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13. ABSTRACT

THIS VOLUME CONTAINS SYNOPSES OF ALL 1978 ARMY LIBRARY INSTITUTE SESSIONS AND FULL TRANSCRIPTS OF WORKING GROUP REPORTS, KEYNOTE ADDRESS, AND SELECTED PAPERS. IT COVERS A BROAD RANGE OF TOPICS IMPORTANT TO PROFESSIONAL LIBRARIANS, WITH EMPHASIS ON COMPUTER-BASED CIRCULATION CONTROL SYSTEMS, MANAGEMENT, GROUP DYNAMICS, AND THE ARMY LIBRARIAN CAREER PROGRAM.
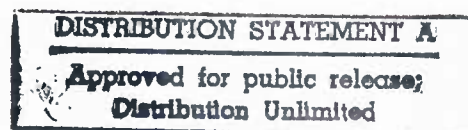
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Mr. Rosett FER
Dr. Mosier.

NEW DIRECTIONS

1978 ARMY LIBRARY INSTITUTE FORT BLISS, TEXAS
22-26 MAY 1978

A
REPORT
of the
PROCEEDINGS

78 10 25 033

THE

1978 ARMY LIBRARY INSTITUTE
22-26 MAY 1978,

WAS DEVELOPED AND ORGANIZED BY

HEADQUARTERS,
U. S. ARMY TRAINING AND DOCTRINE COMMAND
FORT MONROE, VIRGINIA

HOSTING INSTALLATION FOR TRADOC WAS
U. S. ARMY AIR DEFENSE CENTER
FORT BLISS, TEXAS

This report of the proceedings was synthesized from tapes
made during the Institute and from reports submitted by
Session Reporters who are identified in the Institute's
program. The report was compiled and edited by Louise
Nyce, Director, FORSCOM Library Program and Co-Coordinator
of the Institute, and Thomas A. Gallant, TRADOC Librarian
Career Program Intern.

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Contents:

INTRODUCTION

BACKGROUND

Over the past thirty years there have been great investments of material and manpower resources in meeting the library/information requirements of the Army community. The bewildering range of information resources and services required to effectively accomplish the Army's mission and the personal requirements of its individual members grow each year. At the same time it becomes increasingly difficult, in an environment of austere funding and spiraling inflation, to fiscally support this requirement.

Increased understanding of new techniques and technological advances, and more skilled and sensitive library management are imperative if Army libraries are to continue the essential supportive functions which they provide at all levels in the Army structure.

The 1978 ARMY LIBRARY INSTITUTE was one of several initiatives to insure that personnel who provide library/information services to the Army community are prepared to meet the challenges which face them.

PURPOSE/CONTENT

The 1978 ARMY LIBRARY INSTITUTE was an intensive five-day program to synthesize certain key managerial and professional skills and know-ledges to help participants improve their own performance. Evening sessions were scheduled to permit this 48-hour Institute to be completed in a single week.

The Institute was limited in content, allowing for more indepth coverage of specific subject areas. Emphasis was placed on systematic and practical approaches to managing which are applicable across type-library lines (i.e. Morale Support, Technical, School/Academic, Medical, Legal, and Special libraries). The Institute was structured to provide library managers the maximum opportunity to take advantage of their own experiences and that of their fellow participants. Participants had ample opportunity to exchange ideas about specific problem areas in their library environment. Most of the Institute time was spent in activities which could be directly related to the librarian's back home situation. Institute materials were presented through discussions, seminars, and workshops by resource personnel who are recognized for their knowledge in specific areas.

OBJECTIVES

While individual objectives varied from person to person, the following were the overall objectives for this Institute:

- To gain appreciation and awareness of current thinking in the functions of management, librarianship and information science.

- To encourage greater self-appraisal and self-development efforts.

- To explore some specific responsibilities of the library manager.

- To explore some new concepts about managerial/professional tasks which update or supplement former knowledge.

- To exchange ideas with librarians from various sectors of the Army, Department of Defense, and civilian communities.

FUNDING

Funding support was provided by the Office, Deputy Commanding General, The Adjutant General Center, Morale Support Directorate ($7,500).

REGISTRATION

One hundred and twenty two (122) registrations were received for the Institute, representing more than one-fourth of all librarian careerists registered world-wide in the Army Librarian Career Program. Registrants included participants from Alaska, Hawaii, and Panama, as well as an observer from the Eighth U.S. Army (Korea). Thirty-eight (38) additional registrants included librarians from various sectors of the Department of Defense community and civilian librarians from Texas and New Mexico. A complete list of registrants is provided as Appendix D.

THE PROGRAM

1978 ARMY LIBRARY INSTITUTE

22-26 MAY 1978   FORT BLISS, TEXAS

(Unless otherwise indicated, all sessions will be held at THE HILTON INN, the Institute headquarters motel.)

SUNDAY, 21 May 1978:

1500 - 1800:   REGISTRATION. Sky Room.

1800 - 2000:   ¡BIEN VENIDO AMIGOS! *No-host pre-institute get-together*. Skyriders Pool. Come and meet old friends and make new ones around the "ole swimmin' hole."

INTERFACE, 22-24 MAY 1978

This 3-day "Institute-within-an-Institute" offers participating librarians a chance to meet and interface with librarians from other sectors of the profession, a major goal of NEW DIRECTIONS 2. Professional growth and current awareness presupposes just this sort of contact. Recently we have been inundated by speeches and literature on cooperation and resource-sharing. Yet, the promise of these goals is not being realized, at least not as rapidly as they should. One fundamental reason for this is resistance to them at the grass-roots level. Giving the people most directly affected by these goals a chance to discuss them openly and honestly is a major step toward overcoming that resistance. The 1978 ARMY LIBRARY INSTITUTE, via INTERFACE, will enhance precisely that intimate level of communication and involvement among diverse sectors of the profession that is sorely needed if such worthwhile goals are to be reached and parochialism overcome. The organizers of NEW DIRECTIONS 2 have planned INTERFACE as an integral part of the week's training efforts, one we feel certain will greatly benefit Army librarians. They will have the much needed opportunity to interface with selected representatives from other DOD and federal agency libraries, the library associations of Texas, New Mexico, Oklahoma, Arizona and other key personnel from various sectors of the profession. We are certain these representatives will also find INTERFACE a valuable learning experience.

Please maximize this opportunity to its best advantage. It may well be a greater training achievement than courses or seminars in specific subject areas.

MONDAY, 22 May 1978:

0800 - 0900: REGISTRATION. Sky Room.

0900 - 0930: OPENING SESSION: Crystal Room.

> Introduction of Presiding Officer.....................Marie N. Lusk
> US Army Air Defense Center & Ft Bliss
> Fort Bliss, Texas
>
> Convening of Institute...............................Jane Bentley Cooney
> 1st Day Presiding Officer
> HQ US Army Missile Research & Development Command
> Redstone Arsenal, Alabama
>
> Welcome Remarks......................................MG J. J. Koehler, Jr.
> Commanding General
> US Army Air Defense Center & Ft Bliss
> Fort Bliss, Texas
>
> General Program Introduction.........................Raymond Y. Yamachika
> General Coordinator
> 1978 Army Library Institute
> HQ US Army Training & Doctrine Command
> Fort Monroe, Virginia

Introduction of Session 1...........................Jane Bentley Cooney

0930 - 1030: SESSION 1: Crystal Room.

COMPUTER-BASED CIRCULATION CONTROL SYSTEMS: A State-
of-the-Art Report.....................................Ralph M. Shoffner
Vice President
Ringgold Corporation
Ringgold Management Systems
Beaverton, Oregon

"For the past 10 years, more and more libraries have
been turning to automation to streamline all phases
of their operations. The decade also has been one of
accelerating improvements in available technology.
Nowhere has this been more evident than in that most
public of all library services: circulation. Here,
automation can dramatically reduce both the time, ef-
fort, and money required to run an efficient system."
                    Automated library circulation systems,
                    1977-78, by Paula Dranov. Knowledge
                    Industry Publications, Inc., c 1977.

1030 - 1045: Coffee Break. Skyriders Pool.

1045 - 1245: COMPUTER-BASED CIRCULATION CONTROL SYSTEMS: A Reaction
Panel:

Panelist:

Richard W. Boss
University Librarian
Princeton University Library
Princeton, New Jersey

Charles Goldstein
Chief, Computer Technology Br
Lister Hill National Center
   for Biomedical Communication
National Library of Medicine
Bethesda, Maryland

David Earl Holt
Director
Austin Public Library
Austin, Texas

Sheldon P. Roufa
President
DataPhase Systems, Inc.
Kansas City, Missouri

John P. Weiss
Vice President
Gaylord Library Systems
Gaylord Brothers, Inc.
Syracuse, New York

Joan Blair
Vice President
Director of Library Relations
C.L. Systems Incorporated
Newtonville, Massachusetts

Normand L. Varieur
Chief
Scientific and Technical Infor-
  mation Division
US Army Armament Research and
  Development Command
Dover, New Jersey

1245 - 1430: Lunch

EXHIBITS. Sky and Cloud Rooms.	SESSION 2. MICROGRAPHIC EQUIPMENT IN LIBRARIES: A Review. Cloud Room. Conducted by: Carl M. Spaulding Program Officer Council on Library Resources Washington, D.C.	SESSION 3. COPYRIGHT AND THE LIBRARIAN: The New Law. Crystal Room. Conducted by: Waldo H. Moore Assistant Register of Copy- rights for Registration Copyright Office Library of Congress Washington, D.C.
1430 - 1545: Red Group	Green Group	Blue Group

1545 - 1600: * Coffee Break *

1600 - 1715: Blue Group   Red Group   Green Group

1845 - 1945: Institute-wide Reception. Crystal Room.

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1945 - 2245: Institute-wide Dinner/Program. Crystal Room.

KEYNOTE SPEAKER.......................................Thomas J. Galvin
Dean, Graduate School of Library and
Information Science
University of Pittsburgh
Pittsburgh, Pennsylvania

"There is a growing negativism among library admin-
istrators reflected in a persistent emphasis on 'sur-
vival,' on 'survivalism'--both personal and institu-
tional--often accompanied by an apparent desire to
avoid and resist change at all costs--a kind of des-
perate determination to preserve the institutional
status quo... Library directors should be cautioned
against the trap of attempting to deal with the pre-
sent environment as though it were the environment
of the past, or expending energy in the hopeless
task of trying to alter the present to make it more
closely resemble the past..." *Galvin*

TUESDAY, 23 May 1978:

	EXHIBITS. Sky and Cloud Rooms.	SESSION 2. Cloud Room.	SESSION 3. Crystal Room.
0830 - 0945:	Green Group	Blue Group	Red Group

0945 - 1000: * * * * * * * * * * * * * * * * * * Coffee Break* *

1000 - 1005: Crystal Room.

Introduction of Presiding Officer.......................Jane Bentley Cooney

Administrative Announcements............................Ruth A. Mullane
2nd Day Presiding Officer
The Army Library
The Pentagon
Washington, DC

1005 - 1115: SESSION 4. Crystal Room.

PLANNING PROCESS FOR DEVELOPING COMMUNITY WIDE-LIBRARY
SERVICES..Vernon E. Palmour
Senior Vice President
King Research, Inc.
Rockville, Maryland

The ALA, Public Library Association, thru a grant from
the Research and Demonstration Branch of the Office of
Libraries and Learning Resources in the U.S. Office of
Education, has commissioned a 21-month research project
to develop and field test a process by which public li-
brary managers can plan and evaluate library service.
The end product will be a series of manuals describing
the process in detail. This study impacts heavily on
Army libraries, which use ALA standards of service as
well as the standards of SLA, MLA and other professional
organizations. The possibility of selected Army libraries
participating in the field testing phase will be dis-
cussed. Mr. Palmour is the principal investigator.

1115 - 1215: SESSION 5. Crystal Room. *This session is for Army librarians. Other DOD librarians are
invited. Librarians from the civilian sector and other guests are encouraged to visit the
exhibits or use the time to* INTERFACE.

THE STUDY OF ARMY LIBRARIES: Where Do We Stand
Today...MAJ Paul Tracy Girard
The Office of the Adjutant General
Plans and Operations Directorate
Washington, DC

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Vernon E. Palmour
Principal Consultant
Study of Army Libraries

1215 - 1415: Lunch

1415 - 1530: SESSION 6. Crystal Room.

