DOCUMENT RESUME

ED 276 458 IR 051 709

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TITLE Finding Ways: Excellence under Pressure. Proceedings from the 1986 Spring Meeting of the Nebraska Library Association, College and University Section (Lincoln, Nebraska, May 2, 1986).
INSTITUTION Nebraska Library Association, Lincoln.
PUB DATE 2 May 86
NOTE 169p.; For the proceedings of the 1985 meetings, see ED 262 827.
PUB TYPE Collected Works - Conference Proceedings (021) -- Viewpoints (120) -- Reports - Descriptive (141)

EDRS PRICE MF01/PC07 Plus Postage.
DESCRIPTORS *Academic Libraries; *Budgeting; Collective Bargaining; Databases; Higher Education; Library Automation; *Library Instruction; Library Personnel; *Library Services; Microcomputers; Microfilm; *Online Searching; Optical Data Disks; Preservation; Reference Services; Research Libraries; Resource Allocation
IDENTIFIERS *Nebraska

ABSTRACT

Based on the conference theme, "Finding Ways: Excellence under Pressure," papers presented at the 1986 meeting of the association include: (1) "Coping with Budget Pressure: A Public Services Librarian's View" (Janet C. Lu); (2) "The Librarian, the Accession List, and the Database" (B. C. Wehrman); (3) "New Start: Bibliographic Instruction for Non-Traditional Students" (Thomas A. Tollman, Laura K. Dickson, and Carol J. Zoerb); (4) "The Philistines Are Coming, Are Coming!" (G. A. Rudolph); (5) "CD-ROM: What's in Store for Libraries in the Coming Year?" (Melvin M. Bohn); (6) "Turnover of Professional Librarians" (Dee Ann K. Allison); (7) "The State of Preservation and Microfilming and Its Implications" (Louis E. Jeffries); (8) "Inadvertent Personalized Reference Service" (Paul Frantz and Thomas Cashore); and (9) "On-Line Searching in Times of Retrenchment: An Informal Survey of Regional Academic Libraries" (Virginia Moreland). A brief abstract is provided for an additional presentation, "Librarians and Collective Bargaining at UNO (University of Nebraska at Omaha)" (Carole Larson, Mel Bohn, and Bob Nash). (KM)

1986 SPRING MEETING

PROCEEDINGS

NEBRASKA LIBRARY ASSOCIATION

COLLEGE AND UNIVERSITY SECTION

UNION COLLEGE

LINCOLN, NEBRASKA

MAY 2, 1986

"FINDING WAYS: EXCELLENCE UNDER PRESSURE"

PROCEEDINGS

From The

1986 SPRING MEETING

Of The

NEBRASKA LIBRARY ASSOCIATION

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Held At

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LINCOLN, NEBRASKA

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Tamra L. Teasley
EDITOR

INTRODUCTION

"Finding Ways: Excellence Under Pressure" was the theme for the Nebraska Library Association's College and University Section 1986 Spring Meeting. Each paper presented addressed the conference topic either directly or indirectly indicating that Nebraska's academic libraries are not exempt from today's pressures to maintain the quality of service in the face of budgetary restraints. The majority of the papers discussed what level of reference service should be provided during this period of fiscal limitation: on-line search services during times of retrenchment, bibliographic instruction for non-traditional students, public service's side of coping with budgetary pressures, and inadvertent personalized reference service.

The remaining papers discussed a variety of topics: using a microcomputer database manager to construct an accession list, future uses of CD-ROM, staff turnover, libraries and collective bargaining, preserving our present collections and finally, one paper asked us to reconsider the way we think about libraries. Must they continue to grow larger and larger? Do we in fact need libraries in our future?

The papers presented gave helpful information and advice on how to maintain excellence under pressure and illicited interesting discussions. The Executive Board of the College and University Section thanks Union College and those who participated for contributing to a successful spring meeting.

Tamra L. Teasley
Nebraska Library Association
College and University Section

October 1986

NEBRASKA LIBRARY ASSOCIATION

COLLEGE AND UNIVERSITY SECTION

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TABLE OF CONTENTS

COPING WITH BUDGET PRESSURE:
A PUBLIC SERVICES LIBRARIAN'S VIEW

By
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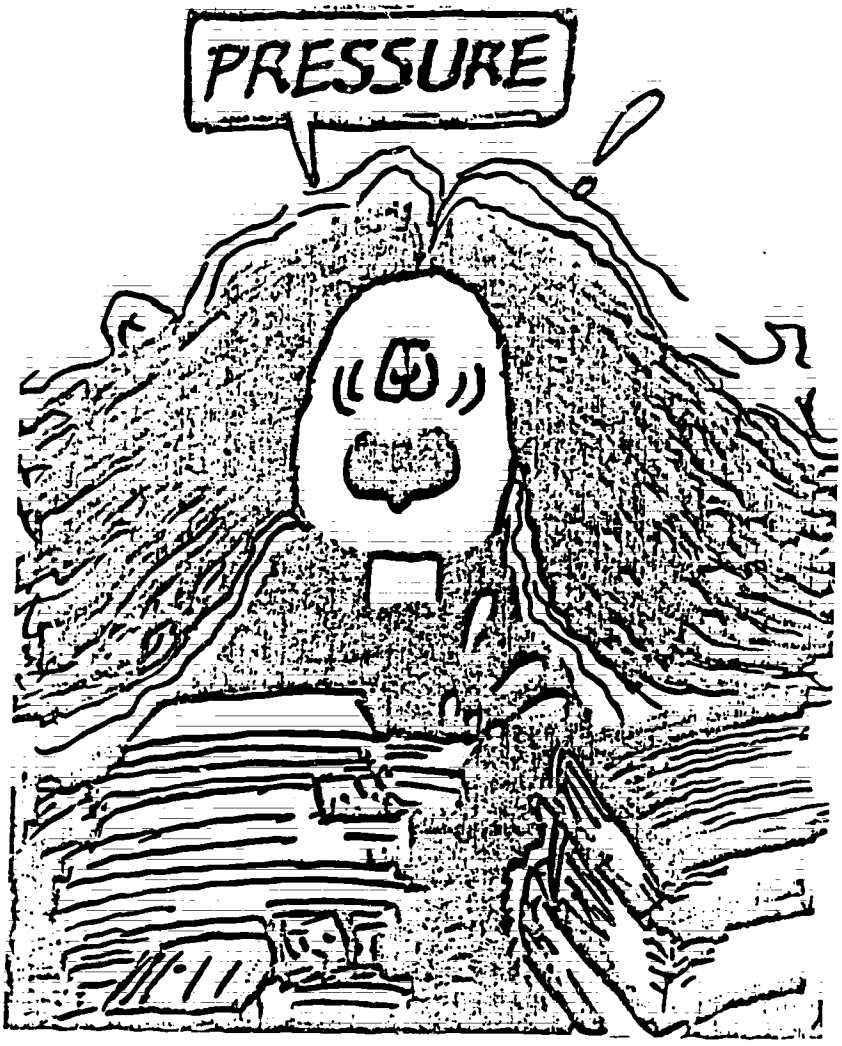
A public services librarian's view of how to maintain quality standards of service in the face of budgetary cutbacks. Ingenuity, an optimistic attitude, professional dedication, and a supportive administration are some of the ingredients needed.

As you can see this librarian is under a lot of pressure.



Let me show you another cartoon (I don't have stress, I give stress!). This could be your boss.

Suppose you changed the words to read: I don't get pressure, I give pressure! This person could be the administrator who has the power to cut your budget.

How can academic libraries cope and survive under tight budget constraint? How can librarians maintain quality standards of services under budgetary cutbacks? In my opinion, to cope with the pressure created by shrinking dollars, initially, you must have very loyal, dedicated, and well-trained staff members who are willing to work hard for comparatively low pay and who are committed to excellence in service; then you must have an optimistic attitude toward your profession; next you must be able to use every bit of ingenuity you have in achieving the goal of providing the best services possible; and finally you must have some kind of support, not necessarily financial, from your school administration.

We are all facing a budget crisis in one way or another. Many academic libraries have learned to cope and have managed to maintain excellence in service while others are still struggling with reduced services and staff cuts.

Nebraska Wesleyan University is considered one of the finest private colleges in the state. It is listed in the recent New York Times publication BEST BUYS IN COLLEGE EDUCATION as one of the best buys in the state of Nebraska. Our institution has found its way in maintaining excellence in higher education. Our library must also find a way to provide quality services to its faculty and students as a supporting function.

To maintain quality of library services with a limited budget you need a dedicated staff who is devoted to hard work. Right now we have the best library staff that any library administrator could dream of having. Each one of us is highly motivated and service oriented. We have maintained a minumum staff of seven people for at least 10 years, yet our services have been expanded in the recent 3-5 years from video program/equipment services to computer online searches.

In the Public Services Department we have added a great deal of AV services such as AV equipment and video program check outs, record keeping, video taping and showing, etc. We have added an "Apple Orchard" which is a small computer room with six Apple computers and diskes for check outs. We handle all money matters and the maintanence of the new coin coperated copy machine, as well as ILL service, DIALOG online searches, reference services, freshman library tours and upper class bibliographic instruction, DIALOG demonstrations, etc. The professional staff also serves on various committees and teaches one evening course per semester in the Library Science program. There is a long list of routine duties for both the professionals and the paraprofessionals. However, we all have a strong sense of committment and take it all in stride and pride to do the best we can. Our library opens 89 hours every week not counting extra hours during finals week, and evenings after a holiday or recess period. Ours are the longest library hours in the state. We have 16 student assistants working for total of 150 hours at the Circulation Department per week. There are 4 student supervisors among the 16 student assistants.

A unique situation exists in that all staff members take turns working at the reference desk and supervising the Circualtion Department on week ends. The paraprofessionals take turns working at the Public Services Department on week nights in addition to their regularly assigned duties. The adventages of this are that all staff members get a chance to work in the public services area; the disadventage is that it takes them away from their own line of work, and adds extra responsibilities and pressure to their jobs. Some of the paraprofessional staff members may not feel competent and skillful enough to help the users in the most efficient way. However, all paraprofessionals are eligible to enroll in our Library Science program to get proper training.

To help all staff and student assistants serve the users better we have designed some check lists as reminders which will help every one remember all the little detailed chores that we have to do while on duty. (see Appendix I - Check list for staff on weekend duties; Appendix II - Check list for student supervisor). They look very tideous, but they are necessary. We are very fortunate that all of our paraprofessionals are well trained. Two of them are our former Library Science graduates, the other two have years of library experience and college education backgrounds. They serve on reference desk duties under the supervision of the Public Services Librarian and they work as a team. Brief reference sessions and assistance are given by the Public Services Librarian when needed.

For many years, our paraprofessionals were paid with clerical worker's salaries. Only in recent years have their salary levels been adjusted. The salaries for faculty and administrators have also been adjusted in recent years. However, we do not know our salaries for the coming year until we know our student enrollment in the Fall.

We have our ups and downs naturally. On the days when everything goes wrong, we can be extremely depressed and frustrated, especially when dealing with AV services. When equipment does not work; when there are too many video tapes and films to be shown or tapped without enough helping hands. When you tell students that the New York Times, on microfilm, is a great resource tool to use, and then find out none of the microfilm readers wrok; when you tell the faculty or students that we have slide projectors, film projectors, record players, cassette recorders, etc. etc. and know many of them are not in good working condition, and have never been serviced or

properly repaired because of high cost. It is frustrating, and it adds a lot of pressure, not to mention headaches to the service oriented library staff. But we have endured all the frustration with a very positive and optimistic attitude. We often laughed about incidents that were out of our control with humor and high hopes that there will be better times in the future.

During the years our staff has developed a great deal of igenuity which is very helpful in solving many of the problems we face regularly. Everyday we wear many hats on the job. We are the educators, the counselors, the librarians, the mechanics. The Mr. or Mrs. Fix-it. When equipment is in trouble, we try to fix it by using whatever tools are available, such as hair pins, clothes hangers, ball pens, letter openers, etc. Luckily we have fixed quite a few minor problems. Our director finally bought a set of tools with which to tackle some of the more complicated mechanical problems. So, if you see our director running around with a tool box, don't mistake him as a hired Mr. Fix-it, he is just our "Jack of All Trades" performing many mechanical emergencies of the day.

The biggest area being affected by the tight budget is probably our AV service. It is the biggest frustration in our entire Public Services Department. We could do better if we had more helping hands and better equipment. On some days we can be so swamped with video showing and taping that my assistant, the director, or I will be running up and down the stairs the entire day. On other occasions, we are often asked by students to help with the malfunctioning computers, printers, charging machine, or coin operated copy machine. Our staff will try all their might to fix them. I still have a vivid picture of my assistant running to our old coin operated copy machine with a wire clothes hanger or letter opener in her hand to fix the jammed coin machine. Many times she would fix the machine without any problems.

Inflation and the shrinking dollar directly affects the school and indirectly affects the library. We can feel the pinch everywhere. We have less purchasing power to build up our collection. It also takes igenuity to plan our purchasing. We are selecting materials with extra caution and consideration even though we are still trying to build up a collection that is as balanced and adequate as possible. For example, we used to purchase 3 sets of BOOKS IN PRINT, one for the reference collection; one for the Circulation Department; one for the Acquisition. Since we are a medium-sized library, each department is not too far from the others, and we decided to get by with just one set located in the reference collection area, but close to the Technical Services room. The discarded set is kept at the Circulation Department. The luxuary of owning three sets is gone, but it does not affect the users much. The staff just has to do a little walking to use it.

We update our encyclopedias every 3-5 years with at least one current set on the shelf. We have ordered the 1986 Encyclopeadia Britania which will be the only updated set for another five years. We have cut quite a bit in the continuation and standing order list. Many reference titles will be ordered every two to three years depending on needs. Decisions will be made after very careful evaluation. Index and abstract subscriptions have been greatly cut with careful evaluation. The DIALOG online service is very helpful to the faculty and students, however, the fact that the users have to pay for the cost of searching usually turns them away. We don't encourage freshmen to use online search service for their research papers because of the cost factor.

We have learned to cope and maintain our standards in providing quality services thanks to a very supportive school administration. However, to have a supportive school administration does not guarantee the ability to solve budget problems. Our school administration

is very sympathetic and very concerned about our budget problems, but there are only so many pieces of pie to share. Somehow knowing that they are morally supportive of our budget problem is a comfort. The faculty and students are satisfied with what we are trying to do to provide good services. They are mostly thankful for what we do to help them and are compassionate with regard to the frustration we encounter. When we show our frustration with malfunctioned machines, they usually say "It is not your fault that the machine doesn't work, you did your best. I appreciate it". Comments like this make our day very pleasant, and the pressure diminishes right away. Working with a staff striving to better serve our users and a community full of caring people is a joy.

Our attitude in the public services is that we are here to "serve" our users by providing the services which will satisfy their informational and educational needs. We are our users' friends, we are also our institution's ambassador to the public. As library workers, we have a committment to our profession and are striving for excellence in everything we do. We are very optimistic towards our future and I am confident that with a hard working staff and good school administration, we will make it.

Appendix I

CHECKLIST FOR
WEEK-END DUTIES

(Staff use only)

Name:_____ Date:_____

When You Arrive

___ 1. Turn on lights.
___ 2. Unlock front doors.
___ 3. Count money.
___ 4. Record the amount of money on cash tabulation sheet.
___ 5. Check money drawer to make sure there is an adequate supply of quarters.
___ 6. Copy machine (paper, toner, dispersant, etc.)
___ 7. AV taping and viewing.
___ 8. Supervise student assistants.
___ 9. Unlock basement door.
___10. Reference desk duty.
___11. Johnson Treasury Room.
___12. Check microfilm area. If Dukane machine is not being used, check to see that machine power is off and lever is in "off" position.

When You Leave

___ 1. Lock basement door.
___ 2. Lock rooms 315, 316, and 317.
___ 3. Turn off equipment in 315, 316, and 317.
___ 4. If timer light is on VCR in 315, please leave as is. Do not turn off.
___ 5. Leave at least $15 of change in the money drawer (mostly quarters).
___ 6. Count total amount of money in cash drawer on Sunday nights only.
___ 7. Record on cash tabulation sheet.
___ 8. Check with students that all is going well.
___ 9. Give student assistant supervisor the checklist to fill out.
___10. Lock the "Keys Box" in storage unit with padlock.
___11. Leave at 10 p.m. (4 p.m. on Saturday).

Were there any problems with equipment?_____

_____

Describe any other problems (security, service, temperature, etc.) that you may have had._____

_____

_____

Daily Checklist For Circulation Student Assistant Supervisors

Name:_____ Date:_____ Shift: From _____ To _____

It is essential that all duties which are assigned to student supervisors on opening and/or closing shifts be done everytime. This checklist is to assist you by helping you to remember them all. Please check off each one as you do it. Then complete the items below the checklist and turn the sheet in to your supervisor. This is to be done faithfully everytime you work. Thank you.

When You Arrive

___ 1. Clock in.
___ 2. Check all floors and microfilm area.
___ 3. Put up newspapers.
___ 4. Empty book drops.
___ 5. Check in books and materials and place them on cart.
___ 6. Straighten reference and reading lounge area.
___ 7. Check boxes for scrap paper.
___ 8. Sharpen pencils.
___ 9. Check with staff person for assignments.
___10. Check AV calendar for things to be done during your shift.

When You Leave

___ 1. Change date machine.
___ 2. Count checkout cards and record.
___ 3. Stamp white faculty card with date stamp.
___ 4. Place proper covers on cards and file.
___ 5. Take head count and record.
___ 6. Pick up materials on 2nd and 3rd floors.
___ 7. Check exit doors on all floors (should be locked at all times).
___ 8. Check restrooms.
___ 9. Turn off Treasury Room lights.
___10. Turn off all lights.
___11. Bring elevator to 1st floor and "stop".
___12. Ring bell (15 minutes before closing time and again at closing).
___13. Check Orchard.
___14. Assist Security Guard in final closing procedures.
___15. Check microreaders. Be sure they are off and Dukane lever is in "off" position.
___16. Clock out.
___17. Change date stamp according to Faculty legend after cards are stamped (Friday only).
___18. Turn off copier.
___19. Turn off fans (Orchard).

Were there any problems with equipment?_____

_____

Did the security guard arrive reasonably on schedule?_____

_____

Describe any other problems (security, service, temperature, etc.) that you may have had._____

_____

THE LIBRARIAN, THE ACCESSION LIST, AND THE DATA BASE

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ABSTRACT

Automation provides librarians with a mechanism for increasing services at reduced costs. This paper shares the experience of Nebraska Wesleyan University in using a microcomputer data base manager (Data Perfect by LJK) to construct an accession list of titles recently added to the collection, and it examines some of the problems involved in constructing a matrix for such a list. Finally, it makes some tentative comparisons in the use of a microcomputer system versus the use of OCLC to fulfill this kind of need.

As I am sure most of us are aware, we librarians are caught in a crucible of opposing forces. On the one hand, we face the information explosion and the difficulty this presents in trying to develop collections which somehow adequately cover each discipline. Moreover, as the cliche goes in the library world -- and it is worth remembering as someone once said that ideas become cliches because they are true -- librarians can no longer be content with merely archiving their collection in the traditional manner. They must go out and agressively expand the services they offer to the public; expanded in new and perhaps undreamed of ways. But increased services imply, among other things, increased costs in terms of money and time (which is another measure of money).

