 20 feet of the main user service point, although in some cases this might also reflect cramped quarters. The 15 libraries that maintain computer indexes to vertical files seem to recognize their value and consider it worthwhile to make their usage easier by a further application of technology.

The evidence appears to indicate that despite the inevitable labor-intensiveness of maintaining vertical files, they will most likely remain in action as a useful information tool in Midlands academic libraries for the foreseeable future.

REFERENCES


Would you like a copy of the results of this survey?  Y  N

1. Do you have a vertical file (VF)?  Y  N

2. If Y, do you have a written policy on its purpose and scope, governing what
is included in it?  Y  N  (If Y, would you please enclose a copy?)

3. What is the status and number of those who can decide to add items to your
VF?

- professional librarians
- student assistants
- other (please note: ______________________)

4. Do you systematically review and clip one or more newspapers for articles to
add to your VF?  Y  N

5. If Y, which newspaper(s)? __________________________

6. Besides newspaper clippings, what other materials are present in your VF?
(Please check any that apply)

- maps
- pamphlets/brochures
- photographs
- other (please note: ______________________)

7. What subject areas does your VF contain materials on? Please check any that
apply:

- local/state history
- local/state business/economy
- local/state biography
- local/state geography
- local/state wildlife
- current debate topic(s)
- institutional history
- institutional biography
- topics in demand for student papers/themes/speeches
- other (please note: ______________________)

8. Do your VF items circulate?  Y  N

9. If Y, with what restrictions (if any)? ______________________

10. How are subject headings assigned to folders in your VF?

- no formal system
- published list (i.e., Sears)
- LC Subject Headings
- created when number of items justifies it
- other (please note: ______________________)

11. In managing/building/using your VF, do you cooperate with any other
library/libraries?  Y  N

12. If Y, with what other libraries?

- local public library(ies)
- nonlocal public library(ies)
- other local academic library(ies)
- other nonlocal academic library(ies)
- other (please note: ______________________)

13. If Y, please briefly describe how you cooperate: ______________________
14. Do you weed your VF on a regular basis?  Y  N
15. If y, how often? ____________________________
16. Do you have a written policy governing the weeding of your VF?  Y  N
   (If Y, could you please enclose a copy?)
17. What criteria do you consider when weeding your VF? Please check any that
   apply:
   ___ age of the item  ___ availability of information elsewhere
   ___ topicality  ___ frequency of use of the item
   ___ other (Please note: ______________________________________)
18. Do you discard the items you weed ___ or store them elsewhere ___?
19. Can users access your VF themselves ___ or do staff retrieve the appropriate
   file/items for them ___?
20. Do you sign out individual file folders ___ or items in the folders ___ to users?  Y  N
21. How large is your VF?
   ___ up to 1 file cabinet drawer  ___ 2-4 file cabinet drawers
   ___ 5-8 file cabinet drawers  ___ 9-16 file cabinet drawers
   ___ more than 16 file cabinet drawers
22. Where is your VF physically located (roughly)?
   ___ within arm's reach of the reference librarian's usual service location.
   ___ within ten feet of the reference librarian's usual service location
   ___ 10-20 feet from the reference librarian's usual service location
   ___ more than 20 feet from the reference librarian's usual service location
23. How often is your VF used?
   ___ once a month or less  ___ two to four times a month
   ___ two to five times a week  ___ two to five times a day
   ___ more than five times a day
24. Which group of patrons uses your VF most heavily:
   ___ faculty  ___ staff
   ___ freshmen/sophomores  ___ juniors/seniors
   ___ graduate students ___ members of the public
25. Do you have problems maintaining security for items in your VF?  Y  N  (If Y, please note briefly: ____________________________
26. Do you track how often individual file folders ___ or individual items ___ in
   your VF are used?  Y  N
27. If Y, please briefly describe how: ____________________________
28. Do you maintain an index to items in your VF?  Y  N
29. If Y, in what format:
   ___ index cards/card catalog cards
   ___ paper/ringbinder
   ___ computer  (If computer index, please indicate software used:
   ____________________________________________________________)
   ___ other (Please note: ____________________________)
30. Does your VF provide references to other library materials on VF subjects?  Y  N
31. Do you have an organized method of acquiring items for your VF?  Y  N
   (If Y, please describe briefly: ____________________________
   ____________________________________________________________
   ____________________________________________________________
   ____________________________________________________________
THE VALUE OF LIBRARY SERVICES: IMPLICATIONS FOR ACADEMIC LIBRARIES AND LIBRARIANS

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ABSTRACT

Academic libraries and librarians add value to information sources by carefully selecting, organizing, and interpreting library materials. The services that libraries provide are essential to the operation of institutions of higher education. How "value" is perceived can greatly affect the type and amount of resources provided to libraries to pursue their mission and objectives. This paper explores how libraries should assess the value of what they do and how that value can be communicated to policy makers and funding authorities.

INTRODUCTION

John Naisbitt in his book, Megatrends, describes the transition from an industrial society to an information society which has been taking place since the 1950's. The largest segments of new jobs being created are information jobs. Professional workers are almost all information workers--lawyers, teachers, accountants, systems analysts, doctors, architects and librarians. The single largest occupation in the United States is clerk. For both professionals and clerks the creation, processing, and distribution of information is their job.1

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In an information society, value is increased by knowledge, not by labor as was the case in an industrial society. David Birch from MIT demonstrated that in the 1970's more than 90 percent of new jobs were not in the goods-producing sector. According to Birch "we are working ourselves out of the manufacturing business and into the thinking business."2

Librarians are in the "information business." Books, journals, newspapers, and other materials are of little value if they are thrown into a room in jumbled piles. Libraries and librarians add value to information sources by carefully selecting, organizing, and interpreting information sources for easy use by library patrons.

Information is a commodity. It can be produced, packaged, bought, and sold. Information has the following characteristics:

- Information can be transmitted
- Information does not wear out but it can become obsolete
- Information is reproducible
- Information is useful in action decisions
- Information differs from land, labor, and capital as a factor of production
- Information has value

WHAT IS VALUE?

Webster's unabridged dictionary gives several definitions: the amount of a commodity, service, or medium of exchange that is the equivalent of something else; the monetary worth of something; relative worth, utility, or importance.4

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2Ibid., p. 17.
Value is also defined as "that quality of a thing according to which it is thought of as being more or less desirable, useful, estimable, important, etc.; worth or degree of worth."\(^5\)

Value is often determined by an equivalence relationship which can be expressed in the following equation:

\[ V_a = V_b \]

where the value of A is equivalent to the value of B and \( A \neq B \). For example, one might say "The value of my car is $10,000" or "$10 is equivalent to £6." These statements define what one would be prepared to exchange for a desired commodity or the exchange value.

Value has other characteristics. Value is subjective. What is very valuable to one person is of little value to another. Value is situation dependent, and it varies over time. An article provided to a student one day before his or her paper is due may be extremely valuable. The same article delivered a day later may be of absolutely no value to that student.

PARADOX OF VALUE

The "paradox of value" is a concept in economics used to describe the low or zero price of very useful things such as sunlight and air vs. the high price received for relatively useless things such as precious stones. The solution to the paradox is the availability of the various items.\(^6\)

\(^5\)Webster's New World New World Dictionary of American English, 3rd College ed. s.v. "value."

Libraries suffer somewhat from the "paradox of value." Library services are available to most people in the United States, and where services are limited their value is perceived as being higher. Institutions of higher learning cannot be accredited without a library, so libraries are at least minimally funded to meet that criteria. The fact that libraries are considered to be "free" degrades the value that libraries play in the operation of colleges and universities.