INNOVATION AND ITS EFFECT UPON LIBRARY STAFFING   Ralph M. Shoffner

Dr. Shoffner's discussion concerns the effects of in-
novation on library staffing, with particular reference
to the use of paraprofessionals. As the profession
evolves, librarians must anticipate pressures and iden-
tify how changes can be made that reduce training re-
quirements while still retaining the quality of perfor-
mance. The following quote by Alfred North Whitehead
states this thesis in general terms and underpins
Dr. Shoffner's presentation: *It is a profoundly er-
roneous truism, repeated by all copy-books and by
eminent people when they are making speeches, that we
should cultivate the habit of thinking of what we are
doing. The precise opposite is the case. Civilization
advances by extending the number of important opera-
tions which we can perform without thinking about them.
Operations of thought are like cavalry charges in
battle--they are strictly limited in number, they re-
quire fresh horses, and must only be made at decisive
moments.*

1530 - 1545: * * * * * * * * * * * * * * * * * * * Coffee Break *

1545 - 1730: SESSION 7. Crystal Room.

SHARED BIBLIOGRAPHIC INPUT EXPERIMENT: A DEFENSE
DOCUMENTATION CENTER VENTURE...........................Paul M. Klinefelter
                                                       Deputy Director
Funding and manpower restrictions prevalent among   Directorate of Technical Services
military libraries and information centers have   Defense Documentation Center
given impetus to the development of methods and   Cameron Station
systems for the standardization and sharing of pro-   Alexandria, Virginia
fessional cataloging and indexing. One-time creation
of authoritative descriptive entries is a workable
concept with inherent savings. Taking advantage of its
existing network of on-line CRT terminals, DDC has set
up an ambitious and successful experiment which involves
the on-line input to central ADP files, resident at DDC,
of descriptive and subject indexing data for technical
reports. This data is being generated at six remote
terminal sites. Progressive phases of this experiment
will be concerned with various categories of input and
work situations

Reactor...Patricia M. Altner
                                                       Reference Librarian
                                                       Scientific & Technical Information
                                                       Division
                                                       HQ ARRADCOM
                                                       Dover, New Jersey

1800 - 2100: UNA NOCHE DE GUSTO EN MEXICO. *An opportunity for participants to enjoy a pleasant evening
in Mexico. Three Gray Line tours will depart the Hilton Inn at 1800 hours. Tour A is a
combination shopping/Mexican dinner tour to Juarez, Mexico. Tour B is a combination
shopping/Cantonese dinner tour to Juarez. Tour C is a combination shopping/dinner tour,
with dinner at the Cattleman's Restaurant, one of El Paso's finest restaurants.*

0830 - 0835: Crystal Room.

Introduction of Presiding Officer.......................Ruth A. Mullane

Administrative Announcements...........................James H. Byrn
                                                       3rd Day Presiding Officer
                                                       US Army Field Artillery Center &
                                                       Fort Sill
                                                       Fort Sill, Oklahoma

0835 - 1000: SESSION 8.

A PROBLEM IS AN OPPORTUNITY WAITING TO HAPPEN; or WE
ARE THE PROBLEM--WE ARE ALSO THE SOLUTION   Yvonne K. Rappaport
                                                         Director of Continuing Education for
Dr. Rappaport's workshop will help the individual to   Adults
be aware of his own behavior, to be aware of how his   University of Virginia
behavior affects others, to be aware that he has un-   Falls Church, Virginia
realistic fears, and to become keenly aware that he
is making his own choices. The idea is that by
developing this kind of vital, productive awareness
one can develop the courage to face unrealistic fears
and more successfully meet the changes that are so
rapidly taking place in our profession.

1000 - 1015: * * * * * * * * * * * * * * * * * * * Coffee Break *

1015 - 1200: SESSION 8. Crystal Room

1200 - 1400: Lunch

1400 - 1530: | SESSION 8. Crystal Room. | SESSION 8. Cloud Room 1. | SESSION 8. Cloud Room 2. |
|---|---|---|
| Red Group | Green Group | Blue Group |

1530 - 1545: * * * * * * * * * * * * * * * * * * * Coffee Break *

1545 - 1700: SESSION 8. Crystal Room.

1700 - 2000: Dinner

2000 -   : 1st Meeting, Working Groups:

WORKING GROUP 1: Management Reporting...................Don Olsen, Chairperson
                 Crystal Room   Fort Sam Houston, Texas
WORKING GROUP 2: Training Program for Library
                 Technicians...........................Madge J. Busey, Chairperson
                 Cloud Room 1   Fort Belvoir, Virginia
WORKING GROUP 3: Cooperative Library Programs:
                 Shared Cataloging.....................JoAn I. Stolley, Chairperson
                 Cloud Room 2   Fort Monroe, Virginia
WORKING GROUP 4: Cooperative Library Programs:
                 Resource Sharing......................Joan M. Fredrickson, Chairperson
                 Sky Room   Fort Lee, Virginia
WORKING GROUP 5: Cooperative Library Programs:
                 Procurement...........................Dorothy A. Cross, Chairperson
                 Castellana Lounge   Fort Bragg, North Carolina
WORKING GROUP 6: Revision of CPR 950-21, Army Civi-
                 lian Career Program for Librarians.....Ingjerd O. Omdahl, Chairperson
                 Coronado II   HQ DARCOM
                                                       Alexandria, Virginia

(NOTE: Institute participants in the GS-1411 series as well as non-Army participants will be on an all-day tour of area libraries on this date. The tour leaves from the Hilton Inn at 0800 hours and will include stops at the Sergeants Major Academy, Air Defense School, Fort Bliss Post Library, El Paso Public Library, University of Texas at El Paso, University of New Mexico at Las Cruces, and the libraries at White Sands Missile Range. Your host for this grand tour is Mr. Glenn Wilson, Sergeants Major Academy Learning Resources Center, Fort Bliss.)

CAREER DAY

SESSION 9. "You & Me and the 2302...maybe a promotion too."

Recurring, ongoing contacts with careerists indicate that much unhappiness, uncertainty and confusion still exists regarding the Army Career Program, and, more specifically, the Army Librarian Career Program. Most of these contacts reveal that the dissatisfaction or "gripes" result from a poor understanding of the mechanics of career program management--how it actually works. Needless to say, some complaints are perfectly legitimate. It would be foolhardy to state that any program is perfect. CPR 950-1 has just gone through a major revision; CPR 950-21 is currently undergoing revision. This shows that management performs its duty of continuously evolving the program in service to you--the careerist. Today's session is not designed to emphasize career program statistics in such areas as placement, equal opportunity goals, etc. These are undoubtedly important topics, but current attitudes toward the career program dictate that today's session focus on the individual careerist. Today will be an open dialogue and workshop session, planned to emphasize how YOUR part in the Librarian Career Program determines its successful operation.

0800 - 0805: Crystal Room.

Introduction of Presiding Officer.......................James H. Byrn

Administrative Announcements...........................Joan R. Keller
4th Day Presiding Officer
Presidio of San Francisco
Presidio of San Francisco, California

0805 - 0915: CAREER MANAGEMENT TODAY: Impact of the Revised CPR
950-1 on Army Career Programs...........................Neil E. Lerch
Civilian Career Mgt Field Agency
Operations Branch, Team I
Department of the Army
Washington, DC

0915 - 0930: * * * * * * * * * * * * * * * * * * * Coffee Break *

0930 - 1045: THE ARMY LIBRARIAN CAREER PROGRAM TODAY: How it
Operates and its Problems..............................Neil E. Lerch

Anne R. Donnelly
Civilian Career Mgt Field Agency
Operations Branch, Team I
Department of the Army
Washington, DC

1045 - 1200: ADDRESSING THE REQUIREMENTS OF THE ARMY LIBRARIAN
CAREER PROGRAM: A Revision of CPR 950-21...............Ingjerd O. Omdahl
Chairperson, Working Group 6
HQ DARCOM
Alexandria, Virginia

1200 - 1400: Lunch

SESSION 9. (Continued)

THE CAREERIST: Focal Point in the Referral System.

The afternoon session aims to explain the individual's
relationship to the referral system; why certain tasks must
be performed. Every careerist has three means of com-
munication with the referral agency. First is the
long-familiar DA Form 2302; second is DA Form 4338-R,
a relatively new and more detailed geographical avail-
ability statement; and third is the new and extremely
important Librarian Career Appraisal and Individual
Development Plan, commonly referred to as the "SKAP"
package. The second portion has two specific objectives.
The first is to convene this Institute as an Ad Hoc
Career Screening Panel in order to show precisely how
careerists are competitively rated and consequently re-
ferred for a specific job. The second is to explain
the honesty, integrity and courage required of career-
ists in preparing all necessary forms. Seeing the
actual usage of the forms in the panelling process will
make perfectly clear what is meant by integrity and
honesty.

1400 - 1530: COMMUNICATIONS--KEY TO CAREER PROGRAM SUCCESS: A Review
of the Librarian Career Appraisal and Individual De-
velopment Plan ("SKAP Package").........................Nellie B. Strickland
TAGCEN, HQDA
Washington, DC

1530 - 1545: * * * * * * * * * * * * * * * * * * * Coffee Break *

1545 - 1730: THE MECHANICS OF THE REFERRAL SYSTEM....................Nellie B. Strickland
Assisted by representatives of the
Civilian Career Management Field Agency

FRIDAY, 26 May 1978:

0830 - 0835: Crystal Room.

Introduction of Presiding Officer.......................Joan R. Keller

Administrative Announcements............................Marie J. Lindsey
5th Day Presiding Officer
9th Infantry Division (M) & Ft Lewis
Fort Lewis, Washington

0835 - 1015: 2nd Meeting, Working Groups

Check Wednesday Schedule for locations.

1015 - 1030: * * * * * * * * * * * * * * * * * * * Coffee Break *

1030 - 1130: 2nd Meeting, Working Groups (Continued)

1130 - 1300: Lunch

1300 - 1500: Closing Session:

Working Group Reports:

Working Group 1.....................................Don Olsen, Chairperson
Working Group 2.....................................Madge J. Busey, Chairperson
Working Group 3.....................................JoAn I. Stolley, Chairperson
Working Group 4.....................................Joan M. Fredrickson, Chairperson

Working Group 5......................................Dorothy A. Cross, Chairperson
Working Group 6......................................Ingjerd O. Omdahl, Chairperson

Committee Reports:

Proceedings Committee...............................Louise Nyce, Chairperson
HQ FORSCOM
Fort McPherson, Georgia

Steering Committee..................................R. Y. Yamachika

Recommendations Committee...........................Margaret M. Murphy, Chairperson

Closing Remarks...Nellie B. Strickland

Adjourning of Institute................................Marie J. Lindsey

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NOTE TO ALL INSTITUTE PARTICIPANTS:

The entire proceedings of this Institute, including formal presentations, questions asked from the
floor, and open forum discussions, will be recorded to assist in preparing a written record of the
proceedings. Participation in the proceedings constitutes consent to the recording.
STAFF JUDGE ADVOCATE, HQ TRADOC

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Nellie B. STRICKLAND, Resource Person

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3. Cooperative Library Programs: Shared Cataloging

JoAn I. STOLLEY, Chairperson

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4. Cooperative Library Programs: Resource Sharing

Joan M. FREDRICKSON, Chairperson

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5. Cooperative Library Programs: Procurement

Dorothy A. CROSS, Chairperson

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Dorothy J. WURGLER

6. Revision of CPR 950-21, Army Civilian Career Program for Librarians

Ingjerd O. OMDAHL, Chairperson

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SESSION 8.

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SESSION 9.

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*Individual session reports are indispensible to the 1978 Army Library Institute Proceedings. The various reports for each session are merged into one composite report, which becomes part of the printed proceedings. Wide coverage insures that no important points are omitted. Therefore, please prepare a thorough report on the session you are covering and mail it by 15 June 1978 to:

Commander
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SESSION REPORTS

OPENING SESSION. Monday, 22 May 1978.

Marie N. Lusk, Installation Coordinator, introduced the First Day
Presiding Officer, Jane Bentley Cooney, Redstone Arsenal, Alabama,
who convened the Institute.