On the other hand, against these increasing demands come budgets which are rarely adequate to meet even the most basic demands. And, when the going gets tough, it seems everyone gets going on the library. That is, almost universally, libraries seem to get cut disproportionately.

Faced with this dilemma of increased demand and bugetary constraints, we are forced to find mechanisms which allow us to increase services while reducing costs. As has been felt in the library community for some time, computers can contribute a great deal towards solving this problem. Indeed, most if not all of us have probably computerized a good part of our operations during the recent years and are looking for more ways to do this. However, given the newness of this technology we will probably have to rely on each other for advice and counsel. Indeed, one of the great advantages of having a meeting like the one sponsored by the College and Academic section of NLA is that it allows us to come together and share ideas and experiences.

To this end, I would like to share our experience at Nebraska Wesleyan University in constructing an accession list -- we call it a "New Holdings" list for easier patron identification -- using a data base system. It is a monthly list of all of the new additions to our library and is sent out to all the faculty and posted in the library for student use. The particular software we employ is Data Perfect by LJK; though I hope to present the issues surrounding this kind of list in such a way that everyone will find it useful, regardless of the

particular data base system they use.

It is interesting to note that at Wesleyan, even before I joined it, there was a demand for this kind of list. For one thing, because the faculty do most of the book ordering, this kind of list allows them to check up on their order. For another, they can keep current on the books ordered for their department by their colleagues. Moreover, they can search other departments for books of personal interest or which fulfill information needs of an interdisciplinary nature. Finally, it goes without saying, that this kind of list is a good public relations vehicle for the library.

This list, while an important asset to current awareness programs, presents great difficulties when attempted manually. It requires a whole series of intricate tasks that must be carried out with a great deal of care and precision. Solving the problem of sorting the records, which must be done before they are typed onto the list, presents one with some fairly unattractive alternatives. One option is to save all of the records -- usually the shelf list cards -- for a month and then type the list. But following this course holds up some of the other activities in processing while it waits for the cards to be returned. The other alternative, which does not interrupt the work flow, is to construct a series of short lists from the cards as they come through the processing routine. As each new batch of cards is received, a new list is made and at the end of the month a series of mini-lists is distributed. But having a

series of lists makes using them so difficult that it almost defeats their purpose.

This process is further complicated by attempting corrections. Indeed, correcting can become so cumbersome as to force a library to ignore the error, as say, when a part of the title or even a complete entry is inadvertantly left out. Typos and incorrectly copied call numbers are more easily corrected but can lead to sloppy looking lists, hardly an asset to public relations. Working with these lists can become so time consuming and so disheartening that despite their value to the community, they are usually and quietly discontinued, as was my experience as a patron at the University of Illinois English Departmental Library.

A data base, however, easily overcomes these problems. Editing in corrections on a data base is as easy as editing corrections on a word processor, and because the list is sorted by the machine, entries can be made at anytime and in any order.

Setting up a data base, any data base, takes careful analysis at its inception. Before one can determine which fields should be included in the data base, one has to have a good view of how the list is going to be printed out -- what pieces of information are going to go where and which information is going to be used for sorting the list. In this connection, it is worth remembering the old computer science adage that searching is the problem and sorting is the answer. For our purposes, this translates into meaning that one can only

construct the data fields for sorting when one has clearly established how the list is going to be searched.

In Wesleyan's case, for example, with a small collection that grows at no more that 300 items per month, the list is best served by sorting in as general a subject area as possible. Since we use our call number as the subject identifier, this meant sorting on the class letters in the LC classification system and not going as far as the division numbers of each class. Within these general class areas the individual titles are sorted alphabetically by title. My reasons for limiting the sorting only to the general class letters are: 1) I feel few faculty know the intricate division numbers, even in the subject areas that they use heavily. If the list was completely sorted by call number, the faculty would find each individual record in no particularly helpful order. Whereas now, they can follow the alphabetical title order within the class sections. 2) I feel more people are going to be interested in all of the additions to their subject area, not just the ones in their specific fields. And, 3) because I limited myself to the class areas, I am able to pass out a guide with the class letters and their corollary subject areas -- something that would be extremely cumbersome and difficult if I tried to do it for the whole call number -- in fact, probably impossible.

The mechanics for carrying out this arrangement are at first subtle. By this I mean one has to separate out those elements which one wants to sort from the other elements of the call

number. In this case (see appendix I) field one, called "ALPH" for the alphabetical portion of the call number, is separated from the field two ("CALL#1" where the rest of the call number is entered). And though when these are printed they are formatted to be placed contiguously, when we sort we only use "ALPH." This concept is important even for those who wish to sort on the entire class. The machine has no trouble sorting on the entire number until it gets to the Cutter. Because it always sorts numbers before letters (in accordance with ASCII), one will get a list in which the decimal point followed by a number will precede those with simply a Cutter -- something we clearly do not want. The solution is to separate the call number field from the Cutter field. One can still sort on both (one after the other).

In addition to the above considerations, we also decided to separate different groups of materials within the list. That is, instead of a long list with all the different types of material mixed in together, we wanted to arrange all of the new reference material, the new book material, the new media material, etc. into their own separate groups. Not only would this make the list more intelligible, but it would also draw attention to the different types of material available in the library. This is of particular importance to our audio-visual collection which we feel is being under utilized.

We worked on various schemes to get the entries to sort the way we wanted them to (including using blanks or some kind of

non-alphabetic character to act as a code to sort the different groups). But none proved very satisfactory -- basically because they detracted from the appearance of the list. I finally decided to use a number code (see appendix I: field 6). Each type of material is given a separate code: for example, Reference is 1, the General Book Collection is 2, and the Special Collections is 3. To sort the list we first use these codes and then the call number and finally the title. It is important to note that though we use this field for sorting and it is in the data base, we do not print it. It is a concealed field.

Sorting the material into different groups mandates using headers and using blank records to separate one group from another. Fortunately, because certain characters are sorted before the numbers and letters, this was relatively easy to accomplish. (See appendix II) For example, blank spaces and the "*" character sort before the other characters. Thus by coding the header and the blank record with the numeric code for each group, these special records will neatly fall into the desired place.

Our overall procedure at Wesleyan is to enter the list in stages. That is, we enter the records as we get them. Immediately after entering the records, we print out a list and check it. The corrections are then edited into the data base. In this connection, it is important to remember that even after the final list has been printed out, it can still be corrected.

This seems to happen to us right when we are ready to send it off to be photocopied and some slight error is discovered somewhere deep inside the list. To correct it we merely call up the incorrect record using the searching capabilities of the data base. After correcting the record, we only have to print out the one affected page. This procedure is even easier and quicker than trying to line up a typewriter and use liquid paper.

Because using the data base is so simple, we have no trouble in leaving most of the work to students. In fact, only the revising of the list is handled by a paraprofessional. But I find that there is still a lot of technophobia, even with our freshman students who would have been in the eighth or ninth grade when the big push for computers in the school systems began. Thus, my training sessions with them and my written procedure manuals have to be fairly detailed. In other words, I have not created a turn-key system that I can walk away from and just leave running. Moreover, there are different problems which crop up about every three months -- technical problems that require my assistance in solving them. Or at least require my certification that they are insolvable. But these kinds of problems are, I believe, minor compared to the type of supervision that would be necessary for a manual system.

Finally, I would like to take a look at the option of using OCLC for this service. We have on several different occasions considered using OCLC to generate this kind of list for us.

Each time, I have studied some of the cost factors that go into the list and each time I tentatively conclude that we are probably doing it more cheaply in house.

I will start by noting that my investigation into this matter can in no way be considered scientific. I have not made a purposeful, controlled study of the time we spend on this list. But I do consider my figures reasonably accurate -- at least accurate enough for the conclusions I draw from them. I begin by noting that the cost of using OCLC for a year at $.16 per entry comes to $528.00 (figuring each list at 275 per month). In the library, after questioning our students on several different occasions, I have concluded that they can enter one record in 1 1/2 minutes. Which when that is figured up for the entire year comes to spending 4,950 minutes to enter the list. Since we pay them $3.35 or about $.0558 a minute, the cost comes to about $277 per year. I also figure that the revisor spends about 2 1/2 hours each month on the list. Figuring her at $5.00 an hour (which is a little high), I put the revising costs at $150 per year. To edit and print the list is $80.40. This brings the total to $507.40, or slightly less than the OCLC figure.

But these calculations do not include my time spent training and working out the problems. So it is safe to assume that our costs might be slightly higher than the OCLC price. However, they are not that much higher -- i.e. no more than $50-$100. Being this close I feel that continuing to construct this data

base in the library is cost effective. I feel this way because of the advantages of customizing the list for our own use. I would note here that OCLC charges $35 to change the existing options of the list, something we have done at least twice in the past year and a half. And I do not think OCLC has the option to allow us to separate the entries into the group as we are currently doing, let alone allow us to construct the headers we now have. Moreover, there are some things our library does not catalog on OCLC, such as serials, which would need, somehow, to get on the list. But finally, the biggest point for me is that the advantage of local control outweighs the possible monetary benefit of using OCLC.

I hope I have been able to show you how easy and convenient using a data base for this kind of task can be. I have found it one of the great assets to our library, an asset which now that it is integrated into our system, seems almost impossible to live without.

File: NEW-HOLD
Date: 05/01/86
Rec: 19

#	Name:	Len	#	Name:	Len	#	Name:	Len	#	Name:	Len
0	Key:	5	1	ALPH :	3	2	CALL#1:	9	3	CALL#2:	12
4	ENTRY1:	80	5	ENTRY2:	80	6	NUMBER:	1			

Fields: 7
Record Length: 197
Max # of Records: 623
# of Records: 18
Active #: 18
Created: 04/14/86
Updated: 05/01/86
Formula: 0

NEW HOLDINGS
FOR
COCHRANE-WOODS LIBRARY
05/01/86

CALL NUMBER	TITLE
**********	REFERENCE MATERIAL **********
REF HD 2785 .B87	BUSINESS FIRMS MASTER INDEX.
REF KF 49 .C63	CONGRESS AND THE NATION.
REF KF 3941 .A75 G97	GUN CONTROL: RESTRICTING RIGHTS OF PROTECTING PEOPLE? BY MARK A. SIEGAL, ET. AL
**********	GENERAL BOOK COLLECTION **********
B 5305 .A37 1984	AFRICAN PHILOSOPHY: AN INTRODUCTION.
E 376 .H24 1985	PRESIDENCY OF JOHN QUINCY.
F 128.68 .C36 R54	CANARSIE.
GN 496 .H67 1985	ELEMENTS OF DYNAMIC OCEANOGRAPHY.
Z 244.3 .S86 1983	PREPARING ART FOR PRINTING.
**********	SPECIAL COLLECTIONS **********
CASSETTE	COMPANION TO CHAUCER'S CANTERBURY TALES.
CUR	CHOICES.
FILM	LA FRANCE.

NEW START: BIBLIOGRAPHIC INSTRUCTION FOR NON-TRADITIONAL STUDENTS

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ABSTRACT

The UNC library conducts bibliographic instruction classes for students who have been away from formal education for an extended period of time as part of a semester-long support group aimed at such students. This paper describes the format followed in these classes, and also discusses several positive and negative factors associated with the approach.

"I FELT LIKE A LITTLE KID IN A CANDY STORE."

"I REALLY WISH I COULD HAVE MORE TIME."

"(GIVE US) AN ASSIGNMENT TO DO ON OUR OWN DURING THE WEEK."

"(I) DID LEARN HOW HELPFUL EVERYONE IS AT THE LIBRARY."

"IT WAS FUN, YET EDUCATIONAL."

"EVERYONE SHOULD GO THROUGH IT. KEEP UP THE GOOD WORK!"

"NOW I HAVE THE KEYS TO UNLOCK UNTAPPED RESOURCES."

How often do you receive this type of feedback from a bibliographic instruction class? The opening comments are quotes from the evaluation sheets of library instruction classes. The library instruction that provides this positive response is part of an unusual program at UNO called New Start.

The New Start program was initiated at UNO in 1975 to focus on the needs and concerns of non-traditional students. For New Start purposes, a non-traditional student is a person at least 25 years old who has been away from formal education for at least 3 years. Situated in a large metropolitan area, UNO attracts a large number of students that do not fall into the traditional 18-22 year-old age group. Presently nearly 50% of the students at UNO are over 25. There is clearly a need for the New Start program here.

Although these non-traditional students are highly motivated, many have little self-confidence and may feel out-of-touch and out-of-place on the college campus. Rusty academic skills and outside pressure from jobs and families often add to their difficult adjustment. To ease this adjustment to academic life, the College of Arts and Sciences offers New Start as an elective course worth one hour of credit. During the semester, the main objective of New Start is to create

a support system for the students. The instructor provides knowledge and friendship. The student group of others who are "all in the same boat" creates a peer support system Weekly lunches carry on the support even after the formal class sessions have ended. Dr. Marge Wikoff, New Start instructor since its inception. reports that students return often for a chat or advice. In addition, New Start students receive campus orientation and career counseling. They review basic skills in math and English; they learn study and test taking skills, stress management, and library skills.

The largest single block of time--25% of the class sessions-- is spent on the library usage instruction. The library classes are taught by at least 2 librarians. During the 1985-86 school year, there were 5 sections of New Start which ranged in size from 15-20 students. In the past, classes were composed mainly of middle-aged women. Now we find one-third to one-half of the class are men and there is a broad spectrum of ages from 25 on up.

The library section of the New Start program consists of 4 one and one-half hour classes taught over a 4 week period. The first week, after a brief tour, we cover the card catalog and Library of Congress subject headings. Indexes and periodicals are covered

in the 2nd session, abstracts and microfilm in the 3rd, and we conclude with government documents and an ERIC computer search demonstration. The UNO Library made videotapes that give a brief but clear description of the more heavily used library tools. The tapes are usually shown in their entirety describing a series of basic sources. For the New Start classes, we isolate a single portion of the tape dealing with the subject of the week.

The third session is a good example of the bibliographic instruction we teach the New Start classes. The class begins by giving the students the handouts for the week and returning the previous week's assignment. We allow time for questions and will take this opportunity to note consistent errors or to offer praise and encouragement. The abstract section of the bibliographic instruction videotape is shown, giving a detailed but concise explanation of Psychological Abstracts. After the video, we go over the abstracts again, since most of the students have never heard of or dealt with abstracts. After careful explanation of what is required on the worksheet, the students go to the reference room to complete the assignment.

The worksheets require the students to make good use of the tool introduced that week. The student

always completes the worksheet during class time when the Librarians are present to offer assistance. This reinforces what was presented in class by offering immediate feedback to the student. The students are given some 3 dozen topics and asked to pick one to use throughout the 4 week session. We also specify certain tools and in the 3rd session, six abstracts with fairly typical formats are used. We do this to prevent them from using more complicated abstracts such as Biological or Chemical Abstracts.

After completing the worksheet, a list of dates is given to the students so they may locate information in newspaper microfilm. At the end of last semester one student commented on an evaluation form that we were a grim lot, since virtually all of our topics dealt with assassinations, invasions, and other tragedies which were picked because of the big headlines. So, we included some more upbeat topics such as the Royal Wedding, man on the moon and the dedication of the Statue of Liberty. This hands-on experience of threading the microfilm reader and reading the headlines printed for the date selected proves to be very enjoyable. Some students go back for more microfilm and look up other topics such as what happened on the date of their birth. Most cannot resist reading the advertisements for the date picked.

It is definitely the highlight of the session and it is hard to tear them away.

The students are asked to fill out an evaluation form during the last class. This evaluation gives us feedback as to the content of the classes and we take the comments into consideration when the Library Orientation Workbook and worksheets are revised. We try to use the evaluation sheets to get an impression of the overall impact of the sessions. They also allow us to adjust different aspects of the course to better fit the students needs and interests. The most frequent comment is that the classes are too short even though they last for 4 weeks.

The positive questions (what did you like most? and what was most helpful?) elicit general answers discussing learning about the library, hands on experience with help available, and so on. The negative questions (what did you like the least? and what was least helpful?) tend to be answered with specifics. For instance, the Spring 1986 comments indicated the computer search demonstration was resulting in either confusion or disinterest for a number of the students. As a result, we may drop the demonstration in future New Start classes.

Suggestions for improving the course can also result in specific answers. Several Fall 1985 evaluations mentioned that the library instruction would be better taught earlier in the semester so the students could utilize the knowledge for research papers. We talked about this idea with the New Start instructors who did change the schedule for the spring semester.

We enjoy the responses to the question "what would you like covered that wasn't?" The most frequent answer is likely to be: "I don't know--what else do you have to offer?" New Start teaches the students great new skills and resources; they are eager to know as much as possible. They are able to see the inherent advantages in knowing how to use the library.

Overall, the evaluations tend to reinforce our own assessment of the New Start sessions. The worksheets done with librarians on hand to answer any questions come across consistently as the most valuable experience. The evaluation feedback tells us we are reaching our goals:

-the students are learning how to use the "basics" in the library, and

-they are learning that reference people are friendly and willing to help even the most inexperienced student.

Many of us enjoy bibliographic instruction, and there is no program we have found to be more enjoyable and rewarding to offer than New Start. We give lots of one-shot lectures in our department - last year we presented just over 200 lectures and reached approximately 4,000 students. However, in a university of 15,000, we don't typically get acquainted with more than a few of our students by name.

Thus, we enjoy having the chance to get to know some students in the library setting over a period of several weeks. More significantly, this more intensive format enables us to reinforce some of the skills that are usually just described. We are able to talk about sources, show students where these sources can be found, answer questions while they are using them, and verify that they have used them correctly. To an extent, we are able to do the thorough job of teaching that we normally can't do in a 50-minute lecture. This eases our frustation level, because we can keep working with the students until they seem confident.

The students are typically apprehensive and unsure of themselves, but very highly motivated and incredibly appreciative of our efforts. They sometimes seem incredulous that a librarian would take them seriously and spend so much time with them. You might think that

we are excited about this program because it makes us feel like we're doing the kind of work we thought we would be doing when we decided to become librarians. You might be right.

There is also a down side to New Start. I'm sure you have sensed the irony of our describing a program that is this labor-intensive at a conference whose theme is how to "deal with optimizing services amid budgetary constraints".

We reached approximately 85 students in 5 sections of New Start during 1985-86. To do this we involved three different librarians and four paraprofessionals, usually with either 2 or 3 of us involved with each section. We typically spend 2 to 2 1/2 hours per person per week for the four-week duration of the class, as well as one or more planning meetings before and a post-mortem after the last class. That's a lot of time to spend on 85 students.

Most realists would view this ratio of staff to student as being inappropriate. It is, indeed, a luxury course, but to date we have kept it in our offerings because of the immensely positive feedback we get from students and staff. We feel good partly because we are doing the kind of competency-based

teaching that we would like to achieve with all our students, but seldom do.

We are all aware of the changing age profile of the American population. As fewer and fewer people fall within the traditional "college age", we will all be looking to various nontraditional groups as our clientele. Our guess is that UNO has the oldest average student age of any school in the state, in large part because of our urban setting, but all of us will be courting the older students in years to come. One factor many nontraditional students have in common is anxiety, including library anxiety. They are unfamiliar with any library, and feel particularly insecure in a college or university library.