MEASURING VALUE

There are several methods of measuring value. What users are willing to pay (in terms of their time and effort) for information, how much it would cost to use alternative sources for getting the information (competitors), and what benefits (or research cost avoidance) would be lost if the library did not exist are three basic measures. The use of an item or how it is used (impact) are two other measures. Use and impact have the most significance for academic libraries. In 1981 Robert Taylor wrote "The value of information has meaning only in the context of its usefulness to users. There is no way of analyzing value of information except by reference to the environment of those who are its intended clientele." Robert Rich identifies several categories of use including intended use, actual use, instrumental use, and conceptual use. Instrumental use refers to the documentation of the specific way information is used. Conceptual use refers to information use that cannot be documented but influences a person's thinking. Although use cannot be

9Griffiths, p. 270-271.
the sole criteria for judging value, it is a significant component. Impact, or how the information is used, is another method of value assessment. Several studies have been conducted to attempt to measure value using these criteria.\textsuperscript{10}

**VALUE CHAIN**

In 1985 Michael Porter and Victor Millar outlined a framework for analyzing the significance of new information technology in a *Harvard Business Review* article. They describe the "value chain," a concept that divides activities into the technologically and economically distinct activities it performs to do business. The activities are referred as "value activities." The value a company creates is measured by the amount that buyers are willing to pay for a product or service. A business generates a profit if the value it creates exceeds the cost of performing the value activities.\textsuperscript{11} Porter and Millar also point out that the information revolution is creating completely new industries by making new businesses technologically feasible, by creating demand for new products, and by creating new businesses within old ones.\textsuperscript{12}

Universities have three primary operations: education, knowledge creation, and resource management. Blaise Cronin and Lizzie Davenport developed the PIM (People-Information-Management) model to describe the university value chain. The PEOPLE component includes prospecting, processing, placement, promotion and post-experience provision. INFORMATION involves input, integration,
intelligence, infusion, and impact assessment. MANAGEMENT consists of materials, manipulation, maximization, marketing, and mega-marketing.

The most important string of the chain for the university library is the INFORMATION chain. Input and integration entail the traditional functions of acquisitions, cataloging and classification. The intelligence function involves the evaluation and packaging of information which is a relatively new activity for most university libraries. Infusion involves the process of dissemination, and impact assessment evaluates how information is actually used. The library can have an effect on areas of the PEOPLE and the MANAGEMENT components particularly in the area where intelligence gathering is important such as marketing, megamarketing, or prospecting for students. The university library is a vital link in the university's value chain.13

VALUE ADDED

Although academic libraries are not "for-profit" operations, they are accountable for the resources they consume. Librarians are responsible for adding value to the raw materials that are provided and for exploiting information technology to enhance traditional library services and to create new services. New technologies such as integrated library systems, bibliographic utilities, and CD-ROM have made information retrieval easier and more thorough for library patrons.

"Value added" is defined as "the value added to or created in a product or commodity by the manufacturing or marketing process exclusive of the cost of materials, supplies, packaging, or overhead."14 Libraries "add value" to

information resources by selecting, purchasing, cataloging, processing, organizing, and circulating materials. Many of these functions may be aided by computers, but they all require human intervention to accomplish. The librarian and support staff, by performing the myriad of tasks that they do everyday, provide a system that makes library resources available to library patrons.

Adding value can be what is needed to generate the necessary support for funding new technologies or other needs such as space, materials, or new personnel. Drew University, a small, selective liberal arts university in Madison, New Jersey, used this approach to acquire an online public access catalog with an online encyclopedia and other features. In 1983 Drew realized that the next decade would be a difficult one because the pool of potential students was shrinking. If the school were to retain its highly selective standards and still maintain enrollment, they must do something to attract highly qualified students. The University decided to invest in the latest technology and to use technological innovation as an area of expertise. The "Computer Initiative" was born and all incoming freshmen and all faculty members were issued personal computers and challenged to incorporate their use in the liberal arts curriculum. With the success of the Computer Initiative, the plan was broadened and became the Knowledge Initiative which linked all computers on campus and added the library to the network. The personal computer had added value to the work of faculty and students, and the addition of library services was a natural outgrowth.

The Drew University Library had been asking for automation funding for more than three years. The quest for funding to expand the network and to include the library was what was needed to make the funding a reality. The strongest case
for this initiative came from the vision of value-added information services and delivery.15

VALUE OF THE INFORMATIONAL PROFESSIONAL

When the resources and services of libraries are described, the descriptions are usually quantitative and made to sound as if the "library" is responsible. The number of volumes held, total circulation, or the volume of interlibrary loan transactions always sound as if the "library" is doing the work. As we all know, it is people who plan, organize, and complete these tasks, but the value of the services provided is often overlooked. If librarians cannot define and measure their value, they cannot convey their worth to administrators and funding bodies.

In 1985 the Special Libraries Association set out to define the value of the information professional. A task force was organized and three approaches were studied: 1) measuring time saved, 2) determining actual monetary savings/gains, and 3) providing qualitative, anecdotal evidence of value. Briefly, some of their findings included that Georgia Tech's on-line information system saves $1.2 million in faculty time per year, Texas Instruments Houston library has a return on investment of 515 percent, an Amoco executive states that information professionals help the company "to make better decisions . . . and to avoid costly mistakes," and an $11 database search saves a company 200 hours of lab work.16

Although the thrust of the Special Libraries Association work is toward corporate and institutional libraries, the implications for academic libraries are

16President's Task Force, p. 1.
significant. Our online catalogs, database searches, and CD-ROM tools save student and faculty time as well as improve library productivity. A graduate or doctoral student may save months or years of work if a database search reveals that the topic chosen for a thesis or dissertation is not unique.

Tools that can be used to measure the value of the information professional include: cost/benefit analysis, return on investment, and user surveys.

THE VALUE-ADDED PROCESS

The value of library information increases as the quantity of information decreases and it is distilled into more usable form. Illustrated below is a rough sketch of the value-added process as it relates to library tools.
Books, articles, proceedings, documents, and other information sources are the basic vehicles for recording and disseminating information. (High quantity, low value). Specific information is made more accessible through indexing techniques used in both print and electronic forms. Paper indexes and abstracts, online databases, and CD-ROM products add value to information sources by making them more accessible to library patrons. (High value, high quantity) Information is distilled in handbooks, guides, and reference books which assists in identifying specific pieces of information. The quantity of information is reduced and that adds to the value. (Low quantity, low value) The most significant aspect of the value-added process is the uses made of information obtained. As information is distilled into readily usable form, it is instrumental in making decisions and impacts. (High value, low quantity)

It is difficult to precisely predict where the value shifts take place in this process. At some point, the library patron takes the obtained information and puts that information to work. Librarians need to facilitate the process to provide concise, usable information and therefore, to add value to the available information sources.

THE BOTTOMLESS PIT

Libraries and librarians cannot add value to resources if they are not provided adequate resources to work with. The library does not, for the most part, generate revenue. There are exceptions such as fines, copy centers, or fee-based business reference services, but in general the academic library is a consumer of resources in the eyes of university administrators. The library has no students, so
there is no tuition or alumni donors. In a classic article published in *College & Research Libraries* in 1968, Robert Munn describes the perception of the library by the academic administration as the "bottomless" pit. Libraries have no bounds on their needs as other academic departments do. Often when the library has received increased appropriations one year, the requests will be even larger the next. This is not the behavior that administrators experience with other departments. Although almost everyone on campus is in favor of adequately supporting the library, other departments will endorse the idea unless they have to give up something.17 This situation might be humorous if it were not so true.

Although academic libraries are not threatened with being closed if they do not adequately provide resources and services necessary to the parent organization as special libraries often are, academic libraries can benefit from larger budgets for materials and personnel if they can measure and document their value to students, faculty, and the community.

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17 Robert F. Munn, "The Bottomless Pit, or the Academic Library as Viewed from the Administration Building." *College & Research Libraries* 80 (Fall, 1989): 267.
RESEARCH NEEDS

Much work needs to be done in the area of value measurement of libraries and information professionals. In June 1989 the Special Libraries Association identified a research agenda. One component of that agenda addressed measures of productivity and value. With only slight modifications, that agenda can easily apply to academic libraries. The items include: 1) What are existing measures of productivity and value resulting from information access and use? How can these measures be used? 2) How do users/students value information? 3) To what extent is there a difference between the cost of information and its perceived value? 4) What is the relationship between library/information services and institutional success? and 5) How can existing cost/benefit methodologies be used by information professionals?18

CONCLUSION

Information professionals add value to the information resources they select, organize, and retrieve for library patrons. In order to receive adequate funding to accomplish the goals of the library and the academic institution, information professionals must understand the value of what they do, how their services add value to library resources, and how to adequately convey the value of the library to university and college administrators.