Major General J. J. Koehler, Jr., Commanding General, U.S. Army Air
Defense Center and Fort Bliss, extended the participants a warm welcome
to the El Paso/Fort Bliss area. His remarks on the Army librarian's
contributions to the soldier's morale and educational welfare helped
cement the attitudes of cooperation and creative endeavor that
brought the participants to El Paso.

Louise Nyce, Institute Co-Coordinator, prefaced her remarks by stating
that she would be "standing in" for Raymond Y. Yamachika, who recently
assumed the position of Library Program Director for Europe. She
set the stage for the week's activities, urging the participants
to glean all they could from the sessions, and to take their informa-
tion and reactions back to share with their staff and supervisors. If
the first Institute cultivated the spirit of cooperation among the
participants, this one is meant to generate involvement. She strongly
encouraged interfacing with peers, guests from other services and local
libraries, and the invited experts throughout the sessions.

SESSION 1. COMPUTER-BASED CIRCULATION CONTROL SYSTEMS: A State-of-
            the-Art Report. Monday, 22 May 1978.

Dr. Ralph M. Shoffner, Vice President, Ringgold Management Systems,
addressed several areas of concern to librarians exploring the feasi-
bility of installing a computer based circulation control system.
These included the common purpose and function of both manual and
on-line circulation control systems, as well as the costs and benefits
of computer-based systems.

Whether manual or computer-based, the purpose and function of any cir-
culation system are the same, namely, to register library items through
charge and discharge, handle holds and reserves, signal such restrictions
as reference or nonstandard loan periods, identify materials and
patrons, and provide bibliographic access. Most available computer-based
circulation control systems provide these functions to varying degrees.

Essentially, a library has three options in acquiring a computer-based
circulation control system: "in-house" design, adoption of another
library's system, or purchase from a commercial vendor. Currently,
seven vendors provide complete packaged systems, six of which are

on-line. The last is mixed mode, which operates on a combination of the on-line and batch modes.

The implementation process demands extreme care and attention to both preparing fully for system installation and monitoring system performance. Adequate advance planning is imperative and usually includes a staff schedule designed solely to accommodate the planning process. Document precisely what the system must achieve and its cost. A firm implementation schedule, with adequate lead time, should be prepared and followed.

System selection encompasses far more than matching library needs to system capabilities. Due consideration must be given to the procurement procedure, especially when working within stringent Army guidelines. Minimum function and cost deserve painstaking scrutiny. Until these requirements are fully met, any selection of the numerous options available cannot be made on the basis of supplementing the basic program in a useful or efficient manner. Examine the contract carefully, as it is a binding partnership between the library and the vendor. The library must take the initiative in ensuring that the contract meets library needs. Pay very close attention to costs - they are often underestimated.

Frequently, some physical preparation is required prior to installation. This may well involve securing adequate space for the system and its associated paperwork files, or simply upgrading existing electrical facilities. Tell library patrons what the new system will do for them and which new procedures they will be required to follow. If staff training is fully documented, the necessary references will be available for the later execution of unfamiliar or seldom-used routines.

A period of formal system testing follows installation in order to determine that the system performs all routines properly. In most library environments parallel testing of the old versus the new system will be required. Do not accept the system until the vendor has made all necessary corrections or modifications.

Costs and benefits are judged from various perspectives, which often results in divergent interpretations of the same data. The library's basis for system appraisal and cost extimates should be clearly stated and relate directly to any conclusions drawn.

Following Dr. Shoffner's presentation, several members of the Reaction Panel related their experiences with computer-based circulation control systems:

    Richard W. Boss, University Librarian, Princeton University Library,

speaking from experience, strongly emphasized assessing all possible risks taken when implementing an automated circulation system.

Charles Goldstein, Chief, Computer Technology Branch, National Library of Medicine, related his experiences in developing NLM's own system and stressed the importance of project planning and documentation.

Sheldon P. Roufa, President, DataPhase Systems, enumerated items to consider before implementing a system.

Larry Steele, of CL Systems, described the management capabilities that automating the circulation system gives library administrators.

John P. Weiss of Gaylord Library Systems discussed his company's product and mentioned the new circulation control system it will be marketing.

David Earl Holt of the Austin Public Library provided a humorous and optimistic synopsis of the library's experiences in implementing an automated system.

Lastly, Normand Varieur, US Army Armament Research and Development Command, made several observations concerning circulation automation and reemphasized the importance of project planning and documentation.

The panelists answered any questions from the floor prior to concluding the session.

(The full text of Dr. Shoffner's address appears at Appendix B.)

INSTITUTE-WIDE RECEPTION AND DINNER PROGRAM.   Monday, 22 May 1978.

The Hilton Inn's Crystal Room provided a congenial backdrop for the Institute-Wide Reception and Dinner Program held Monday evening. It was a pleasant interlude providing participants the opportunity to meet each other and discuss the day's activities, as well as to enjoy the fellowship of a good dinner. The keynote speaker was Dr. Thomas J. Galvin, Dean of the Graduate School of Library and Information Sciences, University of Pittsburgh, and President-Elect of the American Library Association. Dr. Galvin discussed the pivotal issue of managerial survival today. His obvious experience and knowledge of the subject was pleasantly complemented by his informal yet "galvinizing" delivery. (A complete transcript of Dr. Galvin's text appears at

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Appendix A.)

The relationship between managerial effectiveness and managerial error
was first explored. In a logical, persuasive manner Dr. Galvin developed
the thesis that while effective managers probably make more mistakes
than poor ones, they do not repeat those mistakes. Two important corol-
laries derive from this thesis. First, the manager must recognize and
accept that complex problems comprise the most challenging aspect of
the managerial assignment, and, that such problems do not have simple,
easy or complete solutions. Further, in the dynamic nature of problem
solving, one decision often leads to others, a phenomenon referred to
as "decision treeing." Effective managers quickly hone their skills in
anticipating the consequences of decisions - in forecasting or taking
the long view.

The second conclusion rests firmly on the inevitability -and desirability-
of organizational change as expressed in Galvin's First Law of
Institutional Dynamics:

> "Given a dynamic external environment, no institution can ever
> remain static. It is either improving or it is declining; it
> is either expanding or it is contracting; it is either getting
> stronger or it is getting weaker; it is either getting better
> or it is getting worse."

Acceptance of this thesis underpins true managerial and organizational
growth, as demonstrated by those managers concerned with how to
"confront the future directly and support constructive new developments."
It follows that managers nostalgic for the past, or worse, "trying to
alter the present in order to make it more closely resemble the past"
are courting managerial and organizational stagnation or death. To
paraphrase, "You gotta have a vision!"

However, a word of caution is due those zealous managers who may lose
sight of the fact that in the dynamic managerial environment things will
never be set permanently right. Institutional dynamics obviates this
utopian goal. A related pitfall is expecting policies or procedures,
of themselves, to solve problems, a task only people can perform.

Dr. Galvin's peroration appropriately grappled with the sticky question
of managerial style. He is unable to accept the simple substitution
of the consensual style for the authoritarian. Fully appreciating how
both managers and subordinates are apt to see the managerial function
from one viewpoint only, he is nonetheless optimistic that library
managers are fully capable of developing new styles of leadership that
take active responsibility for identifying appropriate directions in
library development and the vigorous aggressive pursuit of clearly-

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defined institutional and client interests.

SESSION 2. MICROGRAPHIC EQUIPMENT IN LIBRARIES: A Review. Monday and Tuesday, 22-23 May 1978.

Mr. Carl M. Spaulding, Program Officer, Council on Library Resources, focused his discussion on the important areas of computerized microfilm, new equipment, equipment selection, and the various types of film presently in use.

Source document microfilming requires separately filming individual pieces of paper, which is an extremely time-consuming process. In the computer output microfilm (COM) process, the cathode ray tube (CRT) places images, in sequential order, directly on the film. Although image complexity is limited by what can be shown on a CRT, the process is very inexpensive. COM is far cheaper than paper for quantity reproductions, which is true for film in general. Currently, COM is used chiefly to reproduce documents fulfilling ready reference needs, such as phone books, parts catalogs, and book order or overdue lists. This has been a dominant factor in bringing forth a new generation of machines. Microfiche is used far more frequently than microfilm, although the latter is still used for newspapers.

The new generation of microform equipment completely avoids the 'wet' process of reproduction. This troublesome procedure provided the user unsatisfactory copy on grainy, heavily coated paper. The image was apt to be unevenly developed and could not be written upon. Frequently, the roller assembly jammed on deposits of liquid toner. The newer 3M and Xerox reader-printers use the 'dry' process exclusively. This more convenient process, coupled with reasonable prices and the wide range of available lenses accommodating the numerous reduction ratios used by publishers, makes these machines extremely popular with libraries. The Minolta RP405, with the added advantages of attachments able to accommodate fiche up to four times larger than normal and the ability to copy both negative and positive fiche, is quickly changing from the wet to the dry process.

Generally, the microform is thriving. Microfiche becomes more prevalent as paper costs skyrocket. For example, there is a growing trend away from printouts to microfiche, which is falling in price and rising in quality, although some substandard film will always be around. Microfiche reader-printers are improving quite steadily and use of the more expensive silver halide film is plummeting. Not unexpectedly, the healthy competition in the micrographics field has given rise to a wide range of quality products, from reader-printers to reels, and has even spawned a used reader-printer market. Newer models now have a turret with three or four built-in lenses, which greatly facilitates and improves

focusing.

Mr. Spaulding stressed that ALA Library Technology Reports, Micrographics Equipment Review and NMA Publications are valuable selection aids for micrographic equipment. When selecting equipment the buyer must ensure that it adapts well to the full range of materials that will be used. Whenever possible test the equipment in the library rather than the show-room environment, as equipment may frequently be used on a trial basis. Contact other librarians presently using the equipment under considera-tion for their appraisal of its capabilities and performance.

Although numerous qualities and performance characteristics of reader-printers are examined by professional consumer groups, Mr. Spaulding detailed various items to visually inspect when testing a machine. The image resolution should be uniform and clear over the entire screen, not just the center, so inspect the image at the corners of the screen. The image brightness must likewise be uniform and not glaring. Choose an easily manipulated reader-printer, which both staff and patrons can load or unload easily. It is essential that the equipment be simple to focus and that it hold the focus. Ensure that the available magni-fications match the reductions to be used most frequently. The glass parts should be convenient to reach and clean. Avoid any equipment that will collect much dust. Most important, do not even consider equipment unless it uses the 'dry' process.

The three types of film now in use are silver halide, visicular, and diazo. Although all may be used in making copies from an original, only silver halide is used for original filming. Used chiefly for archival purposes, silver halide film is very expensive, and susceptible to damage from fungus, water, redox spots, and emulsion scratches. Both diazo and vesicular are susceptible to heat and their long-range storage characteristics are not known. The American National Standards Institute (ANSI) has developed standards for the production, development, and storage of silver film; none exist for the others, but diazo standards are forthcoming. The relatively low cost of non-silver film has led to a great upsurge in its use. The New York Times and GPO are gradually phasing out the use of silver film, even for depository purposes. ERIC and NTIS do not use silver film at all.

In closing the session, Mr. Spaulding strongly advocated creating one central archival agency for micropublished resources. This would eli-minate dependence on vendors, who are likely to keep archives only for materials of current commercial value.

SESSION 3. COPYRIGHT AND THE LIBRARIAN. The New Law. Monday and Tuesday, 22-23 May 1978.

Mr. Waldo H. Moore, the Assistant Register of Copyrights for Registration, Library of Congress, conducted the session on the new copyright law, an issue of obvious importance to professional librarians.

Article One of the Constitution awards copyright ownership to the author. The article's intent is to promote the progress of learning, and for that reason protects the writings of authors and patents of inventors for a limited time. Federal statutes dealing with copyright have been in existence since 1799. Since that time the law has undergone four revisions, with the latest being signed into law by President Ford in October 1976 to become effective 1 January 1978.

The new law provides definitions to facilitate interpretation and states which classes of materials may or may not be copyrighted. Sections 106-108 are of primary importance, as the first concerns authors' rights, while the latter modify those rights by providing guidelines for the legal reproduction and distribution of copyrighted materials.