We have described one program which we have found to be very well-received, but there are some special factors involved. That is, the New Start program has recruited people who recognize the need for some extra support, and are at least potentially receptive to our efforts. We view our New Start efforts not as the answer to all the needs of all nontraditional college students, but rather as one approach that we have found to be very successful.

APPENDIX I

NEWSTART

TIME FRAME FOR 4 WEEK SESSION

1ST WEEK - INTRODUCTION, HANDOUTS, TOUR, CARD CATALOG AND LC SUBJECT HEADINGS SECTION OF THE VIDEOTAPE, AND ASSIGNMENT

2ND WEEK - ASSIGNMENT RETURNED, INDEX/PERIODICAL SECTION OF THE VIDEOTAPE, AND ASSIGNMENT

3RD WEEK - ASSIGNMENT RETURNED, ABSTRACT SECTION OF THE VIDEOTAPE, MICROFILM EXERCISE, AND ASSIGNMENT

4TH WEEK - ASSIGNMENT RETURNED, GOVERNMENT DOCUMENTS SECTION OF THE VIDEOTAPE, ERIC SEARCH DEMONSTRATION, AND ASSIGNMENT

Name_____

Class day and time_____

WORKSHEET ON ABSTRACTS

Using an abstract from the list of abstracts below, complete the following exercise.

Your topic is_____

Name of abstract used_____Date____Volume_____

Subject heading selected from subject index_____

Entry number_____On page #_____

Author of article_____

Title of article_____

Title of magazine or other source_____

Date_____Volume number_____Issue number_____Pages of article_____

SELECTED LIST OF ABSTRACTS (choose one)	Location
Abstracts in Anthropology	Range A West
Child Development Abstracts & Bibliography	Range A West
Criminology and Penology Abstracts	Range B West
Psychological Abstracts	Range B West
Sage Public Administration Abstracts	Range B West
Social Work Research and Abstracts	Range B West

LIST OF DATES

Stock Market Crash	October 29, 1929
Martin Luther King Assassination	April 4, 1968
Pearl Harbor Day	December 7, 1941
JFK Assassination	November 22, 1963
Nixon's resignation	August 9, 1974
D-Day	June 6, 1944
Lincoln's Assassination	April 14, 1865
Elizabeth becomes Queen of England	February 6, 1952
Pope John's death	June 3, 1963
Royal Wedding	July 29, 1981
Man on the Moon	July 20, 1969
Lindberg NY-Paris flight	May 20-21, 1927
Statue of Liberty dedicated	Oct. 28, 1886
Battle of Little Bighorn	June 25, 1876

Evaluation Form - Library Sessions - Newstart

What did you like most about the course?_____

_____

_____

What did you like least about the course?_____

_____

_____

Was the course: too long _____ too short _____ just right _____

Was the information presented: too much _____ too little _____ just right_____

Was the information presented clearly? yes_____ no_____

Were the worksheets helpful? yes_____ no_____

Was the videotape useful? yes_____ no_____

What was most helpful to you? _____

_____

_____

What was least helpful to you? _____

_____

_____

Can you make suggestions to improve the course? _____

_____

_____

What would you have liked covered that wasn't? _____

_____

_____

Additional comments: _____

_____

_____

_____

THE PHILISTINES ARE COMING, ARE COMING!

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University Libraries
University of Nebraska-Lincoln
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ABSTRACT

In contrast to reliance upon standards and comparison with peer groups, two judicial approaches used heretofore by most librarians, a library's funding request based upon analyses of the library's ability to support institutional programs and missions is a better gauge of the accurate needs of the library and is more likely to be effective in the competition for a fair share of the institutional budget, particularly in the near future.

My thesis is simple. Although we have had the wherewithal to determine what the activities in our libraries should be and although there are means for determining accurate assessments of the levels of support of libraries, most of us have not heretofore been overly bothered with performing such detailed analyses to learn what we should have learned about our operations. It was not a case that it hurt our heads to think or that we did not have the mathematical ability to make

the calculations. We could have employed someone to accomplish either task. Operating our shops in a figuratively cavalier manner, we were content in times of retrenchment only to adjust our operations superficially. We made the minimal adjustments that were possible as we waited for the inevitable reestablishment of our position at the institution. *WEREN'T WE THE HEART OF THE INSTITUTION?* It was as if we knew that the gods of the humanities would bail us out. Yes, in times of retrenchment some of us actually took budgetary reductions. Most, however, got through these periods by being exempted from cuts, the budgetary reductions being only what was lost to inflation.

Central to our being somewhat exempt from budgetary cuts was the great snow-job, that momentous public-relations nonsense about our being the heart of the academic institution. A collateral reason was the managerial truism that all chief officers learn: the library is a bottomless budgetary pit. Thus, it was that before the library budget was touched, the institution reduced the number of policemen, custodians, and groundskeepers, and removed duplicative course offerings.

I had the misfortune to be a library administrator dur-

ing a period when accurate budgetary analysis was not necessary and therefore not kept, a period when the administrative officers of my institution were most, and perhaps only, interested in formulae that allowed us to receive higher funding. It was thus relatively easy for me to go into a budgetary session with my bosses. Armed with calculations relating to the formulae of Clapp-Jordan, of Washington State, of California, or of some mixture thereof, and reinforced by statistical comparisons with some group of libraries, I would present my irrefutable case for *more* funds. I never worked in an institution where the library was not underfunded by one or other of the aforementioned formulae. In fact, the selection of the appropriate formula was crucial. I remember in one state we librarians kept manipulating the proposed formula until the largest institution in the state also appeared to be underfunded, along with us havenots.

As I rethink the last twenty five years, I can't remember being employed by any institution where the chief librarian had to be an expert about operational analyses. The usual budgetary formulation during these years was the present base without any increase, or the present base with an increase of *X* (perhaps based upon fac-

tors, *a*, *b*, and *c*), or the present base with a decrease of *Y*. Even when an increase of *X* was requested by the institution, the chief librarian was not always consulted for the justification.

That we could have managerial naifs as chief librarians is not too strange inasmuch as the demands upon the administrative officers of the institution did not require greater budgetary expertise at the level of the librarians. The situation may become clearer if one understands how institutional budgets come into existence. Institutional budgets are political instruments. Even in those cases where there is an amassing of requests from the separate parts of the institution, the institutional budget is not pieced together by some logical, cohesive rule. The *request* budget is only a '*needs*' list in the loosest sense. It is a sophisticated interpretation of what the funding source may accept. The chief executive officer of the institution knows that the request budget will not be acceptable: it will always be too high. That officer, though, like any good barterer, knows, within reason, what the level of acceptance will be. That officer, thus, not only provides for an unanticipated windfall, but gives the funders the opportunity to make adjustments and corrections to

the request: in general, to do their thing.

This has been a game that honorable people play. Though there are no expressed guidelines, all involved seem to know the ground rules. Surprisingly, the game does indeed work, except in those instances when some disreputable participant gets greedy or when a saint becomes involved.

Yet the game has had its disadvantageous consequences. The *distribution* of funding is not a systematic enterprise. Like the request budget, it too hinges more upon politics than upon logical need. A cardinal rule is that what must be fixed today is accomplished, if at all possible. Collaterally, what can be delayed until next year or later is quickly deferred. A second rule appears to be that library funding is only brought up to a level that will keep most of the faculty (and sometimes the students, but never the librarians) from complaining. It is interesting to note that problems relating to library budgets are quietly overlooked and ignored when the faculty become more concerned about their own departmental problems.

In a sense the dual tasks of the chief librarian in this game have been (1) *to orchestrate* the chorus of discontents so that there are indeed better chances for in-

creases in funding; and (2) *to distribute* the received funding in a manner that will tend to defuse the unleased chorus of discontents. Let it be noted as an aside, that the keeper of the wolves sometimes gets bitten by a wolf.

Past library budgets, like the institutional budgets, were also politically put together. At some date in the history of the institution there was a perceived need for a library and a budget of *X* was allocated to the library. At a later date the library budget became *X + 1*, the increases continuing erratically and sporadically until the library budget became *X + n*. It is curious that there was never a stage in the history of the library where the size of the library budget would be justified logically as being directly related to the purposes of the library operations, although I am sure that the chief executive officer of the institution at all times, and perhaps even the chief librarian at times, believed that the increases in funding did so relate.

Every time that an increase in library funding occurred, the chief executive officer of the institution was reacting either to some intra- or extra-institutional pressure to increase the size of the library budget, the precise size of the increase being determined by the chief executive officer not by a particular need but by

what was conceived to be politically feasible and desirable. In the past, therefore, the *modus operandi* seemed to be: keep the library budget as low as possible, so long as there are no pressures to have higher budgets; and, collaterally, increase the library budget only whenever it becomes politically desirable or necessary to do so. Even when a book-reader became chief executive officer, reality, that rationale for so many unforeseen actions, very soon forced the chief executive officer to fund, instead, more important programs at the institution, such as departmental course offerings, faculty salaries, utilities, and, of course, computers.

Today is not yesterday. Although institutional budgets are still politically put together, there is a demand never seen before for justification and accountability. With more intra-institutional factions demanding a fair share of the funding and with lesser monies being funded in the foreseeable future, chief executive officers are demanding better and more detailed information with which to make more informed, and one would hope logical, budgetary decisions. With the aid of a computer, analyses are indeed available as never before. Up to now, the library has been spared the furor over justification.

Yet with tomorrow, even the humanists should ask us embarrassing questions about our budgets when it becomes apparent that there are no additional monies to be funded.

II

Suppose someone godlike, someone who controls the future of your unit, tells you that your operation is *over*funded. Not *under*funded as you have been maintaining, but overfunded. Remember that the statement is not '*I believe that your unit is overfunded,*' but '*Your unit is overfunded.*' as if the individual has irrefutable proof that the statement is veridical. How would you answer such a charge? I hope you understand that such a charge must be refuted because it threatens not only the size of your present funding, but also removes all possibility that you will ever attain the level of funding that you have been stressing for many years. For if indeed you are *over*funded, then in all likelihood the overage will be removed from your budget.

There are three general approaches that one could use as vehicles for refutation. Two of these approaches have been utilized by librarians for years. The first approach is a comparison of members of a class. Member-

ship in the class is dependent upon each having certain common characteristics. This approach is called *peer group comparison*. The peer group can be any combination that one can imagine, given the prerequisite of communality of at least one characteristic. The peer group can be the members of some organization. It can be the libraries in a particular geographical area. It can even be the libraries of the members of an athletic conference.

Although this approach is one of those most widely used by librarians to solicit budgetary support, it cannot be used as a refutation of the charge of overfunding as given above. The comparison will show much about a particular library's standing with the other members of the peer group, but these facts mean very little, for, unlike athletics, libraries are not in competition one with another for the opportunity to be number one. In point of fact, a comparison with members of a peer group does not justify if any or all of the members of the group are underfunded, properly funded, or overfunded.

The second approach, also widely used, is a comparison with a commonly accepted ideal. This approach is an appeal to and comparison with some established and recognized *set of norms* for operations such as yours. These

norms may be regional or national standards as approved or promoted by a professional organization. They may even be evolvements from statistical manipulations of the common characteristics of some class. This approach, like the appeal to a comparison with a peer group, does little to justify a particular level of funding.

Standards are goals to be attained for some purpose. Library standards being committe products are not related to particular facts, but have been compromises created from generalized postulates. They were developed for any library, yet pertain to no particular library. Although the level of funding implied or expressed by the standards may be laudable, any difference between a particular level of funding and those of the standards does not demonstrate whether that particular library is under-, properly, or over-funded. All that is demonstrated is that a particular library does or does not have the level of funding that is promoted by the standards.

Whereas the first two approaches relied upon external comparisons, the third approach *utilizes a direct connection with the programs and missions of the institution*. It is a purposeful approach. It is the only justifiable method in my opinion that can be used to deter-

mine the appropriateness of your funding and, in the process of gathering that information, the appropriateness of your activities. Only by referring to institutional programs and missions and by demonstrating what level of funding would be necessary to support each of these programs and missions, can you demonstrate the appropriateness of the level of your funding. The approach is grounded in the *sine qua non* for the existence of your library: as a service entity of the institution. There is, however, one danger in this approach that is not found in the others. The analysis not only provides information about the appropriateness of the level of funding, but also information about the appropriateness of your managerial and fiscal expertise.

If I am correct in my statement that the rationale for any library is based on its existence as a service unit of its institution, then it becomes clearer why I reject justification by comparison. Look at the comparison with a member of a peer group. Only if the parent organizations, the two institutions, are exactly identical in scope and mission would it be possible to utilize the comparisons of the respective libraries in order to determine whether one library supports its institutional programs and missions better or worse than the other li-

brary its institutional programs and missions. Since two institutions are rarely identical or even closely similar, the difference in the budgets of the libraries can be directly related to the differences in the institutional scope and missions. The question, however, whether the budget of either library is appropriate, proper, or sufficient for the support of the particular institutional programs and missions still remains to be answered.

Look again at the approach utilizing a comparison with some standard. Suppose that according to the standards there should be a staff of 5 in a library for an institution of your size. Suppose, further, that there are only 3 persons on the staff of your library. What would having 2 persons less than what the standards predicate mean? Does it even make sense to utter such a statement? If it does make sense, then having 2 less persons on the staff indicates that your budget is *under*funded by these 2 positions. Since it is unknown what the 3 persons now on your staff do, it seems strange to make any judgment about the adequacy of the number of employees. I maintain that it makes better sense to determine what the 3 persons do and whether the totality of their activities are appropriate to support the particular institutional

programs and missions.

Look at a similar argument. Suppose you have 1,599 books in your library, but the standards specify that you should have 1,600. Does this mean that you have one less book than you should have and that you are thus underfunded by the price of that one book? It seems to be more fruitful to determine whether the *particular* 1,599 books are proper and sufficient for your particular institutional programs and missions. I say '*proper*' because not any grouping of 1,599 books will be relevant for your particular programs and missions. I say '*sufficient*' because it must be determined whether these particular 1,599 books are all that are needed to support the institutional programs and missions.

III

Let us play a game. I have before me a stack of dollar bills that represents the totality of your library's budget. I intend to remove one dollar at a time from the stack. Each dollar removed represents one dollar less in your budget. You tell me to stop when the amount withdrawn from the stack so affects your operations that you can no longer fulfill your obligations of supporting the institutional programs and missions. Where do you

draw the line on the withdrawal? At $1? $100? $1,000? $10,000?

Let us suppose that you are smarter than I am, and you tell me to stop at the first withdrawal. What does that dollar represent? It could be the loss of approximately one third of an hour of student employment for operation *R*, or it could be *S* amount of paper clips, or it could be *T* number of pencils. Can you honestly say that the loss of one third of an hour of student employment or so many paper clips or pencils will produce such consequences that your support of at least one of the institutional programs and missions will cease to occur or will be diminished significantly? Obviously not. Yet somewhere between the loss of that single dollar and the loss of your complete budget, there is indeed a point beyond which your operation can no longer support at least one of the institutional programs and missions.

For my purpose, I do not care what is the exact point wherein you determine that you can no longer suffer budget reductions (because such further reductions cancel your ability to support all of the institutional programs and missions). For my purpose, it is sufficient to know that some such point will be reached. Whatever that point, the difference between it and your present budget

represents the amount of money that your operations are *over*funded.

Since you admitted, at least tacitly, that you were able to support the institutional programs and missions up to the point so indicated, any funding over and above that point must be considered not to be necessary for the library's support of the institutional programs and missions. Any funding not necessary for the support of the institutional programs and missions is *extra*. This extra funding is indeed *over*funding.

If you notice, I did not call any funding over and above the point determined to be necessary for supporting the institutional programs and missions as *un*necessary because '*unnecessary*' carries a connotation in one sense as being useless. Yet the funding over and above the necessary funding is *not*-necessary. The very words '*over and above*' indicate that the additional funding is not necessary for the support of the institutional programs and missions.

I understand your squirming at my word-playing, and I anticipate your answer: that the point below which you cannot possibly fulfill your obligations in supporting all of the institutional programs and missions only re-

presents the *minimal* point at which full support of all of the institutional programs and missions can be achieved by your unit. That point + *n* all the way to the present budget size *and beyond* allows you to fulfill your obligations *qualitatively* and perhaps even *quantitatively* better. There is support, and there is support.

IV

If indeed the most logical way that we can judge the adequacy of a library's budget is the extent to which the library supports the institutional programs and missions, then we must look at the activities of the library thus referred to. In doing so, we indirectly look at the ability of the chief librarian to specify which activities are necessary as well as the ability to direct these activities. Let us ignore, for our purpose, any discussion about qualitative support; that is, let us ignore any discussion about '*minimal*,' '*adequate*,' '*superb*,' and the like. Let us solely concentrate on determining how one could justify the activities that the library has in support of the programs and missions of the institution. In other words, how does the library management spend the money for the support?

Let's suppose that the programs and missions of the institution are so clearly defined that a list, $A \ldots n$, can be created. That assumption may be ill-founded because, for example, the missions may be extremely general. Nevertheless, let's suppose that we do have a finite listing. The next step would be to analyze the activities in the library so that the library budget can be sliced into shares, each representing an activity that supports institutional programs and missions, $A \ldots n$, or some portion thereof. The present library support for these institutional programs and missions can therefore be a listing, $L_A \ldots L_n$. Lastly, let's list the activities in a library that are *necessary* to support the institutional programs and missions as $L_{A'} \ldots L_{n'}$.

Suppose that L_A is the present library activity supporting the American history program of the history department at your institution. Can you tell me what $L_{A'}$, the necessary library support of the American history program, should be? In all likelihood you have never thought of that type of question. At the same time, I'm certain that almost all of you can calculate what the level of L_A is. Yet, without knowing the level of $L_{A'}$, you cannot make any meaningful statement about the appropriateness of L_A. If you cannot make any meaningful statement

about the appropriateness of L_A, you cannot make any meaningful statement about the appropriateness of the totality of the present funding, L_A ... L_n.

V

Most librarians become quite adept at spending monies. I have known some extraordinarily good library budgetary officers. Some were quite skilled at creative accounting, the manipulation of sums of money from one account to another. Some even expanded what was legally possible and acceptable. All, however, had to be fiscally responsible. Yet I have never known any budgetary officer who could tell me, within a small degree of error, how many paper clips or typewriter ribbons or catalog cards would be used in a given fiscal period. All could tell me how many we could afford to purchase; not how many we would use.

What I am suggesting by the example above is that heretofore we have not been looking for the elements that would give us the information about L_A' ... L_n'. Instead we have been concerned with the elements that would give us L_A ... L_n.

Let me cite another, related case. A good budget officer learns early on what are the regulations for spend-

ing every dollar of personnel monies. Yet no budgetary officer has the information whether $4,000 *must* be spent in department A, $2,000 in department B, etc. What the officer knows is how to spend $4,000 in department A and $2,000 in department B. We almost never ask the question - one which we think about many, many times - whether department A *really* needs $4,000 and whether B *really* needs $2,000. In short, what I am saying is that we do not have the facts that would allow us to remove $2 from A's budge[illegible] $7 from B's, even when we are forced to make [illegible]ions. And we certainly do not have the facts [illegible] allow us to eliminate department A.