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A NEW INSTRUCTIONAL VIDEOTAPE AT UNO

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ABSTRACT
The UNO Reference Department staff has shown videotapes of basic library resources over 500 times in the 9 years since they were produced. When we re-made these tapes in the Fall semester of 1989, we decided to use a different approach. In this presentation we will show brief clips from the old tapes along with segments from the new tapes. We will also discuss reasons for the changes, and plans for future tapes.
The library at the University of Nebraska at Omaha has long had an active program of bibliographic instruction. For at least the past ten years, the Reference Department has presented between 175 and 200 lectures a year; entering the 1980's, this load was carried exclusively by the six professional librarians within the department. These lectures represented the whole range of courses taught at UNO from the most basic introductory courses through graduate level classes, across the whole curriculum. Lecture content was tailored to the requests of the professors, and overhead transparencies or slides frequently supplemented the presentations.

Inevitably, some of these talks were repeated very frequently. Perhaps fifty to seventy-five lectures each year contained virtually identical content. By 1980, we has a slide tray loaded and ready for our English 116, University Division, Speech, and a few other classes; the librarian would give a brief introduction to warm up the audience, flip off the lights, start the slides and drone on. At the end of the tray, the librarian would turn the lights back on, issue a few closing remarks, and lead a short tour to wrap up the session.
Our standard presentation with slides included a brief introduction to the building and its public service areas, and a description of the card catalogs and the Library of Congress Subject Headings (LCSH), periodical indexes and the serials list, abstracts, newspaper indexes, and Monthly Catalog of United States Government Publications. We discussed the possibility of developing an audiotape that would have an automatic slide advance, but decided to take a leap rather than a step forward, and put the whole lecture on videotape.

Once this decision had been made and our library administration had agreed to foot the bill, we consulted with UNO's University Television. Three librarians wrote a script that included the material that we wanted to cover, and we convinced our most photogenic colleague to be "The Librarian" and to narrate the whole program. University Television videotaped and edited the production. Our style was later characterized as being of the "Smiling Librarian, Pointing Finger" genre.

This tape was very well done and served our purposes beautifully, but several limitations soon became apparent. First and foremost, we couldn't edit the tape smoothly, because within months of its completion, our photogenic librarian moved to Germany.
Second, though University Television gave us good rates, it was still a costly operation.

The tape had many advantages over the slide talks—perhaps the greatest advantage being the clarity and consistency of the presentation. Fatigue and boredom on the part of the librarians were minimized, and our morale lifted substantially. Also, we felt that it was of even greater importance than ever to have the tape introduced and followed up by a live, enthusiastic person, and we felt very comfortable about including our four paraprofessionals along with the Reference librarians to present the tape.

Over the course of the decade of the 80's, we estimate over 500 showings of this production. As the decade wore on, though, we slowly became more and more uncomfortable with it. The citations were all from 1979 and 1980, and some of the locations in the library had changed. In essence it became outdated, and even though it was very good, we became tired of looking at it. More significantly, student evaluations of our classes began to include more comments about the videotape showing its age.

In February 1989 three members of the Reference Department began brainstorming ideas and strategies for a new instructional video. The three who tackled the
project each had ideas concerning the composition of the new video, but the final direction emerged from a series of developments along the way.

One of the first steps was to decide what content coverage the video was to present and how this information would be divided into sections so that individual segments, such as that describing the card catalog, could be shown independently of each other. We wanted the video to be cohesive should it be presented in one showing, but we also wanted the segments to be self-contained should the instructor choose to show it in installments.

The committee decided to maintain essentially the same content as in the earlier tape. In addition, this time we wrote an introductory narration/tour that would accompany views of the library's facilities. The introduction would be followed by the five instructional segments. This format would correspond with the typical introductory level BI provided to Freshman English, University Division, Newstart, and other classes.

LOEX (Library Orientation/Instructional Exchange) provided sample library instructional videotapes from other universities for us to preview. These were most
helpful and enabled the committee members to clarify their ideas and goals.

In the Spring of 1989 the committee experimented with producing an inhouse revision of the LCSH section to illustrate the new format of that publication. This experience allowed us a trial run, but it also served as a rude awakening. Although we had a video camera, we were sadly lacking in the filming and editing skills necessary for a usable video production that would hold the attention of our students.

A frequently quoted figure for a professional video production is $1000 per minute. Since our budget was closer to $1000 as a total, we quickly decided to use local talent and to draw upon the expertise and facilities of our campus Audio-Visual Department. Early on in the process, a meeting with the AV staff provided advice on taping, technical details, and the photography needed for the introduction. AV met our project with enthusiasm and a promise of cooperation with the scheduling. In addition, the AV Department directed us in a number of techniques and procedures, such as the use of a storyboard to delineate and anticipate the various shots, angles, and interactions. This device would also direct us in fleshing out the actual dialogue and text to be covered.
Our earlier experimental videotaping encouraged us to use students as actors in the BI process. Since we had relied strictly on a lecture technique in the old video, the idea of utilizing the reference interview offered possibilities for interaction between student and librarian. It would also allow the negotiation of a reference question from stated problem to resolution.

With the AV Department eager to participate, we began scheduling dates for our first videotaping sessions. While scheduling meetings with the three committee members seemed at times a challenge, now with Fall semester approaching, adding in the dimension of a very busy AV Department precipitated the first of many scheduling conflicts that would eventually delay the final completion of the video. Selecting four student actors and five reference staff actors and scheduling their time added to the strategic challenges.

The first taping session of segment one, the card catalog, was undertaken with no rehearsals; several takes were required for each scene. The scenes taped during this three hour session on the first day were eventually redone with much improvement, but the lessons learned from this dry run provided invaluable guidelines for later taping.
Several times along the way, the production crew (including AV, committee, and actors), met to review and analyze our progress. One of these meetings involved reviewing the first taping session. Recommendations that evolved from this session included increasing interaction between student and librarian--less talking by the librarian, more talking by the student--the need for more colorful clothing, and a plea for more demonstrable enthusiasm from everyone on camera. We also realized that we needed to take more time prior to filming to direct and to inform the student actors concerning what we expected from them.

After our initial trial and error session we tackled our taping in three sessions of approximately three hours each. Then came the time consuming and sometimes painful task of watching ourselves on screen, and selecting cuts and takes. We made final considerations about the still shots for the opening scenes and rewrote some of the script to capture the right tone for our student narrator. The narration was taped in the AV studio and coordinated with the preselected library slides on the videotape. Captions were superimposed on the title slides, music was dubbed in, and opening and closing credits were added.
Our project began in February 1989 and finished in December 1989. Intense taping and editing took place between mid August and the end of September. The result was a well executed, color, updated instructional video, and our committee felt satisfied. While the final product contained sore spots that irritated individual committee members, it was definitely usable, and represented a substantial improvement over the old video. Most importantly, its five part construction would allow for easy editing in the future. The finished video is approximately 30 minutes which, when split into two parts of approximately fifteen minutes each, seems a tolerable length for our library education classes.

However, there are some problems. Several of the librarians are overly critical of themselves in the video. Most of the flaws appear to stem from the committee's race against time--with scheduling difficulties preventing adequate retakes, and with time restraints making rehearsals difficult for both students and librarians. Furthermore, we wanted to utilize a normal library setting complete with a standard flow of patrons in the background; unfortunately, patrons did not always remain in the background. The time factor, filming location, and job
restrictions were major difficulties to bear with as were numerous last-minute postponements by the AV Department.