The physical object, such as a book, is really not affected by copyright, since the law only allows an author to prohibit duplication. The physical transfer of copyrighted materials does not involve infringement which occurs only if certain materials are copies in excess of the law or for profit.

Materials published anywhere prior to 1906 are totally unprotected by copyright. Works published between 1906 and 1950 are protected only if the copyright was renewed after 28 years. Publications from 1950 to 1977 are still protected by the original copyright. It is unwise to assume a copyright no longer exists, since the Copyright Office is still issuing renewals. Under the new law, copyright ceases automatically fifty years after the author's death.

Publications of the U.S. Government are in the public domain and, as such, unprotected by copyright. Federal employees may publish reports in the line of duty, but such works are likewise in the public domain. Any governmental edict -federal, state, or local- may not be protected by copyright, although official tourist literature and other state-level materials may be. Lastly, no idea or fact falls under provisions of the new law, only the manner in which the fact or idea is expressed.

Section 107 covers fair use, stating the extent to which copyrighted materials may be distributed or copied before the author's rights are considered to have been infringed. The case of Williams and Wilkins vs. Bolt Publishing Co. hinged upon this question. Its complicated litigation clearly proved the great need for unambiguous guidelines in this area.

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Section 108 exempts certain libraries or archives and their employees from copyright provisions when making copies for their users and institutions. In any library, only the user is responsible for what is copied on an unsupervised machine. Providing paper for the machine does not constitute supervision.

Mr. Moore made various Library of Congress copyrighted publications available, and strongly urged that participants sign up for the mailing lists the Copyright Office maintains.

SESSION 4. PLANNING PROCESS FOR DEVELOPING COMMUNITY-WIDE LIBRARY SERVICES. Tuesday, 23 May 1978.

Mr. Vernon E. Palmour, Senior Vice President, King Research, Inc., is principal investigator for research to develop manuals to guide public libraries anywhere in formulating standards. This is a 21-month project funded by the Office of Education for the Public Library Association (PLA) of ALA.

Standards for public library systems first appeared in 1956 and were last updated in 1966. Professional acceptance has not been enthusiastic because the standards have focused primarily on institutional needs. The new standards being developed will respond to community and individual needs rather than those of the institution serving them. As Army libraries follow ALA guidelines, Mr. Palmour feels that the Army community can benefit greatly from participation in cooperative programs designed to achieve a viable library information service. The austere fiscal situation facing all libraries makes it especially important to determine needs perceived by the community, which should be involved in the planning process.

Phase I, begun in October 1977, addressed developing the study's methodology, which was based partially on past research. Phase II, begun in summer 1978, will be a year-long test of Phase I methodology. Two public libraries, including Baltimore County Public, will be involved in the test. Institute participants showed great interest at the prospect of selected Army libraries taking part in the test.

Mr. Palmour outlined the five steps in the planning process. The first involves a concerted effort to determine community information needs and resources. This presupposes a thorough knowledge of the community environment and characteristics of its population. Citizen input is encouraged through direct citizen participation or by a survey of their needs. Community resources must be thoroughly inventoried.

The next phase entails evaluating community resources with special

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emphasis on existing public library services. This evaluation should allow for the potential of existing resources and determine the library's precise role in the community. Patron and staff surveys will elicit a thorough evaluation of library services.

Phase 3 focuses on establishing goals, objectives, and priorities. A written mission or purpose statement for the library gives this procedure a solid foundation. Goals must be set, but only if the objectives are measurable. Determine priorities according to several sets of assumptions regarding the future.

Phase 4 emphasizes strategies for program development, which demands considerable flexibility. After identifying any short-term constraints or pressures, alternative strategies are developed with an eye to possible policy change. Each alternative is carefully scrutinized and judged prior to either selecting strategies or implementing policy changes.

The final phase concerns the methodology employed in monitoring and evaluating progress. All items to be monitored are defined precisely prior to devising sampling methods and plans. Plans for analysis and presentation should likewise be determined in advance. Most important, all findings must be recycled through the planning process.

Mr. Palmour stressed that beginning with Phase 3, the process is circular. He noted that a viable planning process provides consideration for different types of potential users. Mr. Palmour believes that broad five-year goals should be written down and that the process is futile unless it becomes part of everyday management.

SESSION 5.   THE STUDY OF ARMY LIBRARIES: Where Do We Stand Today. Tuesday, 23 May 1978.

MAJ Paul T. Girard, Office of The Adjutant General (TAG), Plans and Operations Directorate, HQDA, provided Institute participants both a background review and a timely update on the status of the Study of US Army Libraries, completed in July 1976.

The Army has become increasingly aware of the pressing need for improved coordination in the management of its library activities. Army libraries have already been strongly criticized for poor program management and they face possible further criticism if they take no action to improve the management of library and information resources. Yet, prior to 1972 no single Department of the Army (DA) agency or office had complete data on the magnitude of the Army's library program. The Federal Library Survey of that year discovered 940 Army libraries with a total budget of $24 million; it also discovered them to be in dire need of improved management techniques. Subsequently, TAG initiated a study

of the situation.

The Army Audit Agency investigated the Army's morale, welfare and recreation program in 1974. The evaluation of resources management of Army libraries was likewise negative. The agency recommended both expanding the TAG study and establishing a centralized management system for Army libraries under one DA staff agency.

As a result of the audit, the Study was approved to begin in October 1974, although delays deferred it until September 1975. Its purpose was to gather data concerning the universe of Army library resources, and to define appropriate communications channels for the issuance of professional guidance, policies, standards, and general procedures. Its ultimate purpose was to ensure more effective patron services and to devise guidelines for more economical procurement and administrative cooperation.

The Study identified numerous problem areas and strongly deplored the lack of an organizational structure essential to provide guidance, establish policy, and set standards. This absence of organizational structure, compounded with poor communications, contributed greatly to library problems. These included a dearth of measurable goals and objectives, scant interlibrary cooperation, no uniform policies or standards, poorly defined missions, and inadequate funding.

The study group formulated several recommendations that addressed these and other problems. Most important was the recommendation to form a central library management office within the Adjutant General Center (TAGCEN). Its responsibilities would include formulating policies, objectives, and guidelines; identifying and establishing channels of communication; and implementing periodic reporting requirements. It would also serve as the principal library advisory agency to major commands (MACOM's) or installations and as a clearinghouse for problems affecting all types of Army libraries. A supporting advisory council, composed of permanent and rotating members, was likewise proposed. This council would study problems, recommend solutions, and provide necessary assistance. Its members would include MACOM representatives.

The Study strongly urged implementing -as a long-range goal- the operation of all libraries on an installation as a single system with central management. Various pilot projects in the realm of cooperative library activities were likewise recommended. These included shared cataloging, centralized procurement, and resource sharing. Funding for most recommended cooperative programs would be provided at the DA and MACOM levels.

In 1976, TAG approved the Study for staffing at the DA level. Three non-concurrences contended that the technical libraries maintained by

several agencies were unique and could be more effectively managed by
technical elements. As the non-concurrences were not resolved, the
Study was subsequently set aside.

Early in 1976 BG Pennington, The Adjutant General, directed that action
be taken to resurrect the Study. This involved validating previous
concurrences, resolving the three non-concurrences and preparing to
establish an Army library office. A short time later the Study was
sent to the MACOM's for comment and responses indicated considerable
support. The previous non-concurrences concerning technical libraries
have not yet been resolved, but separate action is being taken on them.
It is anticipated that the Army Library Management Office (ALMO) will
be formed soon under the staff directorate for the Community Life
Management Office, TAGCEN.

SESSION 6. INNOVATION AND ITS EFFECTS UPON LIBRARY STAFFING. Tuesday,
            23 May 1978.

Dr. Shoffner's second address to the Institute explored the question of
innovation, which for him denotes any change of library operations af-
fecting either staff or equipment. Statistics for the 1960's show
that library staffing grew considerably, but the annual growth rate
for paraprofessionals was nearly three times that for librarians.
Many factors contributed to this phenomenon. Centralization of
infrequently performed functions requiring special knowledge, such as
cataloging, considerably diminishes duplicative professional effort
and positions. Standardizing functions simplified them, thereby enhancing
paraprofessional opportunities, as in copy cataloging. The rapid ex-
pansion of libraries during the 1960's was not accompanied by immediate
growth in the number of professionals available, which probably led
to hiring paraprofessionals instead. Lastly, the pressures of equal
opportunity requirements have resulted in tighter definitions of job
functions performed and skills required to perform them. Dr. Shoffner
feels that additional circumstances will demand increased use of para-
professionals and that this is desirable if we anticipate future
pressures and determine how to reduce training requirements while
retaining performance quality.

Alfred North Whitehead's Introduction to Mathematics railed against the
attitude that people should cultivate the habit of thinking about what
it is they do, stating:

    "Civilization advances by extending the number of important
     operations which we can perform without thinking about them."

Elaborating upon this thesis, Dr. Shoffner stated that innovation can
reduce the number of required skills while retaining or improving

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library services.

Two types of innovations have been taking place in the library community. One is simply the trend toward functional centralization, such as Library of Congress cataloging, which basically changes the work locale, not the skills required. The second is automation, which impacts heavily on the work itself. It is not surprising that automation has gone further in simplifying paraprofessional work, because such duties are usually clearly defined and lend themselves more readily to automation.

However, the reorganization, simplification, or standardization of operations likewise results in improved performance, since this type of innovation creates similar procedures for different operations, thereby demanding minimal training and memory requirements. Functions such as library opening and closure, circulation, acquisitions, and ready reference lend themselves well to this type of innovation. Dr. Shoffner foresees the growing acceptance of these innovative methods resulting in a rate of increased use of paraprofessionals equaling at least half the rate of the 1960's.

The considerable time and effort expended in implementing any innovation make it extremely advantageous to adopt methods proven successful elsewhere, since the reason for such change is to improve service and costs. Reinventing the wheel is a costly pastime. Justifiable independent innovation should first be carried out in the area of standardization. The documentation necessary to this process will be very useful in identifying situations where automation or centralization will be not only feasible but desirable.

Dr. Shoffner closed his remarks by noting that directing our energies towards things we might do differently brings new understanding that augments the variety of tasks that can be performed without thinking about them, which improves civilization.

(The full text of Dr. Shoffner's address appears at Appendix C.)

SESSION 7. SHARED BIBLIOGRAPHIC INPUT EXPERIMENT: A DEFENSE DOCUMENTATION CENTER VENTURE. Tuesday, 23 May 1978.

Mr. Paul M. Klinefelter, Deputy Director of Technical Services, Defense Documentation Center (DDC), described some long-range goals DDC has in the area of shared bibliographic control of reports; how attainment of these goals would benefit the defense community in general; and their value to military library/information centers in particular.

He emphasized that these long-range goals are intended to supplement

the information services DDC presently offers. To that end, DDC is
developing and compiling, on a test basis, the Defense On-line Catalog
(DOC) to serve as a machine-readable data base of bibliographic infor-
mation combining the catalogs of various military and Department of
Defense (DoD) contractor libraries. Whem implemented, DOC will permit
users to search the holdings of other defense system libraries via
computer terminal keyboards. DDC plans to serve as a clearinghouse by
providing on-line availability and acquisitions information for reports
not deposited with them; these documents have long been a source of
problems. Another future bibliographic project has the two-fold goal
of providing printouts of an individual library's documents holdings
as well as that of providing computer support for local storage and
retrieval of restricted material.

Mr. Klinefelter was confident that a large sector of the defense community
would benefit from DDC's plans to serve as a central source of report
literature information. When reports deposited in various DoD data bases
and libraries are accessible through a central inventory, duplication
of research and development (R&D) spending may be avoided and the
"turn-around time" for providing needed reports to the laboratory
worker or patron should be reduced. Shared bibliographic control
with remote access terminals and some provision for "piggy-back"
utilization will save the effort and cost of duplicate cataloging and
record keeping for many research reports used by the defense community.