VI

What is disturbing to me is that instead of attempting to learn about the costs of L_A, ... L_n, those activities which are necessary to support the institutional programs and missions, librarians still are more concerned about maintaining size, numbers, and turf. Only when faced with a potential budget crisis, do we look at the necessity of each of our activities and at the efficiency of our operations. Our analyses, unfortunately, are faulty because we have not collected the information that is needed to make the proper judgments.

As a result, the smart chief librarian still calls upon the faculty library committee or the humanities faculty to pound figuratively upon the desk of the chief executive officer. The latter, however, has other desk-pounders who deal from stronger campus positions and who come fortified with incontrovertible facts.

For the library to receive a fair share of the institutional monies it will be thus necessary for the chief librarian to become budgetarily more sophisticated than I and my generation had to be. Gross generalizations will no longer be possible. Appeals to standards should produce nothing or little. As I see it, there will be a necessity to know the costs of all of the mundane aspects of library operations: what should be, for example, the number and level of employees at a particular desk at 3:30 p.m. on thursdays. Armed thus with the costs of the various activities indigenous to the role of the library in the institutional scheme of things, the chief librarian should be able to present the library's case with a better chance of success.

What gnaws at my innards is the bilious thought that we do both ourselves and the community in which we exist a great disservice when we perpetuate the myth that we are the heart of the community and therefore should be

exempt from all fiscal reductions. If we are exempt, then we do not have to change. If we do not change, the world is going to pass us by.

I remember arguing with the state librarian of one of our western states about the future of libraries. That individual was fanatically opposed to the transference of publishing rights from governmental agencies to the private sector and with such transference a possibility of information being delivered through a system that would not include libraries. His arguments were that the role of our libraries would be changed for the worse thereby and that we westerners should hence fight the feds to leave things as they were. My position, which of all the members at that meeting I alone held, was that the central issue was not what the government did or did not do (although tangentially governmental action could affect us). I was not concerned about a change in the duties and activities of librarians, nor whether there would be a library in my future. The question that seemed terribly important to me was whether certain types of information would continue to be available for those who had need to use that information. It did not matter to me whether that information was available only through '*libraries*' or through a computer center or came via the TV or the checkout stand at my neighborhood gro-

cery store. As you might expect, this was another battle that I lost.

I cannot predict with any assurance what the future may be like. I leave such predictions to others who have better eyesight than I. There are certain signs, nevertheless, that indicate the possibility of certain directions. I suspect that as information so continues to become available outside of the buildings called '*libraries*,' that organization as we now know it will continue to change until it and what we now call '*the computing center*' will become so indistinguishable that for all practical purposes the dissimilarities will disappear. I can see some significant trends beginning to occur in joint management of both enterprises.

Yet I do not know whether you will see a paperless society. If it doesn't occur in your working lifetime, it will not be because there was not the technology to produce it. We have the technological wherewithal now. Low cost paperless retrieval of information is just ahead of us. Nevertheless, the paperless society will not come so long as there are a sufficient number of persons who get a sensual satisfaction from the tactile manipulation of pages.

No matter what the future may augur for libraries, it

is important for you to become more adept than we were in knowing your essential costs. You will face other claims for the favored position in the community. It will be necessary for you to justify your activities in a way that we never had to if you wish to become more than an expensive study hall.

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CD-ROM:
WHAT'S IN STORE FOR LIBRARIES IN THE COMING YEAR?

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ABSTRACT

This paper surveys recent developments in CD-ROM (Compact Disk - Read Only Memory) software packages currently available or in the process of development. Special attention is given to software for library reference services. Some of the issues centering around the acquisition of CD-ROM hardware and software will be considered, such as standardization of formats, cost factors, and product merchandizing trends.

INTRODUCTION

Since CD-ROM is an area where one really needs to stay on top of things to keep current with the developments, I thought I would start out by quoting Jim Seymour from an article in the May 27, 1986 issue

of PC Magazine. This viewpont article titled "Awaiting the CD-ROM boom" starts out:

> CD-ROMs are the single most interesting opportunity lurking on the personal computer horizon. These shiny little disks are going to be the lever that gets PCs into the home on a permanent basis. They're going to transform how we acquire, search, and use many kinds of information. And they're going to create the next generation of computer millionaires. But I wish we understood better how we're going to use them.

He continues to observe that we are in a sort of chicken and the egg syndrome with these because you can't use the hardware without the software and vice-versa.

However, Infoworld magazine recently projected sales of CD-ROM players would go from 3,000 in 1985 to 40,000 in 1986 to 170,000 in 1987 to 353,000 in 1988. So now is a good time to start looking into this new technology.

Definition of CD-ROM

A single 12 cm. (4.72") disk can store up to 600 megabytes of data - approximately equal to a mainframe computer. To put this into more readily understood terms, it is equal to -

275,000 pages of text, or
1000 books of average length, or
1,500 5 1/4" floppies, or
46 days worth of data transmission at 1200 baud.

The disk is 4.7" across and .047" thick. It rotates at a constant linear velocity of 200 rpm. The disk is heat and scratch resistant and has an estimated shelf life of ten years.

Some other interesting, but probably superfluous facts, are these:

"The data pits are pressed into clear polycarbonate plastic that makes up most of the disk, forming a continuous spiral with successive turns just 1.6 micrometers (about .00006 inch) apart." The pits are about one micrometer across and .11 micrometer deep. "One inch of the spiral holds 42,000 bits; the entire disk holds 4.3 to 4.8 gigabits . . . 540 to 600 megabytes" of data. The reflective aluminum layer reflects nearly 100% of the laser beam, the pits

reflect about 30%. Since the data is stored beneath the surface "wiping off a greasy fingerprint won't take the data with it", as it can with a floppy. (quoting from an article in the April 1986 issue of A+)

CD-ROM disks can be manufactured relatively cheaply. Mastering costs from four to eight thousand dollars, so the average cost per replica is about $7.50 in quantities of one to five thousand. Compared to the standard 12" digital videodisk, the CD can only store about half as much, but they are a more attractive alternative to many people because they have a higher accuracy rate than the 12 disk. Therefore they are better for data storage. The loss of detail in a video picture is not as critical as the loss of data in a text file.

Some common features of CD-ROM hardware units are the rate of data transmission: 153 K per second, rotating speed, access time (.5 to 2 seconds), total number of blocks on each disk (270,000) and the block size (2K). Also, practically all CD-ROM drivers can be retrofitted to play audio disks as well.

ISSUES:

: .WARE STANDARDIZATION

There is a world standard for CD-ROM drives. This assures a degree of compatibility among the various hardware options. The problem in compatibility resides with the software and the operating systems used to get at the contents of the disks. As it stands, the driver software must be either resident in firmware in the workstation (PC) or as software on a floppy or ROM disk. There is not yet a standard for file structures and disk mapping.

At present there are several drives available. They are made by Sony, Hitachi, Philips, Denon, and Reference Technology which uses a private label Hitachi. DEC and TECMAR market private label Philips drives. Panasonic and Toshiba have announced drives, but they are not yet available in the U.S.

Prices of CD-ROM drives can be expected to drop significantly within the next year, and will probably bottom out somewhere around $200, based on the current prices of the audio disk players. One possible development will be the storage of video images on CD-ROM.

The most interesting announcement that came out of the big Microsoft sponsored CD [illegible] conference the end of February was a proposal [illegible] Philips and Sony to introduce a new standard: CD-Interactive. This standard would combine stereo audio, video, and computer capabilities in one predesigned package. The "bombshell" as Jerry Pournelle put it in InfoWorld is that the CD-I uses a Motorola 68000 chip, the same one used in the Mac and the Amiga, and mandates OS-9 as the operating system. OS-9 is presently only used in Radio Shack's $89 Color Computer.

Meanwhile. All of the CD-ROMs so far require an IBM or compatible. Apple is not far behind. In November 1985, Management Resources International introduced a 68000 microprocessor on a board that will adapt the Apple II series for use w[illegible] CD-ROMs. T[illegible] card also adds 512K of memory needed to serve the ROM drive. The add-on board will list for $795, and a complete package including the CD-ROM drive should sell for under $2,000.

SOFTWARE STANDARDIZATION

The Phillips/Sony standard ensures compatibility only to a point. It provides for a uniform data format, track layout, disk diameter, and rotation speed. It DOES NOT create standard file formats, and

this is critic to our interests as users. It also does not create standardized hardware interfaces and software interfacing protocals. The standard will only do us some good IF driver software is standardized. The products that are currently available differ in a number of interesting ways. Some are good at handling tens of thousands of files, others are better at providing DOS like abilities such as listing wild cards in directory listing, using the DIR command. Still others provide no direct link to MS-DOS at all. The situation is in a state of rapid change. Hopefully there will be a logical format in the near future [Byte May 1986, p. 184]

But, as long as applications and operating systems are not standardized, market acceptance of CD-ROM is threatened. So the manufacturers have a vested interest in standardization. Only then can publishers master a single disk that is transparent to the operating system, and only then can they be both lower production costs AND be assured of a decent market for their products.

At present, a number of proprietary systems are used. These include LaserData's LaserFile, DEC's Uni-File, TMS's LaserDOS, and Reference Technology's STA/F File. None of these is compatible with any of the others. Anyway, we can hope that standardization

will come within the next year, but there are no guarantees.

At the present time, it is necessary to have several disk players and several IBMs each with a different card installed to use all of the software available. Until the standards are set, we would be wise to make our purchases carefully.

USER ATTITUDES

Before moving to specific pieces of software -- what about user attitudes. From what I've read, the library users are more enthusiastic about these technological innovations that the library's budget officers are. The literature seems to indicate that any time such a system is installed, it is very heavily used. One recent comment from a forthcoming article in Database, and quoted in the May 1986 issue of Online, was this: Ann Beltran, Head of Reference at Indiana University, surveyed students and faculty who used InfoTrac and found that they were "overwhemingly positive." She continues: "We clearly communicated to students that the original use of InfoTrac was experimental; however, if we had tried to discontinue it, we felt we might have risked at sit-in."

SOFTWARE -- APPLICATIONS TO LIBARIES AND RELATED AREAS

General comments

CD-ROM offers a lot. For one, it offers unrestricted access to enormous amounts of data. It can potentially eliminate use of many expensive online systems and phone line connect charges. So while it costs a lot up front, in five or ten years it can pay for itself in these savings. Here are some of the options currently available:

I. SILVER PLATTER

Silver Platter is one of the more visible vendors, and the one that offers to bring us the most interesting databases on CD ROM. In a letter from them dated April 22nd, 1986, their customer support representative said, and I quote, "We are currently offering five databases on CD-ROM: PSYCHLIT, ERIC, EMBASE, AV-ONLINE, and PAIS." However, she continues that alpha testing of these will begin in May at ten test sites, including seven libraries of different types. Subscriptions will be offered starting in the summer. A few words about each of these databases is in order.

ERIC: current disk covers 1981 to the present and is updated quarterly.

The entire ERIC database is available on CD-ROM in archival disks that cover the years before 1983 and do not require updating (e.g., 1966-75 and 1976-82). The pricing for these disks has not yet been determined. Data from 1983 to present is one one disk that is updated. Each disk contains the software to run independently of the others. The retrospective files have RIE and CIJE on separate disks; the current files combine both on one disk. The disk allows searching through the usual fields, plus the capability of BROWSEing the dictionary of available indexing terms. The Boolean operators AND, OR and NOT. It is also possible to truncate terms and do proximity searching. Since there are no communication charges and since there is "context sen[illegible]tive HELP" available, end user searching is a rea[illegible] possibility.

COST: $2,995 for the 1983 to present disk subs[illegible]iption

PschLIT: the current disk covers 1981 to the present and is updated quarterly.

Like ERIC, this has search and bro[illegible]e functions. It also has the LIMIT command and a command to DISPLAY search results. COST: $4,995

EMBASE: Annual disks from 1983 to present are available, quarterly updates.

Embase is the database for biomedicine and related disciplines. This database contains about 250,000 records for each year taken from about 4,000 medical journals. A significant amount of the material in the Silver Platter disk is not available in the printed Excerpta Medica. Users may search by trade name, chemical name, manufacturer's name or free text. The 500,000 controlled terms (MALIMET - Master List of Medical Terms) are also available.

COST: $9,995 (1984-86); $12 400 (1983-86)

AV-ONLINE: (NICEM - National Information Center for Educational Media) the complete database through March 1986, updated annually.

350,000 items from 3,500 producers and distributors can be searched by subject field, title, key words, release date and all with boolean operators. The database leads the user to motion pictures, videotapes, filmstrips, slide sets, audio cassettes, records, and transparancies.

COST: $795

PAIS: Covers the complete database to the present; updating schedule yet to be announced.

More than 225,000 items are indexed with 24,000 references being added each year. Includes journals as well as 9,000 monographs including pamphlets, books, and government publications.

COST: unavailable at this time

Silver Platter has also been advertising a NTIS disk. But they don't give any indication as to when it will become available.

Silver Platter offers "telephone hotline support" to assist users. How this will work out in practice remains to be seen.

COMPACT DISK PLAYER: available from Silver Platter at a cost of $1,295.

II. DEC

DIGITAL EQUIPMENT CORPORATION offers a variety of databases on CD-ROM that will run on either an IBM-PC or a Micro VAX.

They offer COMPEMDEX, CHEMICAL ABSTRACTS, NTIS, and other technical databases. Here is a breakdown of what they have available:

COMPENDEX Electrical and Computer Engineering

$1,195

COMPENDEX Chemical Engineering

$1,195

COMPENDEX Aerospace Engineering

$1,195

CHEMICAL ABSTRACTS Health and Safety in Chemistry

$1 95

Environmental Health and Safety

,150

NTIS Computers, Communications and Electronics

$1,150

NTIS Medicine, Health Care and Biology

$1,150

NTIS Aeronautics, Aerospace, and Astronomy

$1,150

Royal Society of Chemistry: Biotechnology Abstracts

$1,395

Fraser Williams' Fine Chemicals Dictionary

$ 995

Silver Platter: ERIC

$2,995

Silver Platter: PsychLit

$4,995

Silver Platter: Embase

$12,400

Silver Platter: AV Online

$ 795

TOTAL: ASTRONOMICAL

Each of the COMPENDEX disks has about 120,000 records covering the period from July 1983 to June 1985. The disks are updated quarterly with the $1195 annual subscription. For that price, the user also receives the MicroBASIS search and retreival software needed to get at the contents of the database. This software allows free text searching of up to 550 megabytes of information -- offering proximity searching, truncation, set building, prefix or suffix searching, and boolean logic.

III. BOWKER - a Bowker spokesman recently informed the newsletter Advanced Technology in Libraries that Books in Print and Ulrich's International Periodicals Directory should be available in CD-ROM format sometime this summer.

IV. DATEXT

This Massachusetts firm offers the CORPORATE INFORMATION DATABASE in CD-ROM. It contains comprehensive information on 10,000 companies, permitting users to profile companies, look at their financial statements, get info on executives, and make

comparisons among companies. It also has data on 1200 lines of business in 50 industries. It uses existing data from four databases: Disclosure, Predicasts, Media General, and Business Research Corporation. It is broken into four segments: consumer, industrial, technology, and services. It is menu driven and is compatible with PC software such as Multimate and Lotus, so the user can integrate data from it into spreadsheets, etc. The annual subscription ranges from $9,600 to $19,600 and includes a disk player. The article didn't say why the broad price range.

V. Compact Cambridge - has the entire Aquatic Sciences and Fisheries Abstracts on one disk containing 110,000 abstracts. The first disk covers January 1982 to June 1985, subsequent disks will update through 1986.
The cost for a l their disks and a reader is $6,750. The yearly subscription rate for those with a reader is reduced by $500. The renewal rate for 1987 is $2,750.

Also available are Cambridge's LIFE SCIENCES COLLECTION and MEDLINE. The latter two are available as a two disk set or separately. Subscribers also receive a disk reader which becomes the subscriber's property after two years.

A yearly subsription to both of these is $8,500. MEDLINE only is $6,350.

VI. Disclosure expects to begin publishing Compact Disclosure fairly soon. It will use DEC's system for access. Quarterly updates will contain info from corporate filings with the SEC from companies traded on the New York and American stock exchanges, OTC, and NASDAQ. Each disk will also contain a five year financial summary for each company.
Subscribers to Compact Disclosure also get a disk reader which becomes theirs after two years..

VII. Dun and Bradstreet has created a task force to look into applying CD-ROM to its product line.

VIII. MISCELLANEOUS SOFTWARE

Reference Technology's software library of 8,800 public domain files comes packaged with one of their DataDrives for $1,595.

Software Interest Group has an inventory of 400+ disks of public domain programs on floppy. These can be ordered for a copying fee of $6.00 each. To get all four hundred this way would cost $2,400. But all available on CD-ROM for under $400.

IX. GEOVISION, Inc. is creating a library of maps and other types of geographic information. The USGS is developing a prototype system to store earth science and geologic information, including LANDSAT images.

X. UNIVERSITY MICROFILMS is testing CD-ROM in prototypes. One product is the 1984 issues of 42 IEEE publications. Another is the Dissertation Abstracts database. UMI apparently envisions combining remote and local database searching using an M300. They plan to track usage so they can charge users each time they print an article from the disk. We'll see how that works.

XI. GROLIER'S ELECTRONIC ENCYCLOPEDIA

This is available for a demonstration following the talk. It contains the entire nine million words of the Academic American Encyclopedia already available online. It is possible to search words or word combinations with the boolean AND operator. OR and NOT and not available. This is set up to run on the CD-ROM players currently made - by Sony, Hitachi, and Phillips. It will run with a minimum of 256K in an IBM or compatible. It will soon be available in versions for the Apple II series and the Atari 520 ST.

Since the encyclopedia itself only uses about a fifth of the disk, there is room for expansion. And according to John Cole of Grolier, work is underway to produce a version that includes the graphics found in the printed volumes.

Cole also reports that sales of the Academic American Encyclopedia have increased since it went online, and expects a further surge in sales as a result of the CD-ROM version.

OTHER LIBRARY SOFTWARE

So far I have focused on reference tools and databases. There are other entries in the library market that should be mentioned also.

BRODART offers Le Pac, the Local Public Access Catalog. It contains a compilation of MARC records intended for use as an online public access catalog. Over 1,000,000 records can be accessed by subject, author, and title. The cost is about the same as for their COM product.

CARROLLTON PRESS sells MARVLS, which contains the complete shelflist of the Library of Congress and is intended for use of libraries converting their records to machine readable format.

FAXON offers MicroLinx, a serials control system on CD-ROM. It contains the complete records of the LC MARC-S serials file, over 250,000 records.

THE LIBRARY CORPORATION introduced the first CD-ROM product for libraries: BiblioFile. This product performs both card production and maintenance for local MARC files as well as providing 3 million MARC records of all Library of Congress English language cataloging since 1964 and all popular titles since 1900. It includes about 1.5 million English language books in print from 22,000 publishers. The database includes GPO publications, music, films, and maps. The entire database is on four disks, and is updated monthly.