In considering our needs for revisions, we have a number of questions to ask ourselves. For example, should we keep the dialogue approach, with interaction between student and librarian, or should we go back to the more tightly presented format of the librarian describing each of the library tools and how it works? Each form of presentation has its advantages and disadvantages. It certainly is faster and more concise to simply describe and instruct, but is it less interesting to the students?

In our new tape, we set up the premise of four students working together on a group project, and early on we have them discuss the assignment among themselves and divide up the parts of that assignment. Then the camera follows each student as she pursues her task. We decided to drop that opening segment with the students sitting around the table talking. We are now thinking that we will simply follow the individual students as each asks about a specific library tool. This will be more direct, and it will also enable us to edit segments in and out more easily. If all four students are sitting around the table discussing the
assignment, and then one or more graduates before we can do our editing, we're back to the problem of continuity. We feel that as long as all the students are asking about the same topic when they approach the librarian, that will provide the common theme that we are seeking.

Our first and most pressing need is to replace the segment that deals with the card catalogs and LCSH, since we will soon close our catalogs and shift rapidly to an online public access catalog (OPAC).

Another question that we are wrestling with is whether to try to write a good, tight script that says exactly what we want, or whether to take a series of shots of more natural dialogue following a story line. Again each has advantages and disadvantages.

In conclusion, let us present a few comments that may seem like a sermonette, but which we feel bear consideration. This project was, and is, an interesting, rewarding, professional activity. We have included five staff members and four students in speaking parts, and a number more have been involved in less direct ways. All members of the department benefit from the results of the project. We have expanded our experience and our areas of expertise and realize how complex and difficult it is to put together
even a seemingly simple instructional video. There have been long, tedious, laborious, frustrating times, but also many, many laughs. The production has been a lot of fun. In addition, we have feelings of accomplishment and satisfaction and continuing challenge.

We have brought a short tape to show you. The first excerpts are from the 1981 video, the next segments from the current tape, and finally a few out-takes that didn’t quite make it to the final version, but which we hope will show that it wasn’t all sweat and tears.
NOT JUST A PRETTY FACE: REDESIGNING THE BIBLIOGRAPHIC RECORD FOR AN ONLINE CATALOG

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ABSTRACT

The labeled bibliographic display format found in many online catalogs enables libraries to redesign their catalog records, abandoning long-prevalent cataloging standards and conventions in the process. Along with the opportunity to make catalog records more readily comprehensible to the patron come questions about the nature and purposes of the catalog record, the "translatability" of certain types of data to the new format, the exchangeability of bibliographic data among institutions as well as among systems, and ultimately, the continued validity of many cataloging rules. Some specific choices facing libraries adopting the new format are examined in the context of these issues.
A revolution is taking place in bibliographic control. Online catalogs are being installed in library after library, and as they multiply the possible access points to a record and the files available for browsing, speed up the processing of bibliographic records, and make corrections and updating of records much easier, they also enable libraries to redesign their bibliographic records. Most libraries are doing just that. Many systems (including Innovative Interfaces, which is currently being installed at the University of Nebraska-Lincoln) provide a tag/label format for bibliographic display, in which the labels are chosen by the library and linked to specific field tags or subfield indicators in the MARC format, so that the data in the linked fields is displayed beside the label. The order in which the labels (and thus the data) are displayed is determined in advance by the library.

The result is a bib record in tabular, rather than narrative, form. (Figures 1-4.) Preliminary studies indicate that most patrons find such records easier to read and comprehend than the "old-fashioned" card-style records. In addition,
the freedom to rearrange the data, even to leave certain designated fields off the record entirely, usually produces online bib records differing in content (to varying degrees) from their card-catalog counterparts. Does this mean that AACR2 is no longer in force? In one sense, not at all. Most of the bib records displayed online are the familiar card-catalog records, as modified by the catalog software. New records, as well, are likely to be created using the MARC formats and AACR2 revised, then loaded into the catalog and likewise "massaged" for public display. An online record exists in at least two versions: the full MARC record and however many display formats a particular system will offer. But those public screen displays represent the abandonment of an important part of AACR2: the display conventions and organizing principles of the International Standard Bibliographic Description (ISBD). ISBD has long been criticized, especially by public librarians, as needlessly difficult for the ordinary patron to understand. But replacing ISBD with a vendor-and-library-designed format has ramifications that go
well beyond visual impact. A library installing an online system with labeled catalog records will inevitably find itself reconsidering other aspects of the catalog as well.

Perhaps surprisingly, this is because, rather than in spite, of the fact that the online catalog is made up of converted card-catalog records. In an ISBD record the data elements are organized in paragraphs, arranged in a standard order and set off from one another by prescribed spacing and punctuation. These conventions constitute a distinctive and consistent grammar, so that while the data elements are not labeled, anyone familiar with the format can readily interpret an ISBD record even if the data are in an unfamiliar language.

An online record where this grammar has been replaced by brief verbal tags, or labels, is, in effect, a translation. But if the data remain the same as in a standard AACR2 record, the labeled online record is a literal translation and as such will contain much that is incongruous. For one thing, the ISBD punctuation so many find unnatural is still there, even though it has lost most of its
meaning (due to the fragmentation and rearrangement of the original display). For another, the bibliographic data taken from catalog cards may not always mean what the labels say they mean. (One example is taking the entire MARC field 245--title, subtitle, and author information or "statement of responsibility" and labeling it TITLE.) Or different types of information may be subsumed under a single label: for instance, a title and a uniform title both labeled TITLE; secondary authors, illustrators, translators, associated corporate bodies etc. all labeled AUTHOR.

At any rate, a library installing an online catalog with a labeled bibliographic display format faces a number of decisions which compel rethinking the nature and purpose of the catalog. These include:

(1) How long will the records be? This question, which is another way of saying, How much data should appear? brings new relevance to the old controversy whether a library catalog should be a "simple finding list" or a detailed bibliographic reference tool. Theoretically, a display can include everything on the MARC record (including
information not printed on catalog cards), or simply a title and call number, or any possibility in between. Brevity is a desirable outcome, since a single-screen record is easier to use than one spread over more than one screen. But as the Research Libraries Group study of screen displays led by Walt Crawford has shown, efforts to fit records on a single screen are hindered by labeling, which requires that each data field occupy a separate line (and at the same time reduces the possible length of those lines), and further complicated by the fact that wide margins and blank space between lines of data dramatically improve readability.

The desire for brevity also has to be balanced by a concern that all the information a patron needs be included on the display. Reconciling these concerns usually means setting aside the rulebook and evaluating the relative importance of the various types of data to a library's users. Some libraries may choose to leave out certain descriptive elements (e.g., place of publication, pagination, statement of responsibility); others may want to restrict the display of notes or name
and title tracings. But a library may also decide that any information (name, title, subject, control number, etc.) leading a catalog user to a record ought to appear on the display, in order to confirm that the user has found what he or she was seeking. (UNL, for instance, has chosen this approach.) This may result, however, in undesirably long records and add to pressure to cut descriptive data.

Of course, most online systems provide for at least two levels of bibliographic display, so that both the full record and a "condensed version" can be available to the patron. However, the full MARC record is of limited usefulness to most patrons due to the overabundance of data (and sheer unreadability, if it displays in the MARC format). Some libraries may be fortunate enough to have a system which offers two levels of condensed display, whereby a "brief record" containing the essential identifying data for an item is linked by a menu option to a "medium record" showing the complete description and all access points, letting the patron decide how much or how little information to look at. (Figure 5.) But
systems without this feature (such as Innovative Interfaces) force libraries to make that decision for the patron.

(2) Will records have a "main entry?" This question is not as ridiculous as it may seem. To be sure, many commentators including Michael Gorman and Patrick Wilson have predicted that the online catalog, by providing direct access to a record from any access point, would render the concept of "main entry" or "focal heading" obsolete. However, we have seen that a library may choose, in order to save space, not to display all access points to a record. In this case, those access points which do appear play a much bigger role than those that do not in identifying the item (traditionally a major function of the main entry). Moreover, it is safe to assume that those access points on the second or third screen of a record will play less of an identifying role than those appearing on the first screen (as far as the patron is concerned, at least). Finally, the identifying information which appears most prominently in a record (i.e., at the beginning) is likely to serve, in the catalog user's mind, as the "name" of the
item—in other words, the de facto main entry.