Addressing the control of DoD R&D publications, Mr. Klinefelter out-
lined plans he expects will affect the operation of military library/
information centers in various ways. Libraries able to subscribe to
such a system will profit through direct access to a much wider body
of bibliographic information than previously available because com-
puterized literature searches will no longer be limited to the DDC
data bank. On-line searching will save staff time, especially since
one option being planned would provide direct access to the shelflist
of documents in individual libraries. For many libraries, shared
on-line bibliographic control would also represent sharing the intel-
lectual effort expended in cataloging defense research reports.
Ultimately, libraries may eliminate maintaining both card catalogs
and various records of publications-in-progress.

DDC has set a timetable for attaining a number of its long-range goals.
In September 1977, it began building DOC by compiling input from six
test sites, including the Army site at HQ ARRADCOM, Picatinny Arsenal,
Dover, NJ. DDC hopes to expand its data base by including input from
all on-line terminal sites by September 1980. In September 1981, DDC
will begin a five-year project of selectively converting retrospective
information into the data base, as well as expanding the area of input
for current information to include non-DoD reports. Within the same

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time-frame DDC expects to begin supplying readouts for the holdings
of any library/information center participating in the system, either
in computer printout or microfiche format.

Ms. Patricia M. Altner noted some of the problems experienced at HQ
ARRADCOM, Picatinny Arsenal, the Army site for the Shared Bibliographic
Input Experiment. Computer down time bedevils any on-line system,
but this is alleviated somewhat by storing the input on cassettes
for later transmission when the computer is up. The chief problem
is the lengthy process of descriptive cataloging and keyboard entry,
which in combination requires at least one hour per report.

SESSION 8. A PROBLEM IS AN OPPORTUNITY WAITING TO HAPPEN; or WE
ARE THE PROBLEM--WE ARE ALSO THE SOLUTION. Wednesday,
24 May 1978.

Ms. Yvonne K. Rappaport, Director of Continuing Education for Adults,
University of Virginia, led a dynamic workshop designed to help
people recognize and reprogram self-defeating behavior. Her six-hour
presentation was crammed with insights into the nature of human
behavior and its frequently negative impact on the individual.

The program began with a brief exposition of the characteristics human
beings share and their unique configuration within each individual.
This individual configuration governs how one perceives the world and
one's position in it.

Assessing the recent human potential movement, Ms. Rappaport reported
that the emphasis is placed on developing methods whereby an individual
can be made aware of unrealized potential by developing "possibility
vision." This entails thinking of all kinds of possible solutions to a
problem by letting the imagination run wild in a sort of brainstorming
session, determining which of the alternatives is best, and putting it
into action. She advises accentuating the positive by determining those
activities and interests that make one happy and then concentrating on
expending one's energy on them.

Two exercises and a motivational film were used to involve the Institute
participants in the learning process. The first exercise was designed
to help one clarify what activities and interests made one individually
happy and whether one was content with the proportion of time actually
spent engaged in those activities. The second exercise, which explored
self-images, was related to the first insofar as Ms. Rappaport believes
that what prevents individuals from indulging in preferred activities
relates directly to how individuals feel about themselves. Although
one has no control over the periodic change of feelings all people

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undergo, one does have control over one's own behavior.

The film "You Pack Your Own Chute" exemplified how a change in behavior (parachuting from an airplane) can change feelings (fear and a sense of inadequacy). Ms. Rappaport believes that the real roadblock preventing one from realizing one's potential is neither time nor responsibility to others, but fear.

Following the lunch break, participants reconvened in three small discussion groups to share ideas related to key points in the film. Meeting again as one group, selected individuals reported their group's findings to the entire assembly. Ms. Rappaport's closing remarks related to these discussion reports and to the philosophy that everyone can, with some effort and risk, control their lives.

Assuming that control presupposes determining which fears are realistic or tangible and which are unrealistic or intangible. Most unrealistic fears stem from concern over what other people think. However, this approach assumes that one has control over the feelings of other people and that one thus limits their options of response. Putting situations in a more realistic perspective allows one to determine what's really at stake rather than what one fears is at stake. Ms. Rappaport suggested using a problem-solving tool such as Kurt Lewin's "Force Field Analysis" chart, which she distributed.

Ms. Rappaport closed with an enthusiastic endorsement for involvement in personal change. Her guidelines were:

    1. Select one thing at a time to change;
    2. Start with easy changes and success will breed success;
    3. Take risks, expect some results which are less than perfect,
       and call those situations "learning experiences;"
    4. Believe in yourself!!

SESSION 9. CAREER DAY. "You & Me and the 2302...maybe a promotion too." Thursday, 25 May 1978.

The Institute session devoted to the Librarian Career Program (LCP) unfailingly generates considerable participant interest, questions, and comments. New developments are afoot this year, developments affecting every professional in the Army LCP.

Mr. Neil E. Lerch, Chief, Civilian Career Management Field Agency, Operations Branch, Team I, assessed the impact of the revised Civilian Personnel Regulation (CPR) 950-1 on career programs Army-wide. He described all levels of participation, from the role of the Functional Chief

to the individual careerist, as well as their respective respon-
sibilities. The revision became effective February 1978 and covers all
registrants, GS-07 and above, in the 1410 Librarian Series.

The SKAP (skills, knowledges, abilities, and personal characteristics)
package was described as it relates to the elements contained in the
career appraisal and to the librarian job categories, job elements, and
technical or specialized skills germane to various types of library
positions. The supervisory/managerial portion concerns elements
essential to supervisory positions. Lastly, the functional managerial
section sets forth requirements for the top managerial positions
in the career field.

Letter ratings, "A"-"E", denote the careerist's level of skills,
knowledges, abilities, and personal characteristics in these areas.
"A" signifies a level which clearly exceeds most aspects of the
standards described for the element; "C" denotes that all aspects
are met; "E" means that most aspects are not met. "A" or "B" ratings
require supporting documentation. Specified elements may be rated
on the careerist's potential in that area. The rating process carries
the careerist's self-rating up the supervisory ladder, through the
MACOM, to DA. In all, four ratings are provided; the Screening Panel's
rating is the final one.

Ms. Anne Donnelly of the Civilian Career Management Field Agency
addressed problems in the Army LCP and how it operates. She provided
current statistics on careerists world-wide and emphasized the need to
continually update career documents, stressing that the individual
careerist is responsible for accurate and current experience descriptions
and referral desires.

When positions are to be filled criteria are established based on the
major duties as stated in the job description. Candidates are appraised
on the basis of how well they meet the particular criteria. Training
and awards usually enhance a careerist's appraisal. Each careerist
under consideration is assigned a referral category, ranging from best
qualified to low qualified. CPR 950-1 requires that all candidates
on a list be contacted. Although not required, interviews are
strongly encouraged. A careerist who rejects a job offer or is
unavailable must submit a new availability form in order to be
considered for other positions.

Management makes the final selection. Whenever fewer than three
careerists are available from a referral list, a supplemental list
may be requested. The local Civilian Personnel Office (CPO) is
supposed to notify both selectee and non-selectees within 30 days.

Ms. Ingjerd O. Omdahl presented Working Group 6's report on revising CPR 950-21. She maintained that librarian careerists meeded more flexible policies. The revised document must fulfill both the Army's requirement for the best library service at the least cost and the careerist's requirements for satisfying work experience.

Discussing the intern program elicited heated response and considerable controversy. Many felt the program gives younger careerists an unfair advantage, priming them for the most desirable supervisory positions, while the established careerists tend to languish in dead-end jobs.

Ms. Nellie B. Strickland, the Functional Chief's Representative, TAGCEN, HQDA, reviewed both the librarian career appraisal and individual development plans. The sample DA Form 2302's provided both good and bad examples for filling out the form. The draft SKAP package was explained and procedures for completion were discussed. The referral system was again addressed and useful suggestions given for assuring consideration for the type of positions desired. The prospect of intra-command developmental assignments stirred a lively, prolonged debate.

The session was concluded with a free-form, spirited -sometimes heated- discussion of the revision to the career program and allowed librarians to voice their opinions of the changes.

RECOMMENDATIONS

The Recommendations Committee Report consists of two parts:

>   I. a summary of the status of the recommendations approved at
>   the First Army Library Institute; and,
>
>   II. recommendations submitted for consideration and vote by this,
>   the Second Army Library Institute.

I. THE FIRST PART.

Because recommendations as presented at the first Institute did not
directly task organizations and individuals to take action, a number
of recommendations were not implemented. The recommendations which were
approved and their status is as follows:

1. THAT on behalf of the Institute participants, HQDA express appre-
    ciation for an excellent Institute and suggest HQ TRADOC be
    commended.
    NO ACTION TAKEN.

2. THAT HQ TRADOC initiate letters of appreciation to the hosting
    installation, guest speakers, and support personnel.
    ACTION COMPLETED.

3. THAT a Long-Range Planning Committee be established for the Insti-
    tute to insure continuity of management and technical training
    provided by the Institute, and to provide coordination of future
    Institutes.
    NO ACTION TAKEN.

4. THAT TAGCEN, HQDA, request HQ FORSCOM to develop and host the
    1978 Army Library Institute.
    NO ACTION TAKEN. *(A planning conference attended by MACOM Morale
    Support Officers was conducted at HQDA, and a determination was
    made that TRADOC would be responsible for training.)*

5. THAT the Institute report of proceedings and adopted recommendations
    be forwarded by HQ TRADOC to TAGCEN, HQDA, and that information
    copies be furnished to MACOM and HQ agencies, and to all participants.
    ACTION COMPLETED.

6. THAT the recommendations of the Study of Army Libraries, July
    1976, be implemented for the benefit of those commands and
    agencies desiring to participate in cooperative activities.
    ACTION ON-GOING.

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7. THAT an official joint MACOM/HQ agency committee be formed to develop cooperative projects and programs.
    NO ACTION TAKEN.

8. THAT Institute Working Groups submit a quarterly progress report to the hosting MACOM (TRADOC) for distribution as appropriate.
    NO ACTION TAKEN. *(Some reports were forwarded, but no distribution was made.)*

9. THAT procurement of library materials be added to the basic training course for procurement officers as suggested by the Assistant for Procurement Procedures, Deputy for Materiel Acquisitions, Office of the Secretary of the Army, I & L.
    NO ACTION TAKEN. *(Lack of necessary input to provide base for such a course.)*

10. THAT the Office of the Deputy for Materiel Acquisitions, Office of the Secretary of the Army, I & L, issue a Procurement Instruction Letter (PIL) on the specialized procurement requirements for library materials to procurement officers Army-wide.
    NO ACTION TAKEN. *(Lack of input from field personnel to formulate base for requirements.)*

11. THAT the Library Division, Morale Support Directorate, Personal Environment Systems, TAGCEN, HQDA, request exemption from AR 340-22 for all formally organized Army libraries.
    NO ACTION TAKEN. *(The possibility of exemptions was informally investigated, and not favorably received.)*

12. THAT, for information purposes, all Army libraries receive distribution of current publications issued from the Library Division, Morale Support Directorate, Personal Environment Systems, TAGCEN, HQDA, including the monthly clothbound book procurement lists and "Other Items of Interest."
    ACTION COMPLETED.