In December 1985 The Library Corporation offered to sell a CD-ROM drive, an interface for an IBM PC or compatible, a reference manual, a floppy with access programs, and demonstration software -- all for $999. Search and card production software will set you back another $1,450. This provides the buyer with one set of either LC MARC or ANY-BOOK. And to keep current, you also would want the quarterly subscription to the LC English language cataloging data for $870. The monthly subscription is $1,470 a year. LC foreign language cataloging is $500 for the quarterly and

$1,25[illegible] for the monthly. BiblioFile is already installed in over 250 libraries in the U.S., Europe and Japan.

Lael Beiser reported in the April 1986 issue of [illegible] Library Bulletin that the BiblioFile software consists of three major modules: BIB, CONFIG, and UTILS. BIB is the main program and loading it displays a menu with ten choices. Pressing the appropriate function key takes the user to the corresponding activity. Searches of the database can be done by title (or any word in the title) or a combination of author and title (up to 32 characters), by LC card number and by ISBN. Searches can be refined by specifying a date or range of dates of publication, the language of the work and the number of pages. If only one item is found, it is displayed; otherwise a list of items is displayed and the user selects the appropriate one -- just like searching OCLC. According to Beiser, the trickiest part is searching items not on the current disk. If an item is not found, it is placed in a queue to be searched against the other disks. Once the item is found from the queue list, it must be either processed or downloaded or it will be lost.

The INGRAM BOOK COMPANY provides an electronic ordering system using BiblioFile's LaserSearch called

Any-Book. Since the database includes the complete inventory of this distributor, you can transmit ordering information directly to Ingram with a modem supplied at no charge. A year's subscription to the Any-Book disks with quarterly updates, hardware not included, costs $600.

--- OPTICAL DISK OFFERINGS ---

INFOTRAC

I really shouldn't close without commenting on INFOTRAC, even though it's not a CD-ROM product. INFOTRAC uses 12 inch videodisks. The smart money now seems to be with CD-ROM because unit production costs are lower.

But INFOTRAC is packaged this way for now. It contains, and here I quote from their literature, "a comprehensive research oriented database providing indexing to articles from approximately 900 business, technical and general interest publications. For tracking of current events, indexing to 60 days coverage of the New York Times and 12 months coverage of the Wall Street Journal is also included." close quote. After you have paid the base subscription of $8,500 the InfoTrac database itself is available for only $4,500. That includes the hardware. If you have

your own hardware, you can save $4,500. Also available for an additional $5,500, if you get the Infotrac database, is the full text of the editorial content of the Wall Street Journal including "up to 12 months of data." For $3,500 more you can tack on the GPO, and another $4,500 will get you the LegalTrac index to 720 law journals. Personally, I can't get excited about InfoTrac.

UNIVERSITY MICROFILMS

Dissertation Abstracts is available on 12 inch disk.

CONCLUSION

By way of conclusion, I would like to get back to what seems to be the main issue facing general acceptance of CD-ROM today, and that is the issue of standardization. I would like to call to mind a somewhat parallel instance. For those of you who have Apple computers and have installed Z-80 boards in them so you could run WordStar and other CP/M software. Imagine for a moment that you had to install a new board and purchase an additional operating system for each piece of software you wanted to use. That's about the state of affairs today with CD-ROM software.

Until that small matter is resolved by the companies who market the products, it is definitely a situation of caveat emptor.

TURNOVER OF PROFESSIONAL LIBRARIANS

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ABSTRACT

Turnover of professional staff is an increasing problem in academic libraries. This paper presents formulas for determining turnover rates and methods for cost analysis of turnover. The results of a University of Nebraska-Lincoln turnover study are discussed within the context of current turnover research. A model of individual turnover that describes the decision-making process is presented. Possible methods for reducing turnover in libraries are suggested.

INTRODUCTION

Voluntary turnover of professional staff is a problem in academic libraries. To maintain quality service it is important to have an experienced staff, well acquainted with the needs and interests of li-

brary users. As libraries become more automated, it will become more important than ever to retain trained staff familiar with equipment and local practices. Although most librarians agree that voluntary turnover is costly, the process of turnover is not well understood.

To gain a better understanding of the turnover process, a study was undertaken by Eva Sartori and myself to determine what factors played a role in the voluntary decision librarians made to leave the University of Nebraska Lincoln Libraries during the period 1974-1984. Questionnaires were sent to 51 of the 60 former staff members who could be located. Twenty-eight questionnaires were returned for a 55 percent response rate. The results of the study are similar to turnover research findings conducted in other fields. Although the sample size in the UNL survey is inadequate for drawing conclusions on librarian turnover as a whole, several important findings will be explored in this paper.

CALCULATING TURNOVER RATES

There are several formulas for measuring staff turnover. One of the most widely used formulas is to calculate the number of resignations for a specific

period of time, usually a year, divide by the total number of library positions, and multiple by 100. (See table I).

Another formula for analyzing turnover calculates the replacement rate. The total number of hires is divided by the total number of library positions and multiplied by 100. (See table II). This hiring rate is compared with the turnover rate. If the hiring rate is higher than the turnover rate, the library is adding staff. When the turnover rate is higher the library is reducing staff. If the library is neither increasing nor reducing staff the figures should be very close. A hiring rate lower than the turnover rate, when the library is not overstaffed, will reduce the ability of remaining staff to maintain services and productivity. When this occurs, plans for handling work during the staff shortage must go into effect.

The percentage rate of turnover is useful for identifying patterns. When separate turnover rates are computed for each department, trends will become apparent. Transfers and promotions should be recorded as separate categories. Although they are not true staff losses, they nevertheless cause additional training expenses.

Once the figures for departmental turnover losses

Table I

Formula for Calculating Turnover

$$\frac{\text{Number of Resignations}}{\text{Number of Positions}} \times 100 = \text{Percent of Turnover}$$

Table II

Formula for Calculating Hiring Rate

$$\frac{\text{Number of Hires}}{\text{Number of Positions}} \times 100 = \text{Hiring Rate Percentage}$$

have been collected, they can be analyzed for patterns that may be useful in predicting future turnover. Through such an analysis, it will be possible to identify departments with a turnover rate similiar to that of the parent institution. These departments may serve as "forecasters" for future turnover. Departments that supply or receive transfers at excessive levels may be evidence of other problems that need future study.

There is no standard measure for acceptable turnover rates. The acceptable level varies from industry to industry. Before standards rates can be established, the costs of turnover must be measured.

MEASURING TURNOVER COSTS

Turnover Advantages

Not all turnover is bad for an organization. Some turnover is inevitable. Staff will retire, disabilities occur, and personal factors will cause staff to leave. It is even desirable to have turnover among paraprofessionals in the library.

Because a Master's Degree in Library Science is required for professional positions, paraprofessionals must obtain the degree before they can assume professional positions. Intelligent and energetic parapro-

fessionals should be encouraged to attend graduate library schools and enter the professional ranks. A low turnover rate among paraprofesionals who have risen as far as they can in the paraprofessional ranks can be symptomatic of other personnel problems. Paraprofessionals may become frustrated with the lack of opportunities for advancement. This can result in job dissatisfaction, resistance to innovation, or even conflict between professionals and paraprofessionals.

It is healthy for an organization to have some turnover among professionals. New staff bring fresh ideas to an organization, and capable managers are frequently recruited from nonmanagement positions. However, for turnover to prove advantageous, it must be balanced. The presence of new staff in lower positions will not result in fresh ideas if managers are not receptive to them, and a turnover rate that is too excessive will cause disruption in services and productivity. The next section will explore methods of measuring the cost of turnover.

Quantifying the Costs of Turnover

The costs accrued from turnover of professional staff are often obscured under other budget items. Librarians remaining on staff will usually absorb the work of those who leave until new staff is hired.

Training costs are often buried in supervisors' salaries. Because of these factors, turnover is sometimes ignored in managerial reports and seldom included in performance standards for managers. However the cost of turnover is not impossible to measure.

Hiring Costs

Expenditures involved in the hiring of new staff can be quantified. Advertising, and the portion of personnel office staff salaries expended in the recruitment process can be measured. Interview costs must be examined as well. This includes the travel and interview expenses of candidates, and salary expenditures for candidate screening committees. These figures will show how much money is expended in hiring new staff.

Training Costs

Once the former staff member is replaced with a new hire, that staff member must be trained. The experience level and position of the new librarian will influence the amount of training required to integrate the new staff member into the workforce.

Training costs include the portion of trainers' salaries expended on training, the reduction in their productivity while they are training new staff, the expenditures for equipment and other supplies used in

training, the salaries for staff who produce training materials, and the salaries of staff in other departments who are involved in new staff orientations.

Production Costs Incurred with New Hires

During the time a new staff member is in training, there will be a measurable reduction in productivity for the trainee's position. This will be accompanied by a decline in quality, which may result in more error correction. When additional time is spent correcting these "beginner's mistakes," the extra portion of salaries expended for error correction should be included under training costs.

It is important to understand the training process for each position. Some positions will require more training than others. The expectations for performance should be well documentated so that both manager and trainee know when the employee is expected to meet the minimum standards of productivity for that particular position. For a library to receive benefit from hiring a new librarian, that librarian must stay in employment beyond the point where he/she reaches the minimum production standards.

It may be difficult to quantify the contributions a staff member makes after s/he reaches his/her full

development. David Peskin, in his book The Doomsday Job[1], outlined one technique for determining the point at which an employee has remained on staff long enough for the employeer to receive benefits from the hire. Peskin's formula for determining this point is:

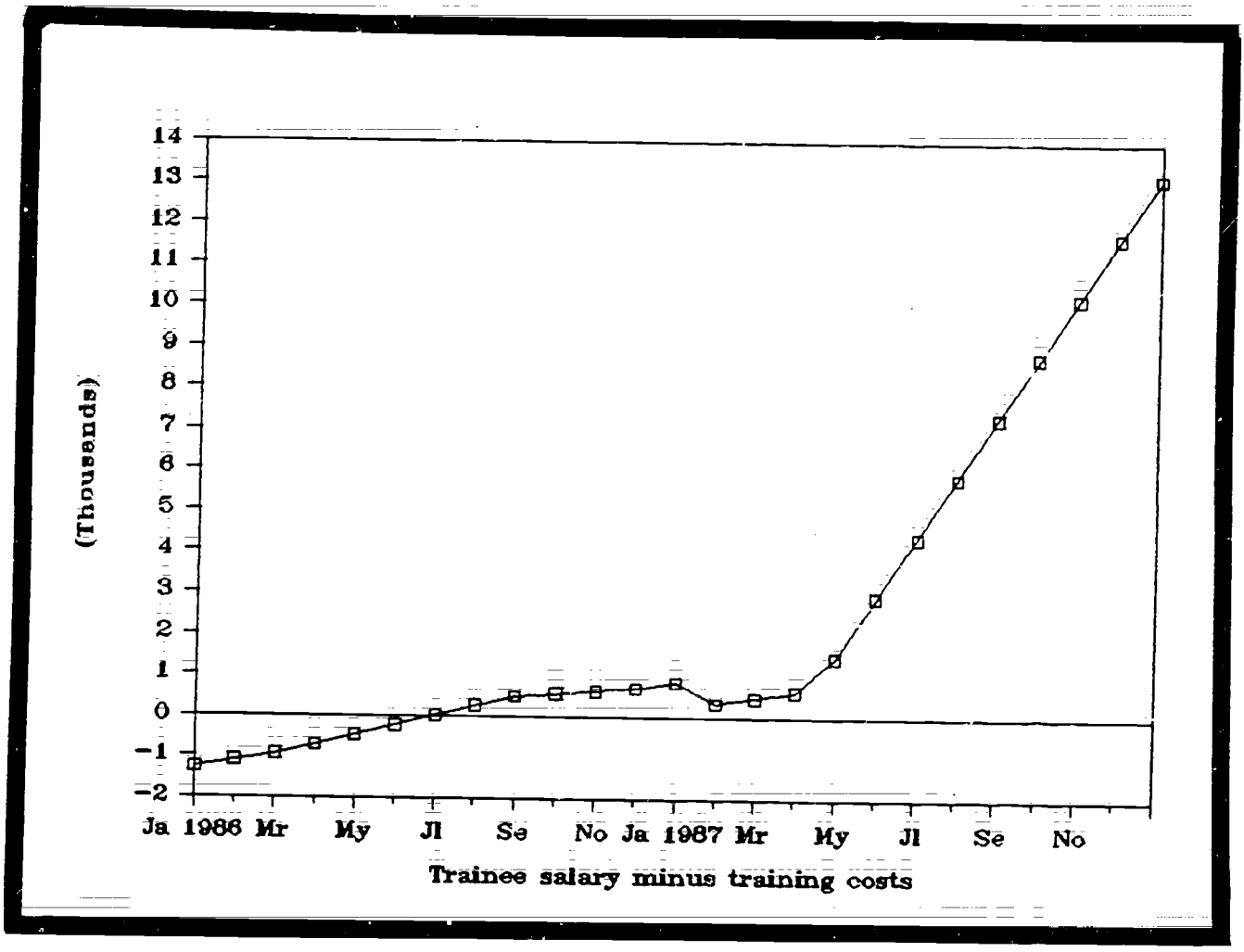
(length of stay X salary) - (trainee salary before productive + training costs).

If the employee leaves before his/her current salary exceeds the non-productive salary plus training costs, the library has lost money on its investment in the employee. Figure 1 demonstrates this concept. This graph follows the progress of a new employee during the first two years of employment. During the first seven months, the library is losing because the training costs and the portion of the trainee's salary that is nonproductive exceeds the portion of the trainee's salary that is productive. As the trainee becomes more competent, the training costs are reduced in proportion to the trainees's contributions, until the trainee reaches the breakeven point in July. This is the point where the trainee's contributions exceed all of the library's losses due to training, and the reduction in productivity for that position.

Productivity Costs to Remaining Staff

Departmental productivity will be impaired as

1. Dean B. Peskin, The Doomsday Job (New York: Amacom, 1973), p. 76.



Breakeven Point

Figure 1

vacancies require remaining staff to assume the duties of former staff. This increase in workload may be too extreme to be absorbed. This causes a reduction in services and/or the creation of backlogs of work. Other intangible effects on the remaining staff include disruption in workflow, loss of productivity due to morale decline, and management inefficiency.

Cost of Staff Exits

Another cost factor in turnover is exit processing. This includes any expenditures of personnel staff for exit interviews and paperwork. Often overlooked are expenses incurred when staff are in the process of looking for alternative jobs. Work is interrupted when a staff member is gone for interviews or "psychologicaly" absent, and when time is spent on resume writing.

When a cost analysis study of turnover is undertaken it is not necessary to account for every penny. It is important to include all measurable expenses. Once the rough cost of turnover is determined, library managers can establish acceptable levels of turnover for their particular situation. The next section will explore some of the reasons why staff become dissatisfied and leave.

MAJOR CORRELATES OF TURNOVER

Although turnover has been a popular topic for research in many fields, the search for a primary cause of turnover has not been successful. Connections between personal characteristrics and turnover are inconclusive. Intelligence tests, aptitude tests, interest inventories and personality tests are not dependable predictors of turnover. Some industries have developed a "weighted application blank" or a WAB to identify individuals who are likely to leave. However, the dependability of a pre-employment test as a forcaster of turnover is limited by other factors. For example, supervisors and colleagues may play a more important role in the turnover process than personal characteristics. More research needs to be done before pre-employment screening can be taken as a serious predictor of turnover.

Some of the major correlates of turnover that researchers have identified are: age, sex, tenure (length of employment), job satisfaction, job security, availability of alternative employment, position level, salary, intention to leave, and most recently, organizational commitment. In the following sections, each of these issues will be briefly explored. Data from the UNL survey will be included when available.

The turnover rate at the Univeristy of Nebraska-Lincoln averaged over the ten year period (1974-84) of the study is 14 percent. The annual turnover rate has varied from a high of 26 percent in 1979-80, to a low of 8 percent in the following year. In order to identify the major factors influencing turnover at UNL, a questionnaire was developed by Eva Sartori and myself. The questionnaire consisted of three parts. In the first, respondents rated job-related categories on a scale from "very important" to "not important" in their decision to leave UNL. In the second part, for the categories identified as "very important", respondents rated on a scale from "very satisfied" to "very dissatisfied" the degree of satisfaction they felt for the category while at UNL. In the final section, respondents were asked to supply biographical information.

Age

With very few exceptions, research has found a negative relationship between age and turnover. However, age is very closely associated with other factors that may play a more important part in the decision to leave.

Tenure

Researchers have uncovered evidence that length of service may be one of the best predictors of turnover. This finding was confirmed in the UNL study. Of the 28 respondents in the survey, only eight had been employed at UNL more than 6 years, whereas twenty of the respondents had been at UNL five years or less.

Job Satisfaction

Job satisfaction which, as defined here, includes pay equity, wages, position characteristics, supervision and supervisory style, and overall job satisfaction, are correlates of turnover. The strength of the correlation varies with the profession or labor group studied, and the demographic characters of the subjects.

In a study undertaken by Bartel[2] younger men were found to be more influenced by wages than older men who were more concerned with benefits. There is also evidence that wages are more important to managers than nonmanagers. In the UNL study, forty-five percent of all managerial respondents (section heads, department heads, and deans) indicated dissatisfac-

2. Ann P. Bartel, "Wages, Nonwage Job Characteristics, and Labor Mibility," Industrial and Labor Relations Review 15 (July 1982) : 578-589.

tion with future salary. Twenty-seven percent of this group were dissatisfied with current salary. Of the nonmanager group, twenty percent were dissatisfied with future salary prospects, but only thirteen percent were dissatisfied with their current salary. Salary has the highest frequency of responses in the UNL survey. Twenty-eight percent of all respondents were dissatisfied with future salary, and twenty-one percent were dissatisfied with their current salary.

Another important factor is supervision. For professionals, supervision and supervisory style and the manner in which they affect the worker's independence were found to be related to job satisfaction. In a study undertaken by Fleshman and Harris[3], supervisors who were highly rated by their staff for their degree of genuine trust, respect, and rapport between supervisor and staff, were found to have lower staff turnover than managers with low consideration Their study further indicates that a structured environment where the supervisor organizes and defines group activities is not as important a factor in turnover as the degree of consideration of a supervisors.

Twenty-eight percent of all respondents in the UNL

3. Edwin A. Fleishman, and Edwin F. Harris, "Patterns of Leadership Behavior Related to Employee Grievances and Turnover," Personnel Psychology 15 no. 1 (Spring 1962) : 43-56.

survey were dissatisfied with supervisory aspects of their work. Although there was no major difference between managers and nonmanagers, length of service at UNL and satisfaction with supervision appear to have a significant relationship. Ten percent of the staff with one to five years experience were dissatisfied with supervision, while seventy-five percent of staff with five to ten years experience were dissatisfied with supervision.

Although salary categories have the highest frequency of responses, some aspect of library management is frequently mentioned by respondents in the comment section as either the chief factor, or one of the most important factors that contributed to their decision to leave. Specific areas mentioned in the comment section include: "lack of support at the middle-management level", "too much time was spent [by the faculty] worrying about administrative matters," "strong anti-intellectual climate in the library", "capricious administrative style", and "conflict with immediate supervisor."

Although interesting, these findings cannot be considered conclusive. The sample size is too small to make generalizations for the larger population. Further research should be conducted in this area.