Of course, this online "main entry" need not always be the same as the card-catalog main entry, since filing is no longer a consideration. While some libraries follow traditional practice and display the (first-named) author first, followed by the title (Figure 6), others place the title at the head of all records; if the authorship statement or "statement of responsibility" from the title page is included, the traditional author heading (MARC field 100 or 110) may appear near the end of the record with the other "additional access points." (Figure 7) Thus, the question of a main entry is really another way of asking, In what sequence will the bibliographic data elements be displayed? Ideally, all essential identifying information (indexed or not) will be clustered together at the head of a record, where it can be absorbed at a glance.

An additional aspect of the question is the place of the uniform title (MARC field 1 or 240). Should it, or the title page title be labeled "title" and display at or near the beginning of the record? (Figures 8-9.) Or should both? Would
their appearing together confuse the catalog user? Similar questions could be asked about author data. A library may prefer to list all author tracings near the head of the record and dispense with the less-searchable "statement of responsibility" (MARC field 245, subfield "c"). (Figure 10.)

If nothing else, the main entry (in title, author-title, or some other form) is still needed to provide an unambiguous (i.e., unique to one work) citation form for subject headings and related-work notes. Such a citation would have to be searchable and, to be most useful to the catalog user, should consist of the data at the beginning of the record.

(3) What will we call the collation? This is another way of saying, How will we label the different data elements? I can hear the response now:

Sounds simple enough: you call the author "author," you call the title "title," you call the notes "notes," and so on. The collation? The only people who know what that is are old-time catalogers; the AACR2
term is "physical description."
But even that term means nothing
to most non-librarians, and anyway,
it's too long to fit onto a label.
Hmmm ... how about, "size?" It's
a short word, its meaning is obvious,
and it can logically cover both the
height and the number of pages--but
not the illustration statement.
Couldn't we just break up this field
and label the subfields individually?

This problem suggests some of the unfortunate
limitations of labels: they are restricted in
length and obliged to use terminology familiar to
the average patron, but their task is to express
complex bibliographic concepts which cannot always
be explained in a word or two. Often, the most
they can do is hint. Moreover, the catalog
software may be able to support only a limited
number or distinctive labels (25, in the case of
Innovative Interfaces). This may not pose a
problem for a catalog composed solely of records
for monographs, but records for serials, musical
scores, and nonprint media contain many types of data not found elsewhere. A library installing an online catalog will probably find itself on a tight budget when assigning labels to data; not only will the collation (MARC field 300) get a single label, but various types of name added entries (secondary authors, editors, illustrators, corporate bodies, related works) may be lumped together under a label such as NAMES.

On the other hand, scarce labels may be needed to rescue data that might otherwise be lost due to software limitations. For instance, the current version of Innovative Interfaces software does not reproduce the print constants that OCLC generates from certain MARC field indicators. Notes which begin with these print constants (such as alternate-title and linking-title notes for serials) will thus appear online without them, and they will make no sense unless a label can be used to supply some portion of the print constant's meaning. Here too, a single label will probably have to pinch-hit for a half-dozen or more print constants, and important differences of meaning will thus be lost. (Figures 11-13.)
(4) How much noise will we tolerate? This question is another way of saying, Do we keep on making catalog records the same way we've always done, even though they don't come out in the new format quite the way we'd like? It can also mean, What should we clean up in the records we've got? As we have already noted, transferring bibliographic data unchanged from card-catalog records to labeled online records almost inevitably produces unexpected inaccuracies, incongruities, and meaningless data in the new records. With good luck and careful planning, this "noise" will have negligible impact on patron access to the collections, and getting rid of it can take its place on a "wish list" of future projects. At the same time, there will be requests to "improve" or "correct" individual records. As for new cataloging, it will be very difficult to justify continuation of pre-OPAC cataloging practices when they lead to confusion, inaccuracy, or loss of access in the online catalog. For example, when a catalog search can be limited by publisher (as on Innovative Interfaces), it becomes important that a searchable publisher name appear in the publisher
statement (MARC field 260). Current AACR2 practice allows an abbreviated name (e.g., "The Museum," "ALA") in the publisher statement if the full name appears in the title or statement of responsibility. Not to change might well cheat the user.

However, in an online system where the public screen display is based on the MARC record, altering data in the former can only be done by changing the latter. This raises questions of record exchangeability. Departures from international cataloging standards to make better use of the local PAC software will make locally-created records less useful to other libraries and make copy cataloging more complex and time-consuming. They would also create database problems for any future migration to a different online system.

It is evident, then, that trading in the ISBD card-style display format for a labeled, tabular online display means more than just giving bibliographic data a more attractive, "user-friendly" setting. Freedom to tailor the online display format to fit local preferences invites
the library to reconsider what kinds of data belong
in a catalog record, and in what order that data
should be presented. The constraints that come
with labeling create the potential for
inaccuracies, incongruities, and loss of meaning
as data created for unlabeled, narrative display
are transferred intact to a format with greatly
simplified grammar and terminology. As a result,
libraries are forced to reconsider their
cataloging practices, weighing the benefits of
accuracy, consistency, and clarity in the local
database against those of standardization and
flexibility in an environment of resource sharing
and ongoing technological change.

The promise of the online catalog is enormous.
But realizing that promise demands knowledge not
only of what we are getting, but also of what we
are giving up and what we are taking with us.

ACKNOWLEDGEMENT

In addition to the sources cited below, this
paper draws heavily on the collective learning
process undergone by UNL Libraries staff in
implementing IRIS. The author wishes especially to
thank Sandra Herzinger and Larry Mozer, several of whose insights and discoveries found their way into this essay.

NOTES


5. For a demonstration (in a somewhat different context) of what can happen when a translation merges two concepts under a single term while the rest of the text is left intact, see Betty Baughman and Elaine F. Svenonius, "AACR2: Main Entry Free?" Cataloging and Classification Quarterly 5 (fall 1984), 1-15.


8. Crawford, Stovel, and Bales, Bibliographic Displays in the Online Catalog, p. 8, recommend three levels of public bibliographic display in addition to having the MARC record available to staff and those patrons who want to see it.


11. Crawford, Stovel and Bales, Bibliographic Displays in the Online Catalog, pp. 75-76.

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[Vincent van Gogh, tekeningen. English]
233 p. : ill. (some col.) ; 21 cm.
Translation of Vincent van Gogh, tekeningen.


Figure 1. AACR2 record in OCLC/ISBD card display format.

TITLE Vincent van Gogh, tekeningen. English
Van Gogh drawings / Evert van Uitert; translated by Elizabeth Williams-Treeman.
AUTHOR Gogh, Vincent van, 1853-1890.
Uitert, Evert van.
EDITION 1st U.S. ed.
DESCRIPT. 233 p. : ill. (some col.) ; 21 cm.
OTE Translation of Vincent van Gogh, tekeningen.
SUBJECT Gogh, Vincent van, 1853-1890.

Figure 2. Public screen display for IRIS (UNL integrated library system) (based on record in figure 1).
Includes bibliographical references and index.


Figure 3. AACR2 record in OCLC/ISBD card display format.

<table>
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<tr>
<td>EDITION</td>
<td>2nd ed.</td>
</tr>
<tr>
<td>DESCRIPT.</td>
<td>xvii, 620 p. ; 26 cm.</td>
</tr>
<tr>
<td>SUBJECT</td>
<td>Descriptive cataloging --Rules.</td>
</tr>
</tbody>
</table>

Figure 4. Public screen display for IRIS (based on record in figure 3).
TITLE: Van Gogh drawings  
NAME: Gogh, Vincent van, 1853-1890  
MATERIAL: 233 p. : ill. (some col.) ; 21 cm.