II. THE SECOND PART.

Many recommendations were submitted by Institute members. Those not included in this report were given to the Steering Committee for consideration. The following recommendations were submitted to members of the Institute for a vote. It was recommended:

1. THAT, on behalf of the Army Library Institute participants, HQDA express, through official channels, appreciation for an excellent Institute to the following:

Raymond Y. Yamachika   James C. Dorsey
         Louise Nyce   Thomas A. Gallant
         Marie N. Lusk   Rosemary C. Marlowe
   (CARRIED)

2. THAT HQ TRADOC send letters of appreciation to all guest speakers.
    (CARRIED)

3. THAT the Library Division, Morale Support Directorate, HQDA,
    make a formal written request to Mr. Vernon E. Palmour, King
    Research, Inc., for copies of the manuals developed in the
    ALA-sponsored project, Phase I: Standards Development for
    Community Library Service, and that selected interested Army
    libraries be used in the future field test.
    (CARRIED)

4. THAT the Functional Chief's Representative, Librarian Career
    Program (LCP), request that the Career Management Field Agency
    revise DA Form 4338-R to include a space where careerists can
    indicate willingness to accept an obligated position.
    (CARRIED)

5. THAT each Working Group Chairperson submit a brief progress report
    six months after the Institute to the Functional Chief's Repre-
    sentative (LCP) to be published under "Other Items of Interest"
    in the TAGCEN monthly clothbound book distribution list.
    (CARRIED)

6. THAT Working Group 6 include an exception in CPR 950-21 to CPR
    950-1 authority for command-level developmental reassignments
    and that all vacant 1410 positions, GS-09 and above, be filled
    by centralized referrals from HQDA.
    (CARRIED - 46 "yes", 29 "no")

7. THAT a one-day training program for library technicians be in-
    cluded by the Steering Committee in the 1979 Army Library Institute,
    and that this program be scheduled on a day devoted to the Librarian
    Career Program or similar sessions.
    (CARRIED - 2 "no")

8. THAT the Library Division, Morale Support Directorate, HQDA,
    forward to the Army Library Management Office (when established)
    a request that an official letter be issued through technical
    channels, outlining a training program for library technicians.
    (CARRIED)

9. THAT the draft list of training courses to be included in CPR 950-21
    be furnished by the Chairperson of Working Group 6 for distribution

through appropriate career channels by the Functional Chief's Representative (LCP) as soon as possible.
(CARRIED)

10. THAT the Functional Chief's Representative (LCP) request that Team I, Career Management Field Agency prepare and distribute to all careerists an annual inventory of present positions in the GS-1410 series by grade, showing position title and location, so that Army librarians may be better able to plan their careers.
(CARRIED)

11. THAT the Steering Committee for subsequent Army Library Institutes be composed of the following:
    a. a permanent membership which includes a representative from each MACOM.
    b. rotating memberships which will include four to six appointed members who will serve for two years. These members will be representative of different types of Army libraries and different geographical areas and interests.
    c. a representative from the host installation of that year's Institute.
(CARRIED)

12. THAT copies of the Army Library Institute Proceedings be sent to DDC for secondary distribution.
(CARRIED)

13. THAT the previous Chairperson of the Recommendations Committee present a status report on the preceding Institute's recommendations so that the participants may know what progress has been made.
(CARRIED)

14. THAT the core items from the Federal Library Survey be used as the basis for an annual report to be submitted to the Army Library Management Office (when established) in recognition of a definite need to establish an Army Library Management Report for purposes of budgetary considerations.
(CARRIED - 3 "no")

15. THAT all Army libraries accept telephone interlibrary loan requests from other Army libraries for special situations.
(CARRIED)

16. THAT the interlibrary loan directory be accepted as an official Army publication to facilitate distribution.
(WITHDRAWN BY WORKING GROUP 4 FOR FURTHER STUDY)

17. THAT HQDA Library Services show concern over the lack of complete indexing of Army periodicals. Perhaps it could be incorporated into one of the pilot projects, with emphasis on a cooperative effort across service lines.
    (WITHDRAWN BY WORKING GROUP 4 FOR FURTHER STUDY)

That concludes the Report of the Recommendations Committee, except for my personal and special thanks to the members of the Committee for their time, effort, and interest.

                                        C. R. ANACLERIO
                                        Chemical Systems Laboratory
                                        Aberdeen Proving Ground, MD

WORKING GROUP REPORTS

Report of Working Group 1: __MANAGEMENT__ __REPORTING__

Session 1

1. Working Group 1 was not as productive during the past year as hoped, but at the conference this year, we made some real progress in gaining a foothold on what topics we should address in order to statistically report the usage of Army libraries.

2. Resource people present were Nell Strickland and Maj. Girard from TAGCEN.

3. Various questions and arguments were aired in our attempts to settle on a reasonable approach to statistics keeping.

4. As a starting point we decided to look at the core items so marked in the new __Survey__ __of__ __Federal__ __Libraries__ to determine if those items could be used as points of study.

5. Maj. Girard felt from his point of view this Working Group was the most important since we have the responsibility for developing the kinds of statistics necessary to justify and further enhance our programs at the DA level. He felt that the statistics we submit should support our budget needs. His attendance at our sessions, he said, was not an indication that he could tell us what statistics DA wants, but rather to gather data from us, the "experts", on what information should go forward. His insightful comments to the members of the Working Group were most helpful.

Session 2

1. Working Group 1 made the following recommendation to the Institute: Recommend that the core items from the Federal Library Survey be used as the basis for an annual report to be submitted to the Army Library Management Office. There is a definite need to establish an Army Library Management Report for the purposes of budgetary considerations.

2. Further, a suggestion was made that a working group on manpower survey/staffing guide be developed for the next Army Library Institute.

3. In order to study just what type of statistics we should keep, we decided to break into subgroups based in part on the topics of the core items in the Survey. The five subgroups are as follows:

        1. public services

        2. physical facilities
        3. personnel
        4. format (Should form be standardized? How should it look?)
        5. Other than core items what other sections of the Survey
           could we use?

4.   Timetables were set up for report submission to insure that a
final report would be in the hands of the ALI committee by 1 Nov 78.

                        Respectfully submitted,

                        KATHARINE HAYES/s/

Report of Working Group 2: <u>TRAINING PROGRAM FOR LIBRARY TECHNICIANS</u>

Last year's working committees accomplished three tasks:

1. A survey of libraries which showed number of technicians and training opportunities available to them;
2. An informal collection of information on what needs technicians felt they had;
3. A pilot training course.

The survey questionnaire was sent to 197 libraries. 147 replied; of these, 112 had technicians on the staff. Of the 112 libraries having technicians, only 36 offered any type training except OJT. We also gleaned a lot of information on training tools used and the number of libraries of all kinds which use volunteer help. The overall message of results from two committees was that technicians badly need training opportunities.

The pilot training course is a technician's introduction to the library and reference tools. It is designed as a complete lesson plan package that can be shipped out with audio-visual and cassette teaching aids. It will be tested as a teaching package at 3 locations during the coming year and parts will be tested as a correspondence package.

Our survey also determined the need for a central place which will gather information as to formal training opportunities -either by attendance or by correspondence. These will be gathered, and sent as small news items in the "Other Items of Interest" notes which are part of the DA MSL book kit lists.

Our survey committee will conduct a research into other sources of help for those library technicians operating alone in remote areas without official staff channels for help. We will ask for SOP's, handbooks, manuals and other items which librarians have compiled to facilitate work or use as training guides in specific areas. We will also ask for people to volunteer as resource persons in specific areas. Your cooperation in completing the questionnaire and forwarding any material which might be helpful is solicited.

The committee's projects must be continued for several more years to do an effective job.

Respectfully submitted,

MADGE J. BUSEY,
Chairperson

Report of Working Group 3:   COOPERATIVE LIBRARY PROGRAMS: SHARED CATALOGING

The chairperson opened the meeting with a brief review of goals and activities of the 1977 Army Library Institute Shared Cataloging Group. One of the primary objectives of the first-year group was compilation and publication of a bibliography on Ohio College Library Center (OCLC) services. It was discovered in the second institute meeting that the bibliography never reached the majority of Army libraries/librarians as planned, and it was decided to reprint/redistribute the original bibliography. The floor was then opened to recommendations for potential activities of the Working Group for the coming year.

After some discussion the following recommendations evolved from the Group:

a. That Points of Contact (POC) be appointed by Command librarians NLT 15 SEP 78 to serve as resource people in the area of OCLC/shared cataloging. Resource people would be nominated from current Army OCLC users, and it would be their responsibility to serve as advisors to the larger Army library community in all matters pertaining to OCLC/FEDLINK. POC's assistance could range from explanations of OCLC services, technical advice on ADPE, to assistance in complying with all Army regulations pertaining to acquisition of subject services;

b. That POC references discussed in (a) above be included in the republication of original OCLC bibliography;

c. That for future convening of this working group to more effectively function, composition of the group be more closely defined, i.e. restriction of members to cataloging/technical processing personnel, current OCLC users, and only those other Army library personnel with an active interest in this functional area;

d. That additional OCLC bibliographic citations be forwarded to Mrs. Mary Jane Weiss, Fort Leonard Wood, MO, for updates to original bibliography;

e. That a full report on the TRADOC Shared Cataloging Project be included in the 1979 Army Library Institute program;

f. That the possibility of name authority files, particulary in the area of "U.S. Army" and other military agency entries, from both the Army War College and the Military History Research Collection, Carlisle Barracks, PA, be investigated as a basis for an Army-wide name authority file.

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The second scheduled meeting of this Working Group was not convened.

Respectfully submitted,

JoAn I. Stolley
Chairperson

Report of Working Group 4:   COOPERATIVE LIBRARY PROGRAMS: RESOURCE SHARING

Working Group 4 considered a wide range of cooperative activities during
the course of two scheduled sessions. Full group participation in dis-
cussion of old and new projects led to the following actions:

1.   INTERLIBRARY LOAN DIRECTORY - The fact that a cooperative product was
available at the Institute was a matter of pride. The ILL Directory was
distributed to a representative from each library in attendance, with
remaining directories to be mailed from Ft. Campbell under the direction
of Ms. Wooten, Project Director. The group recognized the achievement
of Ms. Wooten as well as Ms. Nyce, HQ FORSCOM, who arranged for printing
the directory.

It was the general feeling of the group, as expressed by Ms. Lindsey,
Ft. Lewis, that efforts should be concentrated on doing one project well,
rather than fragmenting the group with multiple tasks and divisions at
this early stage. To this end, further development of the directory
will be pursued:

        a.   Update and additional entries   Mary Nell Wooten, Coordinator

        b.   Subject indexing
             Sec I   Post/Patient   Lyle Minter & Patricia Jardin
             Sec II   School/Special   Doris Mosley & Frances Barrett
             Sec III Scientific/Technical   Dianne Tapley
             Sec IV   Medical   Patricia Altner
             Sec V   Corps of Engineers   Philip Casey

             Project Coordinator is Patricia Olstead; she will interface
             with Jim Byrn to include appropriate items from his Census
             of Special Library Resources.

        c.   User Survey - to be conducted in February, 1979; Dean Burns,
             Coordinator.

2.   OTHER PROJECTS - Acceptance of the tasks involved in maintaining the
ILL Directory as a viable resource did not preclude consideration of
other possible projects:

        a.   Update/index the Army Library Study Directory (tabled)

        b.   Compile Resource Directory of Army Libraries
             Comments: This would be a mammoth undertaking. The profile
             developed at HQ TRADOC is excellent and it could be used as a
             model; the profile will be distributed to members of the working
             group for examination and a beginning effort to cover their own

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installation.

c.   Index Army Times
     Comments: Dissatisfaction with indexing of Army Times by Air
University Index was expressed; full indexing provided by Ft.
Benning is edited to include only items of interest to the Air
Force community. The group felt that complete indexing of all
Army periodicals is vital.

Recommendations submitted to the Recommendation Committee for vote:

1. Recommend acceptance of the directory as an official publication to
facilitate distribution and inclusion in DDC.

2. Recommend that all Army libraries accept telephone ILL requests from
other Army libraries.

3. Recommend that HQDA Library Service show concern over lack of complete
indexing of Army periodicals by pursuing the possibility of including
indexing as a pilot project with emphasis on a cooperative effort among
the services.

4. Recommend that this working group be an ongoing committee.
                          •

Group Newsletter: Lyle Minter, Vint Hill Farms, will continue to edit
a group newsletter.

Group Recorder: Doris Mosley, Carlisle Barracks.

                                        Submitted by,

                                        JOAN M. FREDRICKSON

Report of Working Group 5: COOPERATIVE LIBRARY PROGRAMS: PROCUREMENT

Session 1 of Working Group 5 was held Wednesday, 24 May 1978, with
full membership in attendance. Session 2, Thursday, 25 May, was
attended by core group members only. Session 3, Friday, 26 May, was
again a full working group session. Each session was convened by
Ms. Dorothy A. Cross, Chairperson. The recorder was Ms. M. Malinda
Johnson.

The Working Group reviewed its purpose, goals and progress. Copies
of two unpublished reports were distributed to the members: 1) the
Working Group's report of its proceedings during the 1977 Army Library
Institute; and 2) the first quarterly progress report, which had
included a short questionnaire designed to gather specific infor-
mation about procurement problems.