Some research (Lynch & Verdin 1983) (D'Elia 1979)

(Chwe 1978) has been conducted comparing responses of reference and catalog librarians. The hypothesis that reference librarians have greater job satisfaction is not conclusive. Among the former UNL librarians, there is no area where the response between reference librarians and catalogers is significant.

Institutional support for travel, opportunity for advancement, and career goals also appear as significant factors in turnover decisions. Less than 10% of the UNL respondents felt that the opportunity for advancement in the form of an administrative promotion or promotion in rank was a "very important" factor in their decision to leave. Although the overall frequency of response is very low, when manager's and nonmanager's responses are examined, a pattern is revealed. Forty percent of nonmanagers reported dissatisfaction with the university's ability to meet their career goals. Only two percent of this group left UNL for administrative promotions in another institution. This indicates that nonmanagers leaving UNL are leaving for comparable positions in other insitutions that more directly fulfill their individual career goals, not because they are interested in management positions. On the other hand, sixty-three percent of the managers who left UNL accepted positions elsewhere that they considered to be administrative promotions.

Other major areas where managers and nonmanagers disagree in the UNL survey, are in the categories of encouragement for professional development and institutional support for travel. Thirty-six percent of all managerial respondents were dissatisfied with encouragement for professional development. Only six percent of the nonmanagers were dissatisfied. In the area of satisfaction with institutional support for travel, fifty-four percent of the managers were dissatisfied, while thirteen percent of the nonmanagers reported dissatisfaction.

Sex

Although some of the early turnover research seemed to indicate a difference between men and women and their turnover rate, recent research is inconclusive. The hypothesis that there is no significant relationship is supported in the results of the UNL study.

Organizational Commitment

Recently, commitment to an employer or job has been suggested (Steers 1977) as a correlate of turnover. More research will need to be undertaken before commitment is accepted as a reliable correlate of turnover. Commitment was not measured in the UNL study.

Job Security

Arnold and Feldman (1982) found a relationship between job security and turnover. There is no data in the UNL study on this factor. Job security is so closely related to age and length of service that it is difficult to separate the variables and determine its exact importance.

Availability of Alternative Jobs

The availability of alternative jobs is a strong factor in the decision to leave (Price 1977). There is no specific data collected in the UNL study regarding the availability of alternative jobs.

Intention to Search for Alternatives

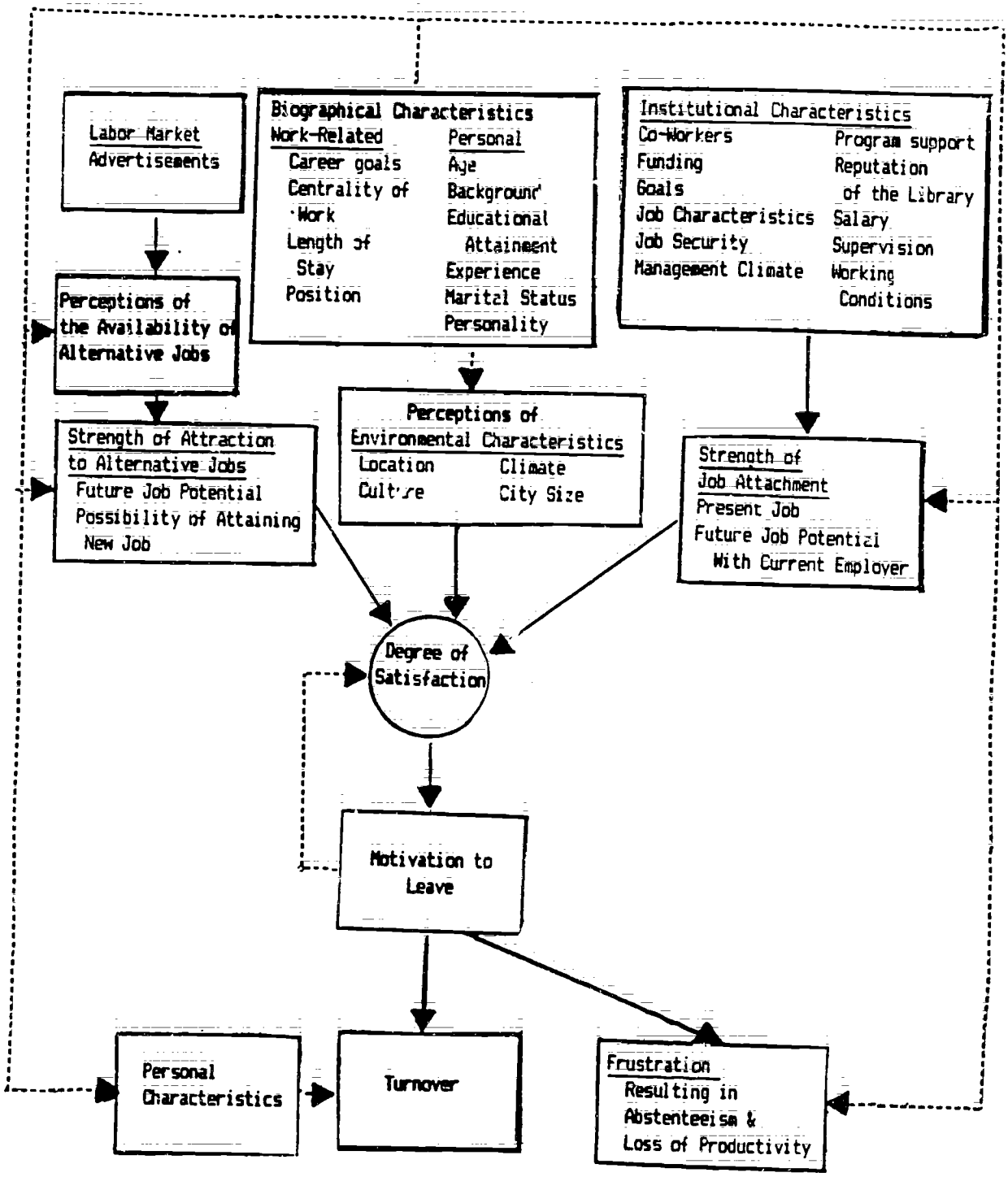
Intention to search for alternatives may be the strongest predictor of turnover. This finding was confirmed in the UNL study. Fifteen of the twenty-eight respondents indicate that either their position was unacceptable, and they had a strong desire to leave, or they were applying elsewhere. Six of the respondents were remaining available for alternative jobs, and only three respondents had not seriously thought about leaving.

Researchers have discovered there are many interdependent factors influencing the decision to leave. The major correlates of turnover have been identified through the collection of aggregate data. However, the decision to leave is a personal decision, and there are many individual characteristics that influence the outcome. Aggregate data that describe the conditions a population shares may misleadingly emphasize the importance of some factors and underemphasize other more important factors. Not until large samples of individuals have been studied over an extended period of time will aggregate data become dependable.

The major correlates of turnover identified through aggregate data have little practical value without a conceptual model for describing the turnover decision-making process. The next section will present a model developed by Eva Sartori and myself that graphically describes the interrelationship of factors important in voluntary turnover.

INDIVIDUAL MODEL OF EMPLOYEE TURNOVER

The model in figure 2 recognizes the individual human values that vary from one person to another. This is depicted in the model through the use of



Model for Individual Voluntary Turnover

Figure 2

dotted lines. Environmental characteristics, labor market, and institutional characteristics originate outside of the individual. They are interpreted by the individual according to the individual's personal characteristics, so personal values determine to a large extent the degree of satisfaction. The availability of alterrative jobs, the strength of the attraction to alternative jobs, perceptions of environmental characteristics, strength of job attachment (job satisfaction), frustration levels, personal characteristics, and the degree of interaction between satisfaction and motivation are all influenced by biographical characteristics.

Degree of satisfaction is at the center of the decision-making process. The degree of satisfaction with the environment and job combine with the degree of attraction to alternative jobs to determine the level of motivation/intention to leave. Motivation to leave may also modify the degree of satisfaction so that individuals who were initially dissatisfied may, after determining they have no intention to leave, become more satisfied with their condition. Someone with a strong motivation to leave, but who cannot will either become less dissatisfied with his/her job, or become frustrated. The biographical characteristics at the bottom of the chart leading into "turnover" account for voluntary turnover of staff who must leave

for non-job related factors such as family, or health.

STRATEGIES FOR REDUCING TURNOVER

The improvement of job satisfaction through effective leadership, challenging jobs, and equity in reward distribution are central to turnover reduction programs.

The first step in developing a turnover reduction plan is to determine acceptable turnover levels through cost analysis research. Once a goal is established, a staff member should be appointed to monitor the effectiveness of the program.

The employee must be the focus in program development. Information gathered during exit interviews can provide insights into ways of improving jobs and may reveal problem areas. Exit interviews should be supplemented with studies of library policies. This will assist in the identification of practices that may be contributing to the turnover problem.

The importance of the individual's contribution to the success of the library's service must be recognized. Work should be designed around the individual, with emphasis on what is to be done, not how. The importance of the work group in promoting feelings of collegiality and self-esteem should be recognized.

Older staff members and supervisors need to develop "mentoring" skills, so they will be in a position to advise younger librarians on career development. Job characteristics such as autonomy and responsibility that give staff a sense of trust and competency should be built into job descriptions and performance expectations. The technical demands of the organization and the social needs of staff need to be reconciled. The reward system should be reviewed so that pay increases are equitably distributed, and recognition is given to individuals who participate in courses, give presentations, or otherwise contribute to the goals of the organization.

New staff should be carefully selected. Not only are job qualifications important, but how well potential staff will work with existing staff and how they will fit into the community are equally important. When individuals are interviewed, they should be informed in detail about all aspects of the job, so they can judge whether or not the job will meet their expectations.

CONCLUSIONS

The turnover process is not fully understood, but library managers should not feel captive to a high turnover rate. A strong commitment to reducing turn-

over through innovative management techniques has proven effective in other industries, so there is no reason why turnover cannot be reduced in academic libraries.

The key to success will be designing a program firmly grounded in an understanding of staff and their needs. Managers must be prepared to be creative. This may include part-time employment, flex time, nine month contracts, sabbatical leaves, release time, shared public and technical service jobs, and staff exchanges between departments. It may also include more radical techniques such as rotating department heads to bring fresh ideas into the management level.

Managers must recognize the need professionals have for self-expression and growth. They must also understand that values will vary from one individual to another. It is important to recognize that what satisfies one staff member may not satisfy another. A program that works today may not work tomorrow, so constant review and staff input is necessary to maintain an effective turnover reduction program.

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THE STATE OF PRESERVATION AND MICROFILMING AND ITS IMPLICATIONS[1]

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ABSTRACT

Librarians have been aware of the deteriorating nature of library materials for many years, but preservation programs have begun only recently. Brittle paper dates from about 1860 when wood pulp came to be used as the base of paper production, using acid in its processing, which contributed to deterioration in less than 70 years. Preservation should include works of great value, heavily circulated materials, and literature that provides the future with an understanding of the self. Microfilming is one alternative, but it is essential to achieve greater accessibility, to follow standards, to practice cooperation with other institutions, and to report the location of the master negative. Future technology consists of mass deacidification and optical disk technology, both in the experimental stages.

The realization that library materials are deteriorating has been apparent for many years; nevertheless, preservation programs

[1]The information contained in this article was derived from notes taken by the author at lectures presented at the following: (1) The Preservation Microfilming Institute at the Library of Congress, March 6-7, 1986; (2) the Margaret Byrnes Lecture series presented at the University of Nebraska-Lincoln, April 24-25, 1986, sponsored by the Love Library Academic Activities Committee; and (3) the Nancy Eaton Lecture on Optical Disk Technology presented at the University of Nebraska-Lincoln on April 23, 1986.

are a recent event. While microfilm laboratories date back to 1938, formal preservation programs appeared only around 1974. It was 1938 that microfilming laboratories were first set up at the University of Michigan, as well as the New York Public Library and Columbia. At Michigan, the microfilming unit was placed in the library by University Microforms. There were no photocopy machines in those days. Then, in the late 1950's and 1960's, photocopy machines came to displace as a duplicating medium microfilm, with microfilm relegated mostly to filming business records. At Michigan, the library microfilm unit did work mostly for business as well as filming pathology records. Meanwhile, the first preservation program was set up at the Newberry Library in Chicago in 1974, with subsequent programs begun at the Library of Congress and at Yale. Michigan began its preservation program in 1981, and in the last five years they have mushroomed across the country.

This concern for preservation has come at a time of awareness and alarm concerning the longevity of many library materials. Early paper, produced before 1860 or so was made from cellulose fibers which came from old rags; however, in the 19th century, the need to mass produce paper with greater speed caused manufacturers to turn to wood pulp as the base for paper production, a process which uses acid in its creation, the acid ultimately causing deterioration. In fact, alum-rosin sizing, ground-water pulp, and environmental stress all contribute to brittle paper. Alum is aluminum sulfate, which breaks up into its component parts under warm conditions, causing paper to become brittle.

Environmental factors include heat and humidity conditions, water leakage, which produces mold, insect damage, and dust, all contributing to accelerated deterioration of paper.

Paper of reasonably high quality remains strong for about 20 years; it is moderately strong to weak from about 30 years old to about 120 years old, then is brittle from about 160 years old to 260 years of age and older. Untreated paper of reasonably good quality has a life expectancy of about 70 years, while lower quality paper can become embrittled in thirty years or less. Some Latin American literature from the 1950's is in danger presently.

The most comprehensive survey ever conducted concerning the condition of a library collection was carried out at Yale University in the early 1980's and published in College and Research Libraries in March 1985. This study concluded that 12.8% of the 7 million volume collection is in need of immediate treatment, 8.1% has broken binding, 37.1% are in an embrittled state, and, most ominous, 82.6% of the total collection is printed on acidic paper capable of future deterioration.[2] In another survey, Stanford University discovered that 26% of its collection is embrittled, a lower percentage figure due to the younger average age of the collection. It is estimated that 75 million volumes in the ARL Libraries are presently at risk with more moving into that category with the passage of time. There is a good chance that about 30%

[2] Gay Walker, Jane Greenfield, John Fox, and Jeffrey S. Simonoff, "The Yale Survey: A Large-Scale Study of Book Deterioration in the Yale University Library," College & Research Libraries 46 (1985): 111-132.

of the University of Nebraska Library's 2 million volumes in Lincoln are in danger, as many as 600,000 volumes. Even more alarming is the approximately 75% of the collection printed on acidic paper, a situation which could render a better part of the holdings unuseable in the next 50 years. Certainly a problem exists.

Faced with this overwhelming situation and the fact that only a small percentage of any collection can probably be saved due to time and monetary constraints, several issues must be addressed.

The decisions on preservation should be made in coordination with the collection development officers but often have not been done as a rule in the past. Not everything need be preserved forever, but there is no consensus on what need not be preserved, no selection decision making. The decision criteria involved center around the following questions: (a) what needs preservation?; (b) what should be preserved?; (c) what modes of preservation are possible?; and (d) what modes should be used? In other words, one set of issues is technical: the needs and possible means; the other issues are critical: what should be preserved and what methods should be used. Of course, the mode of preservation and microfilming is dictated by what is possible and at what cost. For example, if restoration is deemed the only alternative, and if the cost is greater than the worth of the book, then there is no alternative.

Certain library materials should be and are preserved, according to Ross W. Atkinson of the University of Iowa. Class 1 Preservation. This group is made up of rare books of high

economic or capital value, as opposed to high research value. These are relatively easy decision, and the mode of preservation is restoration. Individual pieces are preserved for the integrity of the whole collection. The macro-decisions involve the degree of deterioration versus the capital value. The decisions involving rare materials are a local one, unique to an individual library, and do not necessarily involve economic cooperation as an option.

Class 2 Preservation. This group comprises high use items for curriculum purposes or overused materials. Here, use patterns are noted, using Thrueswell and other studies, involving the date of publication and the date of last circulation. Bibliographers have the most say in the preservation of this core collection, in tandem with circulation and reserve status statistics. These are relatively easy decisions involving local values and needs with selection made on an item-by-item basis. Replacement is often sought, with microforms employed only when appropriateness is called for.

Class 3 Preservation. These decisions, involving lower use items of possible value in future research, are more problematic. Here, local needs are not the principal motivation. Instead, one preserves so that the future will be provided with an understanding of the self. Selection is made on present values involving ethica and epistemological considerations. Some trash should be also preserved. Microfilm or the equivalent is the main mode of preservation. The complexity and magnitude of this area dictates that cooperative projects be instituted. The problem is that Class 3

Preservation has no uniform set of values, with no system for planned deterioration or weeding, and a lack of a general strategy or coordination among libraries. Especially, there is a reluctance to abandon the principles of current collection building, which is that the most rapidly deteriorating materials receive the greatest attention. However, Class 3 Preservation is essential because the values of a library demand it.

Before embarking upon a preservation program, an institution or organization should consider several issues.

(1) Whether to be involved in preservation and microfilming at all. Scholars of the future should have a representative documentation of materials, but the cost and effort involved must be considered. If preservation on a local effort is not found to be economically feasible, then a program of cooperation with other institutions and interlibrary Loan might be considered. In any event, a collaborative effort is essential, with adherence to standards and the proper notification of the master negative to pertinent databases such as OCLC and RLIN. Above all, access must be enhanced to justify preservation costs and efforts.

(2) Whether to undertake in-house microfilming or to contract out these services. One should consider contracting out such services unless an in-house operation is in place with qualified personnel and sufficient business to meet break-even costs. Some contract costs might be reduced if the contractor retains the master negatives; however, a

library should never contract out the selection of materials, because it can get back materials not suitable to be accessed by film. In any event, preservation and microfilming is a labor intensive process requiring much equipment and bibliographic tools.

(3) Whether the collection in question is suitable for microfilming. If the collection is too brittle or contains colored plates or its worth is considerably less than the cost of filming, then alternatives, such as boxing and restricting of use, should be considered.

(4) In any event, a systematic approach to preservation and microfilming is essential. Specifically, there should be a search for copies that can be obtained or purchased elsewhere and for the possible location of a master negative. This is important in order to avoid duplication of work and because it is 5 to 8 times less expensive to copy from an existing master than it is to create an original from scratch. For this reason, it is essential that an effective clearinghouse be maintained to facilitate the location and use of master negatives and cooperative microfilming in general. A preservation strategy must also permit the indefinite expansion of materials.

(5) Preservation must be politically acceptable with user resistance to microforms overcome. One issue is whether the costs of preservation and microfilming should come out of the acquisitions budget or whether a separate fund should be administered. There will always be pressure to purchase

new books and periodicals and to purchase the back files of periodicals. Unfortunately, many look upon preservation and microfilming as purchasing the same thing twice, only the second time it is dated. Preservation must capture the attention and interest of the "powers-that-be" to ensure funding and support.

(6) Finally, new technologies must be identified and analyzed. This requires constant research in that new preservation processes and strategies are emerging in rapid succession.

After a decision to microfilm library materials is made, much attention to planning and administrative concerns is necessary. Such issues as the mechanics of the workflow, the preparation of materials, adherence to standards, especially in the creation of targets, access to storage, and costs must be dealt with.