FOR FULL BIBLIOGRAPHIC RECORD PRESS <f>

Based (with modifications) on labeled brief displays in: Walt Crawford, Lennie Stovel, and Kathleen Bales, Bibliographic Displays in the Online Catalog (White Plains, N.Y.: Knowledge Industry, 1986), 176-79. (Subtitle and statement of responsibility not included.)

Figure 5. Possible brief-record screen display.

AUTHOR Gorman, Michael, 1941-  
TITLE Anglo-American cataloguing rules  
EDITION 2nd ed.  
DESCRIPT. xvii, 620 p. ; 26 cm.  

SUBJECT Descriptive cataloging --Rules.  

Figure 6. Possible labeled screen display with first-named "author" at beginning.

2nd ed.
xvii, 620 p.; 26 cm.


Descriptive cataloging -- Rules.

Gorman, Michael, 1941-
Winkler, Paul W. (Paul Walter)
American Library Association.

Figure 7. Possible labeled screen display with all "authors" together at end.

Vincent van Gogh, tekeningen. English
Gogh, Vincent van, 1853-1890.
Uitert, Evert van.
1st U.S. ed.
233 p. : ill. (some col.); 21 cm.
Translation of Vincent van Gogh, tekeningen.
Gogh, Vincent van, 1853-1890.
Van Gogh drawings

Figure 8. Possible labeled screen display with uniform title at head, labeled TITLE, and title-page title at end, labeled OTHER TI.
<table>
<thead>
<tr>
<th>TITLE</th>
<th>Van Gogh drawings</th>
</tr>
</thead>
<tbody>
<tr>
<td>AUTHOR</td>
<td>Gogh, Vincent van, 1853-1890.</td>
</tr>
<tr>
<td></td>
<td>Uitert, Evert van.</td>
</tr>
<tr>
<td>EDITION</td>
<td>1st U.S. ed.</td>
</tr>
<tr>
<td>DESCRIPT.</td>
<td>233 p. : ill. (some col.) ; 21 cm.</td>
</tr>
<tr>
<td>NOTE</td>
<td>Translation of Vincent van Gogh, tekeningen.</td>
</tr>
<tr>
<td>SUBJECT</td>
<td>Gogh, Vincent van, 1853-1890.</td>
</tr>
<tr>
<td>OTHER TI</td>
<td>Vincent van Gogh, tekeningen. English</td>
</tr>
</tbody>
</table>

Figure 9. Possible labeled screen display with title-page title at head and uniform title at end.

<table>
<thead>
<tr>
<th>TITLE</th>
<th>Anglo-American cataloging rules</th>
</tr>
</thead>
<tbody>
<tr>
<td>AUTHOR</td>
<td>Gorman, Michael, 1941-</td>
</tr>
<tr>
<td></td>
<td>Winkler, Paul W. (Paul Walter)</td>
</tr>
<tr>
<td></td>
<td>American Library Association.</td>
</tr>
<tr>
<td>EDITION</td>
<td>2nd ed.</td>
</tr>
<tr>
<td>DESCRIPT.</td>
<td>xvii, 620 p. ; 26 cm.</td>
</tr>
<tr>
<td>NOTE</td>
<td>Originally published (1967) in two versions under the following titles:</td>
</tr>
<tr>
<td></td>
<td>Anglo-American cataloging rules.</td>
</tr>
<tr>
<td></td>
<td>Includes bibliographical references and index.</td>
</tr>
<tr>
<td>SUBJECT</td>
<td>Descriptive cataloging --Rules.</td>
</tr>
</tbody>
</table>

Figure 10. Possible labeled screen display with all "authors" listed directly after title-page title, and statement of responsibility omitted.
Figure 11. Selected fields (uniform title, title statement, publishing information, numeric/chronological designation of issues, preceding entries, succeeding entry) from a MARC serial record. The digits "00" following the 780 field tag cause a note beginning "Continues:" to print on catalog cards; the digits "05" cause a note beginning "Absorbed:" to print. The digits "00" following the 785 field tag cause a note beginning "Continued by:" to print.
Figure 12. AACR2 serial record in card display format.
<table>
<thead>
<tr>
<th>TITLE</th>
<th>Popular science monthly (1900)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Popular science monthly.</td>
</tr>
<tr>
<td>DESCRIP.</td>
<td>100 v. : ill. ; 24-29 cm.</td>
</tr>
<tr>
<td>FREQUENCY</td>
<td>Monthly</td>
</tr>
<tr>
<td>BEGAN WITH</td>
<td>Vol. 57 (June 1900)-v. 156, no. 6 (June 1950).</td>
</tr>
<tr>
<td>CONT. BY</td>
<td>Popular science (New York, N.Y.)</td>
</tr>
<tr>
<td>NOTE</td>
<td>Title from caption.</td>
</tr>
<tr>
<td></td>
<td>No number issued Nov. 1919.</td>
</tr>
<tr>
<td>SUBJECT</td>
<td>Science --Periodicals.</td>
</tr>
<tr>
<td></td>
<td>Technology --Periodicals.</td>
</tr>
</tbody>
</table>

Figure 13. Serial record in IRIS public display format. Label CONTINUES replaces print constants "Continues:" and "Absorbed"; label CONT. BY replaces print constant "Continued by."
ANTICIPATING THE IMPACT OF AUTOMATION IN TECHNICAL SERVICES:
AN HISTORICAL PERSPECTIVE OF A TASK/PERSOONNEL STUDY

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University of Nebraska at Omaha
Audrey P. Newcomer
University of Nebraska Medical Center
Omaha, Nebraska

ABSTRACT

Changes, whether in workflow, personnel, or management are inherent in the automation of a library's technical services division. The McGoogan Library of Medicine at the University of Nebraska Medical Center responded to the need to integrate its automated and manual functions into a single system. As part of the planning for an integrated library system, a 12-week task/personnel oriented time/work study was conducted during the first quarter of 1984 by the support staff of the Acquisitions/Serials Department. The primary objective of the study was to identify the tasks performed, the personnel performing the tasks, and the time required to perform the tasks. A second objective was to review the retention of Acquisitions within the Serials Department. The study has been further utilized in supporting other changes in the Technical Services Division.
Changing environments impact libraries; library administrators and staff must be flexible and willing to change in response to the changing environments. According to Hernon (1989, 10), data collection and interpretation, decision making, planning, accountability, justification of current and planned programs/services, and being change oriented are related processes which enable library managers to respond effectively to changing environments impacting their libraries. Hernon (1989, 8) considers statistics to be the tool for evaluating choices and establishing and maintaining a course of action. Dougherty (1982, 16) points out that a management study is usually conducted when a problem has been identified or a change in the system is necessary.

Tiefel (1989, 476) reported that the ACRL Task Force on Performance Measures in Academic Libraries considered performance measures (i.e., activity measures or services measures) to be quantitative in nature and applicable for describing library services (output), resources (input), and internal operation (throughput). Also, that there is a need to differentiate between performance measures and standards. The Task Force considered measures to be means of providing objective data to those responsible for planning, day-to-day management, and communication.

This paper discusses how performance measures have been used in anticipating the impact of automation in a Technical Services division of an academic library.
Identifying the need for change, the establishment of a change relationship, working toward change, generalizing and stabilizing change, and achieving a terminal relationship are the phases Dougherty (1982, 37) identifies as occurring in a planned change.

The plans for the interfacing of all computing functions at the University of Nebraska Medical Center into an institution-wide information management system created the need for the McGoogan Library of Medicine to integrate its automated and manual functions into a single system. The automated functions in the Technical Services Division in 1984 were OCLC, a University-wide circulation system, and a medical serials control system.

METHODOLOGY

As part of the planning for an integrated library system, a 12-week task/personnel oriented time/work study was conducted during the first quarter of 1984 by support staff of the Acquisitions/Serials Department. The staffing of the Department in 1984 is illustrated in Figure 1; the 1990 staffing is in Figure 8. The identification of the tasks performed, the personnel performing the tasks, and time required to perform the tasks were the primary purpose of the study.