Discussions following the review disclosed:

1. Procurement problems are still a reality.
2. These problems are apparently of two kinds:
    a. resistance or lack of knowledge on the part of
       procurement personnel.
    b. unfamiliarity with procurement procedures or lack
       of knowledge on the part of the librarians.
3. The preparation of Procurement Information Letters (PIL's)
   requires specific documentation.
4. No documentation of specific cases had been received by
   the Working Group.

The Working Group then divided into subgroups in order to: conduct
a mini-survey of the librarians attending the Institute to determine
types and prevalence of procurement problems; formulate and conduct,
through wide distribution, a more comprehensive survey of procurement
problems; develop procedural guidelines for librarians; and prepare
a recommended training packet for procurement personnel. Sub-group
leaders were chosen as follows: Mini-survey - Ms. Virginia Chaney;
Comprehensive Survey of Procurement Problems - Ms. Juanita Taylor;
Guidelines for Librarians - Ms. Agnes Frey.

The survey of the librarians attending the Army Library Institute
was conducted and produced the following statistics:

Type of Procurement Problem	Frequency Problem Was Cited
Procurement of Periodicals	16
Establishment of Blanket Purchase Accounts	14

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Establishment of deposit accounts          14
Procurement of Books                       11
Other:
    Problems with jobbers, especially with Key
      Book Service
    Advance payments
    Sole source procurement
    Stalling, by P & C, and by vendor
    Location of procurement office (e.g., at another
      installation)
    Acquisition of foreign materials
    Procurement of equipment
    Procurement of audio-visual materials, microforms,
      and related supplies and equipment
    Small supply items (e.g., specialized library supplies)
    Local purchases
    Standing orders.
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The comprehensive questionnaire on procurement problems was drafted and discussed by the Working Group. The questionnaire will be refined within two weeks and distributed to Working Group members for comment. The final version will be distributed to all Army librarians for completion. The target date for this action is 15 October 1978.

The sub-group addressing the development of procurement guidelines for librarians plans to study all pertinent ASPER's, APP's, regulations and directives, make contacts with procurement officers at all levels, complete an analysis of the information received on the completed questionnaires, develop guidelines, and to investigate the feasibility of formalized procurement training for librarians.

The questionnaire results will also be evaluated and used as documentation to support the preparation of PIL's and the preparation of the training packet for procurement personnel.

Working Group 5 made two recommendations to the Institute: 1) that the Working Group be continued for another year, and 2) that a workshop on procurement procedures be included in the 3rd annual Army Library Institute with Working Group 5 actively involved in the planning of that workshop.

DOROTHY A. CROSS/s/
Chairperson

Report of Working Group 6:   REVISION OF CPR 950-21, ARMY CIVILIAN
                             CAREER PROGRAM FOR LIBRARIANS

1. During the two meetings of working group #6, Wednesday evening and
Friday morning, the discussion centered on training requirements, intern
program, and the commands' authority to reassign personnel. A first draft
of chapters 1-4 of the proposed revision of CPR 950-21 was handed out to
the core members for their review/comments.

2. It was the intent to use the two sessions to start work on the appen-
dix which will contain the training requirements and suggested courses.
In view of the strong reaction from institute participants to parts of
the report on the revision of the regulation, presented to them Thursday
morning, the second session of the working group was devoted to further
discussion of the intern program and the new reassignment authority
contained in CPR 950-1.

3. In the area of training, the group discussed minimum training goals/
objectives and agreed that the minimum training objective should be 40
hours annually. Some discussion took place concerning the requirements
established by the Librarian Career Program Planning Board of "two/three
courses of 5 days duration or equivalent" in view of the DCSPER decision
that a course will be counted as a course regardless of duration. The
working group indicated that they felt that more credit should be given
for a course which, as an example, lasts 40 hours versus one which lasts
4 hours. The possibility of using the system which recently has been
gaining support in various professions, of providing credit for continuing
education beyond the professional degree through counting "contact hours"
was discussed. A specific number of "contact hours," for example 10 hours,
is established as one "Continuing Education Unit" (CEU). Training require-
ments/goals are then based on the number of CEU's established as appropriate/
minimum when considering candidates for promotion. It was agreed that the
possibility of using such a concept/system in our training and development
requirements should be pursued further.

4. In our discussion of the intern program, major emphasis was placed
on the intake grade level and competitive versus non-competitive promotions.
A great deal of concern, however, was also voiced in the areas of uniform
quality intake and training of interns. One of the possibilities brought
out concerned consideration for establishing one centralized place to assume
the responsibility for recruitment, training requirements, and review of
training accomplishments for all librarian interns. The working group was
unanimous in its support for the GS-9 intake grade level. In considering
the aspect of competitive versus non-competitive promotions, the vote was
split, 13 voted for competitive and 2 voted for non-competitive promotions.

5. The group discussed further the new authority contained in CPR 950-1

for commands to reassign personnel for developmental purposes without requesting a referral list from HQDA. The group felt that there are various advantages in this new authority but that the concern expressed by some institute participants for possible misuse of this authority should be considered. It was agreed that an attempt would be made to add "safeguards" against misuse while still retaining the positive aspects of the reassignment authority. However, the vote by institute participants in favor of a recommendation, presented by the Recommendations Committee, to except the Librarian Career Program from applying this new authority, appears to have cancelled the need for any further consideration in this area.

6. The core members were requested to review the first draft of chapter 1-4 and submit their comments/recommendations to the undersigned not later than 1 July. The projected date for submission of the proposed draft regulation to HQDA is not later than 31 December 1978.

7. Recommend that working group #6 be discontinued upon submission of draft regulation to HQDA.

INGJERD O. OMDAHL/s/
Chairperson, Working Group #6

APPENDICES

KEYNOTE ADDRESS

MANAGEMENT IN INTERESTING TIMES

The preliminary announcement for the 1978 Army Library Institute suggests rather strongly, both in its content and in its tone, that these are not exactly the best of times for Army libraries or for Army librarians. Just to show you how really bad things are, I am the after-dinner entertainment!

I was very pleased to be invited to participate in this year's Army Library Institute, because I don't know as much about Army libraries and Army librarians as I ought to, and I thought this would be a very good opportunity to get acquainted. Now that I've spent a day and an evening with you, if somebody asked me, "What are Army librarians like?" I'd say, "Well, they're either very polite or they're very masochistic." Because, on several occasions today, many of you have said to me, "I'm looking forward to hearing your talk tonight." After having been talked at all morning, and all afternoon, it's difficult for me to imagine that you could be looking forward to hearing anybody talk tonight.

The other thing I'd say about Army librarians is that they are very thoughtful. I realized that when I looked at the program for tonight and saw that three hours has been set aside for this talk. I thought, "Three hours - how thoughtful! They must have figured out that I'm Irish!"

The way this evening segment of the Institute has been planned, as I understand it, is that I am supposed to talk and you are supposed to listen. The hope is that you won't finish your part before I finish mine.

There is an ancient Chinese curse that reads - "May you live in interesting times." For us as librarians and library managers, these are certainly "interesting times" in the true Chinese sense of that adjective. "The times," writes Stephen Grabaud in a recent issue of Daedalus "are propitious for introspection, and also for cursing those who govern in high places, whether in the university, the state or the nation." At the risk of straining a paraphrase, there has rarely been a time in the course of human events when librarians have been called upon to do so much, for so many, and been given so bloody little of the wherewithal needed to do it.

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This kind of managerial climate - one in which you and I are being asked to respond to infinitely expanding demands for services, and to do so in a context of limited, finite, or even diminishing resources, is at best paradoxical, at worst, downright demoralizing. In management today, an optimist is defined as somebody who says he's not sure how things will turn out.

All of this constitutes, to put it mildly, a challenging environment for those of us who have managerial responsibilities. I believe that our profession, that you and I, can, must and will respond creatively to that challenge. This Institute has been planned to help you to respond more creatively as library managers to the challenge of these interesting times. Tonight, I'd like to share with you my perception of some of the more general aspects of the managerial role which seem to me to be relevant to almost any library situation. There are fourteen points that I hope to touch on*, and you have them before you, as a kind of summary outline headed "Maxims for Managerial Survival in Tough Times." As I go along, I'll try to signal you periodically, so you'll know how much longer I'm likely to be talking.

To begin with, I probably ought to say something about my own credentials for talking about management. I consider myself a manager. Management is what I do. It's almost the only thing I've ever done in twenty-four years in librarianship. I've been a public library director and an academic library administrator, and for the last fifteen years, I've been a college and university administrator. That last may either mean that I've either had fifteen years of experience in academic management, or I've had one year of experience fifteen times over.

I've also been a consultant to a fair number of public, academic and special libraries, almost always dealing with management problems and concerns. Not, I hope, in the sense in which Robert Townsend defines a consultant. "A consultant," Townsend says, "is a man who borrows your watch to tell you what time it is, and then neglects to return it."

I've been a teacher of library administration for almost as long as I've been a practicing administrator.

I use the term practicing administrator in the sense in which a friend of mine uses the word practicing when he inquires of a mutual friend of ours, a dentist, whether he is "still practicing dentistry" and receiving an affirmative response, asks him if he's "getting any better at it?"

*"Maxims for Managerial Survival in Tough Times" follows this speech.

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I'm a practicing administrator in that sense--administration is what I do and I'd like to hope that after twenty plus years of "practicing" I might be getting a little better at it.

Pause for a moment to consider what "getting better at" management through experience might mean, because I think that question relates to a very fundamental aspect of management as an activity. It might seem logical, at first glance, to suppose that one sign of improved managerial performance is that one makes fewer mistakes.

Do experienced managers make fewer mistakes than inexperienced managers? If they are doing their jobs effectively, I doubt that they do make fewer mistakes. I suspect one difference between the effective and the ineffective supervisor is not that the effective supervisor makes fewer mistakes, it is that the experienced supervisor who is functioning effectively makes different mistakes, that is, he or she does not repeat the same mistakes.

The manager who makes fewer mistakes may actually be declining in managerial effectiveness and sidestepping or avoiding the very administrative and supervisory responsibilities which are, or ought to be, the essential content of his or her work. Kenneth Shaffer, Dean Emeritus of the School of Library Science at Simmons College, puts this issue in this way.

> "Library administrators make mistakes as well as create significant achievements, and probably the best administrators make far more mistakes than the poorest ones. It has been my experience that most administrative errors are made through faulty strategy, tactics and timing rather than through lack of adequate information. More mistakes occur through <u>failure</u> to make a decision than in decisions which are made and turn out to be wrong." (Kenneth R. Shaffer, <u>Decision Making</u>, Linnet Books, 1971, p. vii).

The notion that the best managers make the most mistakes is the kind of discovery that may have a paradoxical effect on us. On the one hand, it's consoling to find out that our counterparts don't always bat 1,000 either; that facing the same kinds of problems we face, they don't do any better job of dealing with them than we do. It's rather like the chap who, when asked, "Which, in your opinion is worse, ignorance or apathy?" responded, "I don't know and I don't care!"

In more pessimistic moments, this kind of discovery may lead us to conclude that library managers as a class are the perfect illustration of Peter Drucker's observation that "the experience of the human race indicates that the only person in abundant supply is the universal incompetent." Or, as Drucker has written elsewhere, that indeed "so

much of what we call management consists of making it difficult for people to work."

Let me suggest that there are two useful general conclusions to be drawn from the discovery that experience does not make the manager less error-prone, and that the frequency of error is often directly, rather than inversely, proportional to the effectiveness of the manager. One has to do with the content of the managerial assignment and the other has to do with the character of the managerial environment.

Let's look first at the content of the managerial assignment. I submit that the most important and demanding responsibility of the manager is to identify and address what I would term "complex problems." Kenneth Schnelle has described, quite accurately I think, the character of the complex problems which are the central substance of the managerial assignment.

> "Characteristically, in a complex problem, the problem itself is not clearly defined, the crucial fixed and variable elements may not be identified; and even where they are identified, they frequently will be either unmeasured or measured in ordinal terms only. Finally, even where the elements are both identi- fied and cardinally measured, the relationships among them may be obscure. The complex problem, be definition then, is the problem which is not precisely stated. The problem elements are either poorly measured or even completely unmeasured, and the relationships between or among variables are unknown or exceeding- ly tentative. Typically, the complex problem involves an almost infinite number of facts. Most of them are unknown. Those which have been identified are seldom quantified. The relation- ships between or among variables are usually matters of wild conjecture rather than certain knowledge." (Kenneth Schnelle, Case Analysis and Business Problem Solving, McGraw Hill, 1967, pp. 2-3).