One must select the staff to do the work, including a supervisor to organize the workflow, schedules, catalog entries, bibliographies, descriptive notes, and draft filing instructions. It is also necessary to hire a full-time microfilm camera operator, who is experienced and well trained. In the pre-filming stages, one must produce camera ready materials, requiring collation of pages to ensure order. Bound volumes may be unreadable on microfilm and may ve to be rearranged. Notations on the copy for missing pages and space for later splicing, plus repairs to torn pages can be made in preparation. The spines of materials might be cut for microfilming to produce a better copy if the books are to be discarded afterward.

If one fails to adhere to standards, one is doing a disservice to themselves and possibly greater expenses in the long run. After all, the items may not exist later on. Standards on filming equipment, storage, training of staff, costs, and catastrophe planning have been set down by the American National Standards Institute, the Association of Image Management, the Superintendent of Documents, and the Canadian Government Publications Center.

Negative camera film stock comes in 100 foot rolls. One should use as much of the roll as possible by examining the size of the original volume and determining the appropriate reduction ratio for maximum spacing on a roll. For a monograph, one should strive for one title per reel or less than 100 pages per reel. For serials, one should use as much of the 100 feet as possible, while ending a roll with the end of a volume. Never end a roll in the middle of an issue, if possible. For newspapers, film all issues on one reel, if possible, in uniform, chronological units. For maps and photographs, film as many on a reel as possible, but identify the groupings by targets.

Targets are essential, a document containing information on technical and bibliographic control. There should be test targets (indicating resolution and density), title targets (reel number, dates, identifiers which can be read with the naked eye), bibliographic targets (contents and history of the publication, printing errors, and catalog cards), and collation targets (document discrepancies and printing problems), all of which

should be prepared in advance and filmed in the order that they appear on the frame.

The best film stock for microfilming purposes is 35mm, wet processed, silver halide film, because more is known about its quality and durability. At Love Library, Archivist Joe Svoboda creates a master negative from which he has copies made on diazo film, the other standard film stock available for microfilming. Joe uses diazo film because it is cheaper, and he can always make another copy later on silver halide if requested. Diazo is less preferable than silver halide in that it scratches easily and has been known to fade even in the dark. Also, it is more difficult to get funding for microfilming if copies are made on non-silver film, according to Margaret Byrnes.

After the camera negative image is produced, it must be tested no later than 14 days or so to determine if the residue falls within acceptable limits, to determine resolution, detail, image density, the amount of light absorbed, all of which impinge upon the quality of the copies to be produced. A microscope must be used. The filming may have to be redone if the resolution density results are not acceptable. If there are too many splices, refilming is also necessitated. The master negative, of course, must be preserved and properly stored, apart from the positive copies for security reasons, for use in making further copies. There are standards for the storage of film and master negatives, preferably in a windowless enclosure with non-rusting shelves, dust free, and a controlled climate set at 65°F and 40% relative humidity. There

should be acid-free wrappers and no rubber bands used. Proper security and fire control should be exercised.

After the master negative is created, its presence and location should be reported to the National Register of Microfilm Masters, Newspapers in Microform, Microfilms in Print, RLIN and/or OCLC databases and elsewhere, to ensure that there is no duplication of effort between libraries.

The costs of contracting out microfilming services have several variables, including labor, contracting out services, and the difficulty of handling and filming. There is little hard data that has been published; however, costs have been put into certain ranges by the ARL. The cost per monograph is estimated at $40 to $70, with the mean around $45. The cost per 300 page volume is around $50, with 30% to 50% of this cost coming from expenses other than filming. As such, it is essential to keep the operation simple and precise since prefilming costs are high to begin with. On average, the actual filming costs about $23, while making copies is around $10 per copy.

Alternative costs are as follows: (1) If one boxes the brittle book and restricts use, the cost is around $5 to $10. (2) A reprint purchase, if available, is around $20 to $50. (3) Photocopying is around $15 to $40. (4) Microfilming is around $30 to $60.

If properly produced, stored, and cared for, microfilm should survive as long as alkaline paper, which is 350 to 500 years.

Most important, one should remember that microfilming is not xeroxing; rather, it is microreproductions produced, with all the problems thereof.

At present, several research groups or consortia of libraries have undertaken preservation and microfilming projects, including the University of Nebraska-Lincoln Libraries.

(1) The American Philological Association has undertaken to preserve on microfiche the classical studies published between 1870 and 1910, a core literature and bibliography in the classics, the most attractive titles from this period to disseminate to smaller libraries. What is sought is preservation and availability, a sense of ownership. The editorial board of consultant scholars worked separately at different libraries, with all the disagreements and need for compromise that this entailed.

(2) The Canadian Institute for Historical Microreproductions has pursued a goal of putting the entire national literature of Canada on microfiche to remedy the problem of crumbling and dispersed collections. This is a cooperative microfilming project which must rely upon many libraries for lending resources. The first materials converted to microfiche were pre-1900 monographs, followed by pre-1900 serials, with microfiche collections having been sold to about 30 different institutions.

(3) The University of Michigan Preservation Program under Margaret Byrnes, a recent visitor to the University of Nebraska-Lincoln Libraries, was begun in 1981 and has filmed about 2500 volumes per year at a cost of about $45 per volume. There is a regular review of books returned from circulation for brittle books; however, there is a reluctance to withdraw these brittle books from the collection after microfilming.

(4) The National Archives National Historical Publications and Records Commission has undertaken the preservation of historical photographs, as well as publishing the papers of notable Americans. The photograph project is funded at $2 million a year, using a Scanatron camera.

(5) The Research Libraries Group Cooperative Microfilm Project has undertaken to preserve materials from the 1876 to 1900 time period concerning the cultural heritage of the U.S. The preservation committee divided the project among 7 institutions, with each institution taking a stated area, such as poetry (Brown University), the social sciences, English literature, and the American West.

(6) The National Endowment for the Humanities Office of Preservation made a grant to preserve the contents of newspapers. Previously, newspapers have been dealt with on a state-by-state basis. This project sought to develop a comprehensive newspaper database for about 300,000 titles with a holdings record, an N.U.C. for newspapers.

(7) The University of Nebraska Libraries in Lincoln have undertaken several microfilming projects since acquiring their MRD2 microfilming unit in 1971. The Daily Nebraskan backfiles from 1871 to 1971 were converted to microfilm, and current backfiles are filmed periodically. The original paper copies from 1871 to around 1900 were retained after filming because the paper quality is more durable; the later originals were discarded. Current paper copies are retained

for 10 years after filming, bundled and stored, then discarded.

Another on-going project is the filming of the Czech newspapers published outside Czechoslovakia, a cooperative project with the Center for Research Libraries and the University of Chicago. Other projects include the filming of the Bessey papers, primarily correspondences, and the filming of the state weather reports of Nebraska. Only about 6 books have been microfilmed, on specific request, those published around the late 1800's on acidic paper.

These materials are filmed, with the master negative being stored at the State Historical Society Library and copies on diazo film being retained at Love Library.

In past years, there had been no push for conservation or retrospective preservation in the University of Nebraska Libraries. instead, funds had been limited to the acquisitions of new books and periodical subscriptions, and for the purchase of periodical backfiles. However, people were not unaware of deterioration and the need for preservation. Conservation efforts consisted of mending pages, some in-house binding, tipping in of leaves, and wrapping books in jackets. Some materials were bound by means of 'clete' binding, a process in which the binding is sawed through, laced up, and glued, thereby losing considerable margin. This method has been discontinued due to a philosophy that says, "Never do anything that cannot be reversed."

The installation of a humidity, air conditioning, and climate control system in the Love Library Archives was dropped in the planning stages due to an estimated cost of $250,000. Environ-

mental conditions in the Archives were tes d in 1979, revealing a mean temperature of 75°F (the ideal temperature should be 60° to 65°F), and an average humidity level of 35% (the ideal level for paper and leather is 50%). Paper acidity levels for much of the archival collection at Love Library Archives were found to be "dangerously high."[3]

In the last three years, however, several changes in policies and emphasis have occurred to foster preservation. When the Binding Department was transferred into Serials, a new binding contract was written, new binding techniques sought, and commercial binding was employed to save money and to achieve better quality whenever possible. Other activities included the formation of a preservation committee, inviting Margaret Byrnes to speak and consult, sending the Head of Binding to a preservation conference at Stanford University, instituting a brittle books shelf as a forum for deciding the fate of deteriorating materials, purchasing special ink to mark and label materials, which does not damage paper, and special glue recommended by preservationists, the use of alkaline paper and materials for inserting leaves and in-house binding, and employing plastic paper clips. More money has been allocated for binding. Still to be done are disaster planning, stacks cleaning, and the monitoring of environmental conditions. Requests for funding from the administration and grants have

[3]Fortson-Jones, Judith. Statement on Conservation as Related to the Love Library Archives, University of Nebraska-Lincoln Libraries, 6 November 1979. Love Library Archives Annual Report 1979-80, Appendix 1.

increased as well.

Two technologies are on the horizon which may alleviate some of the preservation crises over the next 10 to 15 years. These processes are presently being tested at the Library of Congress and in industry.

(1) Mass Deacidification with DEZ is an attempt to treat materials printed on acidic paper en masse. DEZ diffuses into acidic paper to produce an alkaline compound through the following process: Dehydration removes the water from the books; Permeation allows the DEZ vapors to neutralize the acid in the paper and reacts with the water in the paper to form zinc oxide; Passivation is the introduction of CO_2 and water in the paper to form zinc carbonate alkaline reserve; Finally, partial restoration of the water content. The Library of Congress is experimenting with this process at Goddard Space Center, and hopes to build a facility by 1988 which can eventually process 1 million volumes per year by 1992, at an eventual cost per book of $1.68. The Library of Congress will then, perhaps, license the technology free of charge to companies that have the capital and willingness to operate it.

However, it is important to remember that deacidification merely extends the life of paper by a multiple of about 5 times, which can leave a short life expectancy for a book already embrittled. Hence, deacidification has the greatest benefit for strong paper and relatively little

benefit for brittle paper.

(2) Optical Disk Technology is presently being tested and perfected at the Library of Congress and by hardware manufacturers and publishers. Unfortunately, there is little involvement or representation on the part of users so far. There are 6 major categories of optical disk technology, with the 2 most likely and popular applications with publishers and LC being videodisk and CD-ROM (Compact Disk-Read Only Memory). CD-ROM is likely to become the major player, with growing applications just in the past year. For example, Silver Platter, a middleman between libraries and producers, will have 6 databases available by June, charging a flat fee with unlimited searching capabilities. There will also be internal applications to libraries and reference sources, with old information being converted to CD-ROM. Bowker, for example, is proposing putting Books in Print on CD-ROM, as is Brodart its catalog, Grolier its Academic American Encyclopedia, and H.W. Wilson its Reader's Guide and other bibliographies.

CD-ROM holds the equivalent of 1500 floppy disks or about 100,000 pages of text. It is digital, and has been produced overseas until this year, a fact that has probably slowed down its applications in this country. Unfortunately, Nancy Eaton, Dean of Libraries at the University of Vermont, and an expert on optical disk technology, believes it will be more costly than conventional sources,

irrespective of what others maintain. Mass application of this is probably 3 to 5 years off.

In conclusion, the decades of the 1980's and 1990's will be a time of experimentation with, and concern for, preservation, as libraries race against time to save materials approaching the upper bounds of their longevity. As new technologies and alternatives emerge, libraries will be faced with even greater choices and dilemmas concerning collection management, costs, and future research needs. These dilemmas make for a time of reflection and compromise on a national level.

INADVERTENT PERSONALIZED REFERENCE SERVICE

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ABSTRACT

During the course of a computer search interview, the search intermediary may discover that the patron does not in fact need a computer search at all, that the print indexes are either sufficient or more efficient. This paper analyzes the implications of this not-so-innocent shift from computer to print resources in terms of traditional reference desk service, staff time, socioeconomic factors, and enduser searching trade-offs.

I have been involved with on-line searching for eight years, and Paul has for about three. For the past two years we have worked together, and have recently discovered that we have had a common experience more and more frequently. We would like to describe that experience in the hope that it may be familiar to others of you; and then to share what we feel are the reasons this situation arises, and to suggest certain implications for reference services as well.

A patron has scheduled a computer search with me. (We don't yet have a developed end user system.) The patron comes to my office for the pre-search interview. During this

interview I discover that the patron does not "need" a computer search. This may be for a number of reasons, which frequently include:

1. The print indexes are perfectly adequate for the topic. This is especially true where the topic can be defined without resorting to Boolean logic; i.e., the topic is one-dimensional.
2. The patron has an incorrect or exaggerated conception of what a computer search is. Having heard of a revolutionary new information delivery system that is machine-based, the patron naturally assumes computer search to be more powerful than any assistance that can be rendered by a mere human.
3. The patron has little understanding of how data bases, or some specific data base, is compiled; of the access points which that data base offers and those which it lacks; and of the parallel access points that some printed index may offer.
4. The patron believes that the computer will deliver the full record into his hands--while technically possible with many databases, this is prohibitively expensive for most patrons.

At this point, I usually attempt to persuade the patron that she should not do a computer search. To merely state this to a patron -- "You don't need a search. Go over to the Reference Desk." -- is too abrupt. What I (and probably most

searchers do) is attempt to convince the patron that a computer search is only one possibility and in her case not the best one. So, I take the patron over to the reference department and show her the appropriate print indexes. For example, the patron needs ten good citations on the Montessori method of education for an educational psychology class. I conduct the patron on a guided tour of Education Index, ERIC, and Psychological Abstracts. Next, I walk the patron over to the subject catalog and show her the variety of books under the heading "Montessori method of education." The patron is convinced, perhaps overwhelmed, by the abundance of material and by its free availability. Thereupon, she goes to work, abandoning the idea of a computer search.

It is important to look closely at the motivation of the librarian called upon to do the search -- myself -- at this point and how it differs from that of a traditional reference desk librarian, who may at some other time of the day also be myself. For many librarians will in the course of working day wear both hats, that of reference desk staff and that of computer searcher. In the situation where I believe print resources are preferable, my motivation with the patron is generally dual: to assist with the research problem and to persuade (that a computer search is not necessary). That is, a rhetorical dimension, persuasion, has been added to the encounter. The motivation of a reference desk librarian may be exceedingly complex but primarily it is to assist with the

research problem, to guide the patron to the information or the means to the information. Persuasion may be present in some reference desk interviews ("you ought to use this index rather than that index") but rarely is it as overt as when the intermediary believes a computer search is not appropriate.

What is the result of the dual motivation of the librarian leading a computer search patron through the reference collection? Here I'm going to make an assumption. I'm going to assume that the assistance I give the patron in this situation is more thorough than the assistance generally given by a reference desk librarian.

Her are some reasons why I make that statement.

First, because I am attempting to persuade the patron that the print resources are adequate or on occasion better than those available through the online databases, I will be more thorough in my explanation of the print indexes. Rather than pointing out only the location of the Education Index and Psychological Abstracts, I will tend to find the pertinent citations in those indexes in order to demonstrate the relevance of the printed index method. If I sense that the patron is not yet convinced, I may break out a few more specialized indexes or walk the patron through the Subject Catalog, pointing out those books on the topic containing bibliographies. This kind of personalized reference service, taking from fifteen minutes to as much as an hour, is rarely given at the reference desk and only on those occasions when the Reference Desk is experiencing

slack time, allowing the staff to give extensive assistance. Ordinarily, reference desk staff do not page through the indexes for patrons. (It is, in fact, a policy of the UNL Reference/ Information Desk that staff may indicate appropriate sources but, because of time and staff limitations, they should not find the citations for the patrons.)

A second reason has nothing to do with motivation. The computer search patron has scheduled an appointment with me; I am not working at the reference desk; I am not working on anything at the moment; indeed, I have cleared my calendar for the patron. I am all hers. I can afford to be as thorough as I want with the patron. No one else at the moment is demanding my services. This "ideal" reference environment almost never obtains at the reference desk. Desk staff are typically answering ten questions a half hour, not one. Under those circumstances, desk staff tend to answer reference questions as thoroughly as they can, but always realizing that if they leave the desk for any length of time, the desk may be clogged with patrons on their return.

The third reason has to do with the mechanics of most online search services. At UNL, patrons desiring a computer search are referred to the librarian with subject expertise in the area of their research. Someone wanting a search done on the banding of birds will be referred to the Biology Librarian. If the Biology Librarian decides that a search is not necessary, he or she can still provide expert assistance through the print

indexes. But should a patron come to me, for instance, at the Reference Desk and ask for information on banding birds, the assistance I render will be considerably less informed than that of the Biology Librarian. Patrons, in effect, take "potluck" when they approach a reference desk. They entrust their research topic to librarians of widely differing backgrounds; the assistance they receive is not uniform from librarian to librarian.

A fourth reason is that I am "poised" for the search in most cases. Computer search is still new enough even to us that I have a sense that I need to be "at my best." Normally we will be charging a fee, and I will be determined to do an efficient job. If the topic is new to me, I may have done some preliminary manual searching in advance of the patron's arrival. In both the intellectual and the psychological sense, I have in effect reserved an hour of "my best time" for this person.

Thus, for these four reasons, we have assumed that the patron in the situation we are describing will get better reference service than she would have received at the reference desk. As the librarian serving her, I have a persuasive motivation, am not distracted by other duties, often possess the necessary subject expertise to make my assistance valuable, and am intellectually and psychologically prepared to give my best service.

Of course, the patron, presented with what the reference librarian considers overwhelming evidence that the print indexes

are superior for this topic, may still ask for a computer search. She may do so because she does not want to take the time to look through the print indexes or because she is curious as to the nature of a computer search, or for other valid reasons. At this point, the librarian should probably acquiesce and do the search, if schedule permits. It's the patron's money. Of course, the librarian may be a little irritated that after giving up a half hour or even an hour of good service, he still has to do a search. This is known as the "Okay,-you-want-a-search?-By-God,-I'll-give-you-a-search" syndrome.

But let's get back to the shift from computer to print resources and the resulting reference service that results. There is nothing "wrong" with this situation as I have described it. A patron wishing one kind of reference service has been given another kind, a more appropriate kind. Among other things, the above situation validates the necessity of the pre-search interview as affording a "filtering system," a way of ensuring that computer searching is not done indiscriminately.

Nevertheless, there are implications of this shift. Remember we have assumed that patrons being led through the reference collection by a librarian seeking to persuade them not to do a computer search are somehow getting more thorough reference service than had they approached the reference desk in the traditional manner. These patrons are receiving "inadvertent personalized reference service." Their research topics are no more complex than many heard at the reference

desk, yet they are treated more extensively. These patrons probably ought to have approached the reference desk to begin with, had no need to schedule an appointment with the librarian for a computer search. But as a consequence of this "mistake," a mistake for which no forgiveness is necessary, personalized reference service results, while other patrons, who have chosen the "right" method of having their questions answered, i.e., approach the Reference Desk, have also chosen the likelihood of standing in a cue and receiving their information from a staff member who may be under a great deal of pressu e. Error is rewarded.

(A note: I have not noticed abuses of this inadvertent yet institutionalized personalized reference service. Patr ns who have benefited from such service do not seem to repeat the practice. That is, they do not continually schedule computer searches, no matter what the topic, in the hope that the librarian will continue to give them superior service. Of course, there is nothing to stop them from doing this. The system encourages it. What tends to happen instead is that the patron, having originally received superior service, returns a second time (even if weeks or months later) to the same librarian to have the next information need "analyzed." Sometimes the second or third topic does culminate in a computer search--but now on a mutually better-informed basis. I submit that the level of interchange between librarian and patron has thereby been heightened; the professionalism of our work has

been subtly emphasized; and the patron has been led to a greater awareness of the value of information and of those who help provide it.