An earlier study of the Serials section's activities had been conducted in 1975, January through March. A period of twelve
Organization Chart 1984
McGoogan Library of Medicine
University of Nebraska Medical Center

Associate
Director
Tech. Services
1.0

Head, Coll.
Development
1.0

Head,
Acq/Serials
1.0

---

Head,
Cataloging
1.0

---

Head, Coll.
Preservation
1.0

---

History of
Medicine
.5

Volunteer
pt.time

LA III
1.0

Acct.
Clerk
II
1.0

LT II
1.0

LA III
1.0

LT II
1.0

LA II
2.0

LA II
0.5

IA = Library Assistant; LT = Library Technologist

FIGURE 1
weeks was selected to capture a fair representation of the tasks involved. As Mitchell, Tanis and Jaffe (1978, 34) confirm, tasks vary considerably in intensity from month to month. Much of the variation is unpredictable but of great interest to management since effective resource allocation is accomplished through knowledge of fluctuations.

Dougherty (1982, 152-153) considers a diary study where staff members record how each workday is spent to be an appropriate data collecting tool for tasks that vary from one cycle to another, but considers it to be not as precise as a study where times are collected using the stopwatch method. He cautions that work standards should not be based on diary study data because of inconsistencies in the data resulting from staff members' interpretations of definitions and their being responsible for recording their own times. Establishing work standards was never a purpose of either the 1975 or the 1984 study.

A period of twelve weeks was selected for the 1984 study for similar reasons as the 1975 study. The study was conducted January 23 through April 13, 1984. The portion of the study relating to the manually operated Acquisitions section was to be documented for the first time with data identifying the tasks performed, the personnel performing the tasks and the time required to perform the tasks.
The normal activities performed by each staff member were identified by the Department Head; data sheets reflecting these activities were explained and distributed by the Head to the staff members. Projects or new activities assumed by a staff member were recorded on sheets developed by him or her. Each staff member recorded his or her own data noting the time an activity began and ended and the number of units, if any, involved in the activity as each activity was performed. Actual time spent in an activity, rather than the time scheduled or expected to be spent was recorded. Employee benefits and study compilation times were recorded, also. Daily, weekly, and monthly summaries were maintained with monthly summaries being submitted to the Department Head.

FINDINGS

The findings from the study are illustrated in Figure 2 through 6. The division of labor of acquisitions and serials section activities is shown in Figure 2. The average weekly time spent by each staff member in acquisitions section activities and serials section activities are represented in Figures 3 and 4, respectively. Note that employee benefits and study compilation times have been excluded. Sectional activity rankings for acquisitions and serials are given in Figures 5 and 6.

A force field analysis is a tool that is sometimes useful in outlining the influence of the many variables involved. Figure 7
## AVERAGE WEEKLY TIME BY POSITION*

For Acquisitions Activities  
(in hours and minutes)

<table>
<thead>
<tr>
<th>Activity</th>
<th>LT II (hr:min)</th>
<th>Acct Clerk (hr:min)</th>
<th>Lib Asst 3 (hr:min)</th>
<th>Lib Asst 2 (hr:min)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Claims</td>
<td>00:00</td>
<td>00:00</td>
<td>00:00</td>
<td>00:20</td>
</tr>
<tr>
<td>Correspondence</td>
<td>00:01</td>
<td>00:42</td>
<td>00:00</td>
<td>00:11</td>
</tr>
<tr>
<td>Filing</td>
<td>00:00</td>
<td>01:18</td>
<td>00:00</td>
<td>03:11</td>
</tr>
<tr>
<td>Misc.</td>
<td>00:00</td>
<td>00:04</td>
<td>00:00</td>
<td>00:17</td>
</tr>
<tr>
<td>Personnel</td>
<td>00:04</td>
<td>00:15</td>
<td>00:00</td>
<td>00:00</td>
</tr>
<tr>
<td>Statistics</td>
<td>00:00</td>
<td>00:12</td>
<td>01:01</td>
<td>00:00</td>
</tr>
<tr>
<td>Phone Calls</td>
<td>00:00</td>
<td>00:20</td>
<td>00:00</td>
<td>00:15</td>
</tr>
<tr>
<td>Photocopying</td>
<td>00:00</td>
<td>00:32</td>
<td>00:00</td>
<td>00:14</td>
</tr>
<tr>
<td>Prepaid Orders</td>
<td>00:00</td>
<td>00:03</td>
<td>00:00</td>
<td>00:00</td>
</tr>
<tr>
<td>Process Invoices</td>
<td>00:01</td>
<td>02:48</td>
<td>01:05</td>
<td>00:00</td>
</tr>
<tr>
<td>Process Shipmts</td>
<td>00:00</td>
<td>00:41</td>
<td>00:00</td>
<td>03:02</td>
</tr>
<tr>
<td>Public Service</td>
<td>00:00</td>
<td>00:00</td>
<td>00:00</td>
<td>00:04</td>
</tr>
<tr>
<td>Typing</td>
<td>00:01</td>
<td>00:52</td>
<td>00:00</td>
<td>01:29</td>
</tr>
</tbody>
</table>

* Excludes employee benefits and study compilation

---

**FIGURE 3**

113
## AVERAGE WEEKLY TIME BY POSITION*

**FOR SERIALS ACTIVITIES**  
*(in hours and minutes)*

<table>
<thead>
<tr>
<th>Activity</th>
<th>LT II (hr:min)</th>
<th>LA III (hr:min)</th>
<th>LA 2a (hr:min)</th>
<th>LA 2b (hr:min)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Biblio. Searching</td>
<td>02:19</td>
<td>00:13</td>
<td>01:13</td>
<td>00:00</td>
</tr>
<tr>
<td>Duplicates</td>
<td>00:00</td>
<td>00:00</td>
<td>00:00</td>
<td>00:20</td>
</tr>
<tr>
<td>Filing</td>
<td>00:04</td>
<td>01:03</td>
<td>00:12</td>
<td>00:03</td>
</tr>
<tr>
<td>Mail</td>
<td>00:18</td>
<td>00:17</td>
<td>02:12</td>
<td>02:58</td>
</tr>
<tr>
<td>OCLC Cards</td>
<td>00:03</td>
<td>00:00</td>
<td>00:00</td>
<td>00:00</td>
</tr>
<tr>
<td>Other serials duties</td>
<td>7:13</td>
<td>3:57</td>
<td>02:23</td>
<td>00:54</td>
</tr>
<tr>
<td>Personnel</td>
<td>02:02</td>
<td>00:07</td>
<td>00:00</td>
<td>00:00</td>
</tr>
<tr>
<td>PHILSOM Activities</td>
<td>11:50</td>
<td>5:17</td>
<td>01:14</td>
<td>00:15</td>
</tr>
<tr>
<td>Public Service</td>
<td>00:59</td>
<td>00:10</td>
<td>00:21</td>
<td>00:59</td>
</tr>
<tr>
<td>Serials Checkin</td>
<td>01:11</td>
<td>00:04</td>
<td>09:40</td>
<td>5:23</td>
</tr>
<tr>
<td>Serials Claims</td>
<td>00:24</td>
<td>07:31</td>
<td>00:22</td>
<td>00:09</td>
</tr>
<tr>
<td>Serials Projects</td>
<td>01:09</td>
<td>02:03</td>
<td>01:14</td>
<td>02:25</td>
</tr>
<tr>
<td>Statistics</td>
<td>00:00</td>
<td>00:18</td>
<td>00:06</td>
<td>00:01</td>
</tr>
<tr>
<td>Typing</td>
<td>01:06</td>
<td>01:42</td>
<td>00:34</td>
<td>00:04</td>
</tr>
<tr>
<td>Withdrawing</td>
<td>00:00</td>
<td>01:01</td>
<td>01:02</td>
<td>00:00</td>
</tr>
</tbody>
</table>

* Excludes employee benefits and study compilation

**FIGURE 4**
### ACQUISITIONS ACTIVITY RANKING

<table>
<thead>
<tr>
<th>Activity</th>
<th>Rank</th>
</tr>
</thead>
<tbody>
<tr>
<td>Filing</td>
<td>22.80%</td>
</tr>
<tr>
<td>Processing Invoices</td>
<td>19.70%</td>
</tr>
<tr>
<td>Typing</td>
<td>14.40%</td>
</tr>
<tr>
<td>Processing Shipments</td>
<td>13.90%</td>
</tr>
<tr>
<td>Statistics</td>
<td>11.30%</td>
</tr>
<tr>
<td>Correspondence</td>
<td>4.69%</td>
</tr>
<tr>
<td>Photocopying</td>
<td>3.93%</td>
</tr>
<tr>
<td>Phone Calls</td>
<td>3.04%</td>
</tr>
<tr>
<td>Misc.</td>
<td>1.90%</td>
</tr>
<tr>
<td>Claims</td>
<td>1.82%</td>
</tr>
<tr>
<td>Personnel</td>
<td>1.75%</td>
</tr>
<tr>
<td>Public Service</td>
<td>.38%</td>
</tr>
<tr>
<td>Prepaid Orders</td>
<td>.32%</td>
</tr>
</tbody>
</table>

**FIGURE 5**

### SERIALS ACTIVITY RANKING

<table>
<thead>
<tr>
<th>Activity</th>
<th>Rank</th>
</tr>
</thead>
<tbody>
<tr>
<td>Philsom Activities</td>
<td>21.52%</td>
</tr>
<tr>
<td>Check-In</td>
<td>18.66%</td>
</tr>
<tr>
<td>Other Serials Duties</td>
<td>16.72%</td>
</tr>
<tr>
<td>Claims</td>
<td>9.76%</td>
</tr>
<tr>
<td>Serials Projects</td>
<td>7.93%</td>
</tr>
<tr>
<td>Mail</td>
<td>6.65%</td>
</tr>
<tr>
<td>Bibliographic Search</td>
<td>4.34%</td>
</tr>
<tr>
<td>Typing</td>
<td>3.97%</td>
</tr>
<tr>
<td>Serials Public Service</td>
<td>2.87%</td>
</tr>
<tr>
<td>Personnel</td>
<td>2.49%</td>
</tr>
<tr>
<td>Withdrawing</td>
<td>2.37%</td>
</tr>
<tr>
<td>Filing</td>
<td>1.58%</td>
</tr>
<tr>
<td>Statistics</td>
<td>0.48%</td>
</tr>
<tr>
<td>Duplicates</td>
<td>0.40%</td>
</tr>
<tr>
<td>OCLC Cards</td>
<td>0.06%</td>
</tr>
</tbody>
</table>

**FIGURE 6**
FORCE FIELD ANALYSIS

A. Reduction of the number of people handling forms and the number of files to be consulted.

B. Consolidation of the decision making activities related to vendor selection.

C. Simplification of statistical compilation.

D. Placement of this activity in overall strategic plan.

E. Expeditious placement of orders.

F. Limited resources.

G. Absorption of acquisitions activity for two additional collections.

H. Time needed for training due to personnel changes from natural attrition.

I. Increasing user expectations.

J. Expertise of staff.

FIGURE 7
is an example of a force field analysis. By identifying the major elements and then weighting their relative influence, one can more easily determine whether there is enough motivation to make the change. There is always a learning curve associated with any intervention. The outcome must, therefore, be greater than the amount of energy invested in the change.

The information from this data was used for identifying which manually performed acquisitions tasks and reports would be improved, expanded, or made possible through automation in order that these activities could be addressed in the grant proposal. More immediately, the job descriptions for the Library Assistants, Accounting Clerk, and Library Technologist were revised in Fall 1984 based upon the study.

The study's secondary purpose was to review the retention of Acquisitions within the Serials Department. In an earlier reorganization of the Technical Services Division in 1979, the acquisitions duties were assigned to the Serials Department personnel; Acquisitions Department support staff, except for the Bibliographic Searcher, were transferred to Serials. Collection development duties were assigned to the newly created Collection Development Department. The Bibliographic Searcher from Acquisitions was assigned to the Head, Collection Development. In 1985, acquisitions and collection development activities were again combined but under the Collection Development Department.
DISCUSSION

Beer (1980) outlines five principles for designing jobs: formulating natural work units; combining tasks; establishing client relationships; vertical loading; and opening feedback channels. By consolidating all collections activities under one department, each person sees the beginning and end of a natural unit of work. For example, the Head, Collection Development, selects the materials and identifies the vendors, and the Library Assistant does the bibliographic verification and the typing and filing of the multiple order forms. By combining tasks, the handling of materials and records could be streamlined. For example, the activities associated with multiple order forms are now consolidated.

Establishing client relationships encourages each individual to have an opportunity to work with the person who reaps the benefits of his or her labor. This is a difficult principle to apply within any Technical Services division whose staff usually do not meet the library patron. The Head, Collection Development, however, does make contact with the faculty who use the collection. This occurs primarily through the faculty providing recommendations for purchase and collection analysis.

Vertical loading permits each worker to have as much responsibility as possible. The Head, Collection Development, is now completely responsible for the ordering process as well the status of the materials budget. The Library Assistant's
responsibilities have increased to include quality control of the multiple order forms since there is no longer any verification of her typing.

Opening feedback channels provide a good opportunity for staff to discuss their jobs and to make suggestions. Nadler (1980) indicates that while structural interventions can be potent and durable, they may also bring about changes that may be unintended or unanticipated. Within an organization these interventions tend to lead to major and significant changes in behavioral patterns resulting in changes other than those desired if attention is not given to social system or process variables. One improves one's chances that the change will be successful, if one takes into account the following five process variables: resonance, incrementalism, ownership, habit, and interconnectedness. Resonance, in the case of the reorganization of Technical Services Division, meant that the Associate Director for Technical Services needed to review the impact of moving acquisitions into collection development from the point of view of cataloging and collection preservation as well. Incrementalism encourages one to make changes in small increments in order that corrective steps can be made more easily as the plan unfolds. In our case, acquisitions was moved into collection development when the Head, Acquisitions/Serials moved on to another position in June 1985. One year later, the move was evaluated and it was determined that the change was validated and the decision to permanently retain acquisitions within collection.
development was made in July 1986. The following February, the Head, Collection Preservation, retired and binding preparation activities were moved into the Serials Department; other preservation activities were temporarily reduced. In February 1987, the Head, Serials/Binding, resigned and the position was held vacant until July 1987, when the Library Specialist assumed responsibility for the Department. In July 1987, the History of Medicine Librarian's title was changed to Head, Collection Preservation, with her hours expanded to full time and responsibilities expanded to include both history of medicine and collection preservation. This change was validated and retained the following year in July 1988. The changes are reflected in Figure 8.

Ownership is another important consideration whenever implementing change. Each individual impacted must be involved in the planning process to the greatest extent possible. Eventually, the change becomes fully accepted as the current way of doing things and activities become habit. Finally, interconnectedness represents the need for a change to be integrated into the existing fabric of the organization. The McGoogan Library is currently looking toward the creation of a Systems Librarian position in the fall and the process begins again.
FIGURE 8

LA = Library Assistant
LS = Library Specialist (formerly Library Technologist)

* Note: Head, Collection Preservation also responsible for History of Medicine
** Note: Systems Librarian position expected Fall 1990
CONCLUSION

The McGoogan Library of Medicine’s response to the need to integrate its automated and manual functions into a single system to enable it to interface with the planned University of Nebraska Medical Center’s institution-wide information management system was the force which instigated the technostructural changes in the Technical Services Department. The actual changes made included: 1) acquisitions activities were relocated to the Collection Development Department; 2) the binding activities were relocated within the Serials Department; 3) the collection preservation activities were combined with history of medicine activities under a joint department, again titled Collection Preservation; and, 4) the Cataloging Department assumed responsibility for all OCLC inputting activities.

The results of the study were used in conjunction with other divisional work statistics and anecdotal evidence from the Department Heads in Technical Services. The combined documentation enabled the Division to: identify like units of work; maximize current human resources; and, do this without precluding future opportunities for desirable change.
LITERATURE CITED