Libraries which argue that their staff is too busy to provide personalized reference service, the kind of "one-on-one" service which has received considerable attention lately in the literature, should realize that their searchers are probably providing that service, inadvertently, to a fair number of patrons. Champlin alludes to the special attention and private consultations, frequently lasting an hour or more, which help verify the need for an online search as opposed to the use of traditional printed sources.[1] I have no reliable statistics on the matter, but I would estimate that approximately one in five of the potential searches referred to me never get beyond the Reference Collection. After lengthy consultation, the patrons abandoned the idea of a computer search and used the print indexes instead.

There is a socioeconomic factor involved, too, in this shift from computer to print resources. The persons receiving this inadvertent personalized reference service tend to be those persons who felt they could afford a computer search in the first place. Otherwise, they would not have scheduled an interview to begin with. Thus, if inadvertently, searchers are

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[1] Peggy Champlin, "The Online Search: Some Perils and Pitfalls," p. 213.

giving personalized reference service to patrons whose topics are no more complex than those heard at the Reference Desk, the situation becomes compounded when this same kind of personalized reference service tends to be given to those who can afford a computer search. In any library with fee-based services, socioeconomic "injustices" can be argued. At UNL, some students are deterred from computer searching because of the cost. Some faculty may be deterred from searching because of the limits of their computer searching subsidy. But patrons' rights to use those resources of the library which have no fee attached -- such as public reference service -- should not be impinged by their economic status, nor should the service given them be upgraded or downgraded on the basis of their ability to pay. Yet, in this situation, again inadvertently and not through conscious class choices, a group of people tend to get better personalized reference service than others.

Another consequence arising out of this shift from computer to print resources speaks to the phenomenon of end user searching. For it is the nature of end user searching that patrons proceed in their searches without the direct assistance of an intermediary. In situations where end users do their searches without any interface with librarians before the search, many of these end users may be doing searches that could have been done just as easily with the print indexes -- for free. The "filtering system" we have referred to earlier is gone, and searching is done indiscriminately. It may no in

the best interest of the library's use of resources to have searching done this way, especially if the end user system in place is popular and heavily used.

Thus, libraries with computer search systems have a dilemma. If they continue to use intermediaries to do those searches, some of the time spent by those intermediaries will be on personalized reference service for patrons who never needed a search in the first place, an inevitable service and an appropriate one but with consequences, as we have described. If those same libraries go over to an end user system with no chance for librarians to consult with the user, then patrons may never learn of print indexes that in some cases will do a better and cheaper job of researching the topic.

Libraries should be sure that in whatever means they use to publicize their computer search services they do so accurately and realistically. If demonstrations of computer searching are done to groups, then the limits of searching should be stated as clearly as the advantages.

CITED REFERENCE

Champlin, Peggy. "The Online Search: Some Perils and Pitfalls." RQ 25, no. 2 (Winter 1985), pp. 213-217.

LIBRARIANS AND COLLECTIVE BARGAINING AT UNO

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University Library

University of Nebraska at Omaha

Omaha, Nebraska

ABSTRACT

This panel focused on the efforts of the UNO Library Faculty t raise their salaries through the AAUP. Included were approach take he proposal submitted and recent outcome from the 1985/86 collect: bargaining prccess.

ONLINE SEARCHING IN TIMES OF RETRENCHMENT

AN INFORMAL SURVEY OF REGIONAL ACADEMIC LIBRARIES

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Love Library

University of Nebraska-Lincoln

Lincoln, Nebraska

ABSTRACT

During periods of budgetary hardship, do computer searches take a back seat to more "basic" services or do they move to the forefront as a source of potential revenue? Academic libraries at ten large state universities in the Great Plains region were surveyed informally by telephone. Background information on the size, scope and administration of online services was gathered. The effects, if any, of shrinking resources or budget cuts on these services was determined. While the volume and types of services varied somewhat, most libraries reported that economic hard times had produced no impact on their online services.

When the theme for this Spring Meeting was announced, it seemed to present a good opportunity to contact and compare notes with other online services coordinators in the region. My objectives in this

project were three-fold: first, to discover how similar libraries organized and administered their services; second, to confirm an impression that the University of Nebraska-Lincoln supports a higher volume of intermediated searching than many of our peer institutions, and third, to see whether an environment of shrinking resources and tighter budgets was having any effect on libraries' provision of online search services. Today's presentation will summarize some of the highlights of these interviews.

METHOD

The survey population consisted of ten publicly supported university libraries in the Great Plains region. These institutions, including all the Big Eight schools, were chosen because of their proximity to Nebraska and a certain commonality of mission. There is no intention to imply, however, that their programs are identical in size or quality, or that services should be expected to be exactly comparable. Appendix A includes a list of the participating libraries and the contact person for computer search in each location.

Information was gathered through a telephone survey during the months of March and April 1986. Each

interview began with a standard list of questions, but was allowed to vary with the interests and circumstances of the respondent. The structure was informal and reciprocal, with the interviewer sometimes sharing Nebraska data and policies as the respondents shared theirs. This project was not an attempt at scientific survey research, but rather an exercise in preliminary information gathering. The statistics quoted by respondents sometimes represented off-the-cuff estimates, and libraries do not all keep the same kind of measures of online searching. Because of these two factors, quantitative comparisons and analysis will be kept to a minimum.

Five main topics were covered in the phone interviews: 1) organization and administration of online services; 2) size and scope of traditional intermediated search services; 3) size and scope of ready-reference searching; 4) involvement in end-user searching programs; and 5) effects of budgetary constraints on online services.

FINDINGS

1. Organization and Administration. The respondents were asked questions such as: How many librarians are involved in searching? In how many locations? Is

there a coordinator? What percentage of his/her time is spent in coordination? To whom do the searchers report? Who evaluates them?

All libraries but one have someone designated as an online coordinator. In the one exception, the head of reference assumes those duties. The individuals responsible for search coordination were evenly divided between men and women.

Five of the ten institutions place a major emphasis on the online coordination function--that is, the job consumes 50% or more of the coordinator's time. In the other five cases the coordinators spend only 5% to 10% of their time on this task.

The number of librarians performing online searches ranges from four to nineteen, and they are based in anywhere from one to six different departments. It is common to find coordinators working across departmental lines. It is rare for the coordinator to formally supervise or evaluate the searchers.

One interesting variation is reported at the University of Colorado. Their coordinator has just been re-titled Coordinator of Microcomputer Applications, and the advisory group which she chairs has been expanded to include both searching and other microcomputer concerns.

Intermediated Literature Searching.

The second group of questions concerned what is now thought of as "traditional" online searching. That is, the production of computer-generated bibliographies by a librarian, at the request of an individual, usually with some charge to the patron. Questions included: How many searches are done per year? What are the pricing mechanisms? Does the library subsidize any costs? If so, where does that funding come from?

All the libraries provide this kind of service. The number of search requests filled in a year (1984-1985) ranges from 400 or 500 (four schools report this level) to just over 2500 at the University of Nebraska-Lincoln. The second highest figure is 1234 for the University of Colorado. (Appendix B provides a view of the levels of searching activity in the ten libraries.)

Nebraska's ascendancy in this category is no doubt related to the fact that generous subsidies are provided for faculty searching. For several years, a portion of the indirect cost monies returned to the library has been put in a fund to subsidize faculty members and some other categories of searching. Each faculty member is limited to $75.00 per year, and doctoral candidates receive a one time $20.00 subsidy. Currently the fund stands at $16,000/year.

Only one other school in this population provided direct subsidies: Kansas State University grants its faculty $25.00/year and graduate students a one time $15.00 subsidy. KSU funds this subsidy program from the income generated by their photocopy machines.

Aside from these few subsidized categories, all the libraries charge the search patron for at least all direct costs (online database charges, telecommunications, and citation charges). Six libraries add on a service charge for all patrons, to cover miscellaneous costs such as training and searcher errors. These fees range from $2.00 to $6.00 per search or 15% of the direct costs. Half of the libraries add an additional service fee for off-campus clients in the business or corporate sector.

Ready-Reference Searching.

This category refers to the use of online systems such as Dialog or BRS at the reference desk to help answer routine reference questions. These are usually quick searches provided free of charge to the patron, and done at the discretion of the library staff. Common uses are verifying incomplete citations, covering for a volume of an index which is missing or at the bindery, finding information on very current events, and finding access points for use in the printed tools.

All of the respondents perform this kind of searching, although a few have started only recently and two libraries do very few because the searching equipment is too far from the reference desk. Firm statistics on this activity were not so readily available. Two hundred to three hundred searches a year is a typical estimate, but the University of Oklahoma reports over a thousand a year.

Expenses of $1,000 to $2,000 a year for ready reference searching are not unusual, and funding comes from a variety of sources. At Colorado State University it [illegible] of the reference book budget; at Iowa State [illegible] general acquisitions budget; at Nebraska and Kansas State from the regular search subsidy fund. Some of the respondents did not know exactly where the money came from--the expenses were just absorbed by the library along with other searching overhead.

Kansas State offers an unusual hybrid form of ready-reference searching, which accounts for their large numbers (1600 searches last year). The librarians use a BRS/After Dark account to provide brief subject searches (up to 2 databases and 25 citations) at the reference desk for only $1.00. They report that this service became so popular they had difficulty keeping up with requests. The experience

persuaded them that the time had come for end-user searching.

End-User Searching.

The University of Missouri and the University of Colorado each have a BRS/After Dark service in place at present. Kansas State and Iowa State plan to launch theirs by the fall of 1986; Colorado State is opening accounts with After Dark and Dialog's Knowledge Index, but only for staff to use at the reference desk in the evenings. One school expressed no interest in end-user searching, while the remaining four are studying and/or tentatively planning for it. Several libraries are involved in limited experiments, and others are providing workshops, counseling, or other assistance to active or potential end-users on campus.

In the two cases where After Dark is up and running, librarians are finding they need to require attendance at a training session. Too many students try to search with minimal instruction and waste their money. Those libraries which offer or will soon offer end-user services report that their chief motivation is to expand computer search access to a broader population. With the exception of the Kansas State situation mentioned earlier, the coordinators do not expect end-user services to reduce their overall work load. If anything, they expect to make a considerable

investment in staff training, user training, and administration of the service.

None of the responding libraries is able to provide end-user searching for free. Policies and plans for charges vary, but all institutions expect to have to recover at least a major portion of the direct costs of the service.

Budgetary Constraints.

The last issue covered in the interviews was that of shrinking financial resources. Coordinators were asked if university or library budget problems were having any effect on their ability to provide online search services. The response was nearly unanimous - a very cautious "well, not yet, knock on wood." Some said their libraries had been spared any serious budget problems. Others said even if cuts were to effect the library, online searching would continue unless there were really massive losses of personnel.

The most bleak financial scenarios came not from the farm states but from oil dependent Oklahoma. Both campuses in that state are bracing for budget cuts, but the search coordinators felt they would be able to proceed as usual with online services. Iowa State was going ahead with plans for a new end-user service, in spite of some serious concerns about the overall library budget.

Several respondents saw free ready reference searching as somewhat more vulnerable than other services. Where the library's operating or materials budget supports the service directly, retrenchment might take its toll. At the same time, however, some felt the relatively small amount of money committed to ready-reference searching would not make it worth the trouble of withdrawing a service highly valued by staff and patrons alike.

CONCLUSION

These inquiries seem to indicate that in times of retrenchment, online search services are cushioned from the immediate effects of budget shortfalls. This is not too surprising, considering the evolution of this function. In the early days, computer searching was seen as a somewhat exotic service, and the costs associated with it generally were not absorbed into either the materials budget or the operating budget of the library. Most academic search services have been forced to operate at a significant level of cost recovery. Therefore when budget cuts come through a few percentage points at a time, search services are able to continue to operate.

Some difficulties that do arise are staff

shortages due to lost positions or unfilled vacancies, lack of funds for the upgrading and maintenance of hardware and software, and less money available for off-site training sessions. Regarding hardware, almost all of the surveyed libraries now do their searching on microcomputers. In most cases the library benefits by having multi-purpose rather than single purpose equipment. In one case, however, the search service has always been compelled to pay for their own equipment and supplies; in that library other staff members are not encouraged to use the searching equipment for other applications.

Within the library field, there is a growing debate over the proposition that the traditional materials budget should become a materials and access budget, and that services like online searching should be provided without direct charges to the patrons. Among the librarians interviewed, feelings on this topic are mixed. While most coordinators would like to see the institution support a larger share of computer search costs, not all support the idea of using the materials budget for this purpose. Some have come to value the margin of independence provided by the fee-for-service system, and others believe it would be difficult to control the demand for service without at least some token financial investment on the part of

the patrons.

There is much less disagreement, however, over the purchase of searchable databases in a format such as optical disk. The librarians who addressed this issue looked forward to the time when heavily used databases might be made available on CD-ROM for local end-user searching. They were largely in agreement that this would be an appropriate item in the materials budget; they were not necessarily confident however, that their institutions would be able to afford these new subscription fees any time soon.

The desire to introduce new (and expensive) reference technologies, such as the popular Infotrack laser disk system or free online end-user searching, will inevitably come into conflict with the need to acquire and preserve traditional research materials. The competition for scarce resources can be expected to intensify as long as library budgets remain stable or shrink, while the cost of books, serials and other information formats rises.

It will be interesting to observe how different kinds of libraries make these choices. The findings of this survey hint at a somewhat curious correlation. Although the evidence is highly impressionistic, it seems that those libraries with the larger budgets and the more prestigious research collections put less

emphasis on online searching and new reference technologies than do their smaller, less affluent peers. Two of the smaller libraries, for instance, had been the first to install the Infotrack system. There could be many explanations for such a pattern, and speculation at this point would be unwise. With a larger population of libraries and more focused survey questions, however, this might be an issue worthy of further investigati

APPENDIX A

Contact People for Computer Search Services

University of Kansas
Barbara Jones, Watson Library
Lawrence, Kansas 66045-2800 (913) 864-3347

Kansas State University
Glenn Renelts, Farrell Library
Manhattan, Kansas 66506-7166 (913) 532-6516

University of Iowa
David Martin, University Libraries
Iowa City, Iowa 52242-1098 (319) 353-4056

Iowa State University
Gary Fouty, Parks Library
Ames, Iowa 50011 (515) 294-3542

University of Colorado
Ellen Robertson, University Libraries
Campus Box 184
Boulder, Colorado 80309 (303) 492-7521

Colorado State University
Barbara Burke, Morgan Library
Fort Collins, Colorado 80523 (303) 491-1869

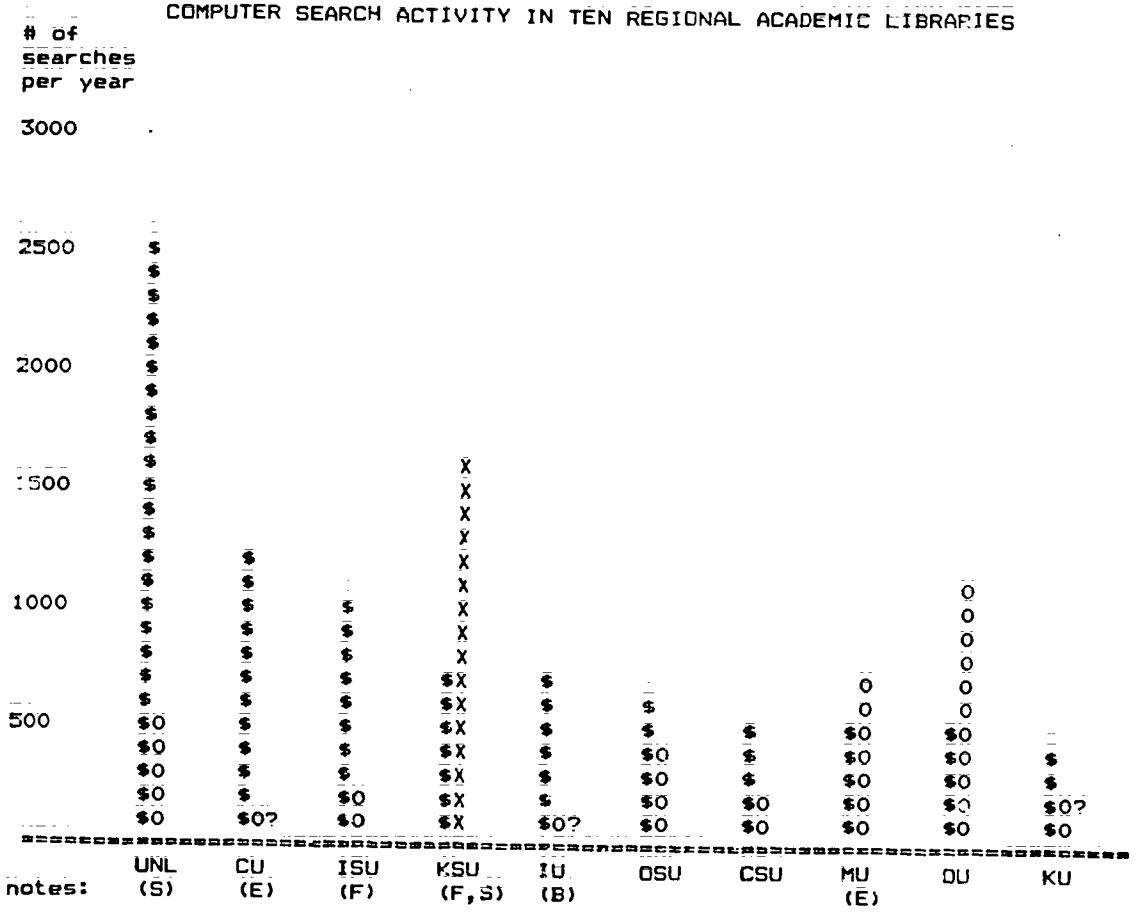
University of Oklahoma
Fred Batt, University Libraries
401 W. Brooks
Norman, Oklahoma 73019 (405) 325-4231

Oklahoma State University
Tim Balch, OSU Library
Stillwater, Oklahoma 74078 (405) 624-6313

University of Missouri-Columbia
Judy Pallardy, Ellis Library
Columbia, Missouri 65201-5149 (314) 882-4692

APPENDIX B

COMPUTER SEARCH ACTIVITY IN TEN REGIONAL ACADEMIC LIBRARIES



$ - Number of fee-based computer searches performed for individuals
O - Number of free ready-reference searches
X - Number of $1.00 ready-reference subject searches
B - Figures exclude large number of ERIC requests batch searched locally
E - End-user service in place now
F - End-user service expected by fall 1986
S - Fee-based searches are partially subsidized

PLEASE NOTE: THIS CHART IS PROVIDED FOR GENERAL COMPARISONS ONLY. MOST FIGURES REPRESENT THE 1984-85 FISCAL YEAR. SOME FIGURES ARE APPROXIMATIONS. ALL INSTITUTIONS DO NOT KEEP THE SAME STATISTICAL RECORDS.