Let me suggest that one of the most important kinds of under- standing that the manager can achieve is to recognize and accept the fact that complex problems are the most challenging aspect of the managerial assignment and that, by their very nature, they do not lend themselves to simple, easy or complete solutions. As Anthony Athos and Robert Coffey point out in their book Behavior in Organi- zations, in addressing complex problems:

> "There is no one right answer...there are usually several alternative courses of action open to us....and often, more than one of them is 'right,' 'okay' or 'good.' Further, we usually

do not know whether they are 'good' or 'bad' decisions until
we have implemented them and seen the results..the problems
in life that matter are more for living with than solving."

Addressing complex problems, to which there are usually no
single right answers is, then, a central aspect of the content of
administrative work. And, complex problems arise in managerial en-
vironments that are, themselves, not static, but highly dynamic. The
managerial environment is dynamic in character in at least two dis-
tinct and different respects. The first is the sequential character
of decision making--the fact that making a decision almost inevitably
results in the necessity to make another decision, and making that
decision, in turn, results in the need to make still a third decision.
Students of management refer to this phenomenon as decision-treeing.
Managerial environments are, by their nature, open rather than closed
systems. All decisions have consequences, one of which is that they
commonly engender a need to make still further decisions.

Let me suggest, by the way, that one characteristic of the effec-
tive manager seems to be the capacity to anticipate the consequences
of decisions, especially those kinds of decisions that involve
choosing between two or more less-than-ideal alternatives. And less-
than-ideal alternatives are almost always the only alternatives
available to solve complex problems. One important difference between
mediocre and effective performance in the managerial role is that
the effective manager has the ability to take the long view, to look
beyond the immediate decision that is required to forecast accurately
the likely outcomes of choosing any of the available options. In
this sense, the managerial role involves the frequent writing of
futuristic scenarios, and the test of managerial effectiveness becomes
the extent to which these scenarios turn out to match actual outcomes.
To reduce the concept to a compact truism--the effective manager is
one who hopes for the best while planning for the worst.

Let me return to the other characteristic of the managerial
environment which makes it of necessity a dynamic one. We've identi-
fied those sequential and open aspects of management which contribute
to its dynamic character. The other is the inevitability or organi-
zational dynamics. Let me suggest as strongly as I can that every
library manager must understand--and far more important--must be able
to accept--the unalterable fact that organizational change is both
inevitable and desirable. The logic of this view is embedded in a
very simple formulation that I modestly call

Galvin's First Law of Institutional Dynamics

"Given a dynamic external environment, no institution can ever

remain static. It is either improving or it is declining; it is
either expanding or it is contracting; it is either getting stronger
or it is getting weaker; it is either getting better or it is
getting worse."

If most librarians recognize and comprehend the First Law of
Institutional Dynamics, they do not always reflect an awareness of
it in their managerial behavior. More often, particularly in these
traumatic and perilous times when the very existence of libraries is
threatened by powerful economic forces, many library managers have
fallen into the trap of attempting to deal with the present as though
it were the environment of the past, or of expending energy in what
I perceive to be the utterly futile task of trying to alter the present
to make it more nearly resemble the past. The Carnegie Commission on
Higher Education, in its final report titled Priorities for Action,
has provided a strikingly accurate description of the insidious symp-
tomology of this highly destructive cast of mind. They write, in
language every bit as applicable to other types of libraries as it
is to the academic world, of:

> "A traumatic loss of a sense of assured progress, of the inevi-
> tability of a better future, has occurred. Instead, there has
> developed more of a nostalgia for a Paradise Lost. The tone of
> so much thought now is more an attitude of how to hold on to as
> much of the past as possible--or even to retrieve lost aspects of
> it--rather than of how to confront the future directly; of how to
> avoid change, since the most possible changes are thought to be un-
> favorable or even disastrous, rather than of how to plan and sup-
> port constructive new developments. The prevalent attitude is
> more to look back with longing than to look ahead with hope--the
> situation may be bad but it cannot be improved; the Golden Age
> of the past is more attractive than any conceivable prospects
> for the future."

I call the disease - pernicious managerial nostalgitis. It is a pro-
gressive, debilitating affliction which strikes those who do admini-
strative work, and is almost invariably organizationally fatal.
William Birenbaum, writing in the Chronicle of Higher Education about
the fiscal plight of the City University of New York, is highly
specific both in identifying the grave dangers inherent in the kind of
administrative nostalgitis I've been talking about, and in suggesting
ways in which managers can respond affirmatively, rather than negatively,
to the question "Is there institutional life after retrenchment?"
He writes:

> "To avoid death, one must imagine a future beyond retrenchment.
> Without either a history or a vision of tomorrow, everything

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> collapses into the moment, the essence of which is to survive,
> Survival is guided by self-interest, transitory and negotiable,
> like the stocks on yesterday's market. In this defeat, the
> University (here we might substitute "library") is beginning to
> feel like a jungle in which little bands of cannibals are secretly
> sharpening their spears back in the departmental villages."

The message is clear--you gotta have a vision! (point #8 on the 14-point
outline) You have now passed "go," and are 4/7's of the way to the
cocktail lounge!

I think there is a bit more that might be usefully said about this
matter of change and the inevitability of change within organizations
and institutions, as well as about the ways in which we, as managers,
respond to change and cope with the inevitability of flux. What seems
to me critical for the manager who seeks not merely to survive, but to
flourish in difficult times, is that he or she achieve a recognition
and acceptance of the essentially dynamic character of management, to
recognize that the managerial environment is by its very nature a
dynamic, not a static one. I believe that much managerial energy con-
tinues to be expended in pursuit of the false and hopeless goal of
achieving a static state. My teacher of library administration used
to talk about the successful administrator as a person who had "admin-
istered himself out of a job." Either he was naive in his understanding
of the basic character of library administration, or, more likely, I
was naive in my understanding of what he was trying to convey. If so,
this is a naivete that is still rather widely shared. I am speaking
of the incorrect perception of the managerial task as being one that
comprises identifying a finite number of problems within an organi-
zation, and proceeding to deal definitively with each one in turn,
until there are no more problems left to solve. This notion of the
managerial role is based on the mistaken idea that some static state
of perfection can be achieved within an organization--that the job of
the library administrator is simply one of systematically setting things
right and then just keeping them that way. In particular, this is a
characteristic attitude that seems to be widely held by staff, and one
of the major obstacles to mutual understanding and effective communica-
tions between staff and administrators.

The hard lesson--perhaps the most difficult one for most managers
to learn and even more difficult to accept--is that the content of
management is problem-solving; that if there were not always another
problem waiting in the wings to replace the problem that we've just
dealt with, we'd be out of a job. As managers, I think it is essen-
tial that we and our staffs arrive at a clear understanding and accept-
ance of the fact that no matter how capable or industrious or dedicated
we as administrators may become, we will never be able to set things
wholly and permanently right, because every human organization will

inevitably, by its very nature, continuously generate new problems. Indeed, the very absence of new problems is often indicative of a corresponding absence of institutional progress. When I heard that last statement quoted from the platform this morning, I thought, "Did I actually write that?" It has a dreadfully platitudinous ring, but in my experience and observation it is nonetheless often true. It is also often true that an inability to accept and live comfortably with this aspect of management is likely to engender highly counterproductive attitudes on the part of the manager, most notably a feeling that he or she is the object of persecution by both the staff and the clientele. That is a trap that I suspect all of us who do administration are inclined to fall into from time to time for quite understandable reasons, but I submit that it is essential that administrators recognize that this attitude, if it is allowed to persist, is both dangerous and destructive to the administrator and to the organization. Of course, as my fifteen-year old daughter is fond of pointing out, "It's okay to be paranoid, if everybody really is out to get you!"

A closely related notion that is both naive and misleading is the view held by some managers that systems and documents, in and of themselves, possess problem-solving power. Their goal is to "perfect our documents and systems." My students in library management courses often express the view that policy statements are like preventive medicine--that either a given problem would never have arisen if an adequate policy statement had been in existence, or that such a statement would carry in it the resolution of any problem. I submit that the reality of library administration is, in fact, more often reflected in a scenario such as the following:

Somebody in authority recognizes that a problem exists within the library.
"Gee, we ought to have a policy statement on that."
With considerable effort, a document is drawn up setting forth a policy, or procedure, a methodology or a set of priorities to govern future decisions.
The resulting document or system not only does not prevent the reoccurrence of the original problem or others like it, but often generates a whole new set of problems that either didn't exist before or that nobody identified as problems before.

The important points to keep in mind for managers, I think, are that no policy or procedure can ever be formulated for all time, and also that no policy statement, no matter how expertly prepared or written, ever in and of itself, solved a problem. The best materials selection policy never, in and of itself, answered the question:

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"shall we buy this book?" or "will we need two prints of this film?" or "three subscriptions to this journal?" The best written, most comprehensive set of criteria for staff performance evaluation never, in and of themselves, provided the answer to the question "shall we recommend Ralph for a permanent appointment in recognition of his abilities, but in spite of his obvious limitations? Or, shall we get rid of him and replace him with somebody else who's more intelligent even if less pleasant? Or more pleasant, even if less intelligent? Or somebody who's more intelligent and more pleasant?"

Consider, for example, one of the more popular contemporary problem-solving techniques - the systems approach. Used correctly, the systems approach can be a very powerful analytical tool. However, as Arthur Coombs points out,

> "a systems approach is simply a device for making certain you accomplish your objectives. If your objectives are in error, the systems approach simply guarantees that your errors will be colossal."

The thing is not to abandon such useful management tools as the systems approach, but to avoid confusing the tool with the task to be performed - to avoid the application of what is widely known among students of the management process as Kaplan's Law of the Instrument named for the contemporary philosopher, Abraham Kaplan. Kaplan has observed that we tend to try to address all problems with whatever tool we happen to have at hand at the moment, whether it is well-suited to the problem or not. "Give a small boy a hammer," Kaplan writes, "and it will inevitably turn out that everything within his reach needs to be pounded."

The point is simply that documents and systems do not solve problems. People solve problems, and they can frequently do a better job of problem solving with the aid of documents that have been thoughtfully prepared and policies that have been formulated and promulgated in a timely fashion.

I'd like to examine very briefly one or two critical contemporary aspects of change that seem especially important in their impact on library management now and in the near term future. A crucial area involves the linking together of three concepts--planning, accountability, and funding. This relationship is clear in the Palmour Study of Army Libraries.

Traditionally, planning for libraries was conceived of as something conducted wholly outside of the context of current operations, something

oriented toward the long-term future, and consisting of glowing predictions of a bibliographical millenium to come. The outcome of this quite delightful form of fantasizing was a good deal like the effect of the old motion picture travelogues of the exotic South Sea Islands that used to fascinate me as a child. The major reasons I found them so enthralling, I think, was precisely because they had absolutely no direct relationship either to my own customary environment at that time, or to anything even remotely likely to happen to me at any time in the then foreseeable future.

Planning today has become something very different from the kind of blue-sky exercise of the creative imagination that I've just been describing. Planning has become an activity that is central, rather than peripheral, to the ongoing program of any library. It occurs in a tightly telescoped time frame, usually five years at a maximum. Nobody attempts ten or twenty-year projections anymore.

The current approach to planning is as much concerned, if not, in fact more concerned, with how we are going to get there as it is with exactly where it is we are going as an institution. And the concern with how we are going to get there—how we are going to achieve the specific objectives we define for our libraries—is stated in terms of a series of direct questions that require quite explicit responses stated, in highly quantitative, very precise, extremely realistic terms. Such questions as:

What inputs (dollars, human resources, space) will be needed to bring us where we want to go?

What milestones can be identified that will enable us to measure progress towards objectives?

What if we decide to reverse direction? Will it be possible? At what cost?

How will we know when we've arrived? (Or, to put the question another way, how much will ultimately be enough?)

When we get there, will it have been worth the trip? And how will we measure the value?

hese are exactly the kinds of questions one must be able to answer n making a decision about an automated circulation system.

These statements are intended to help make clear and underscore he quite explicit relationships and direct linkages among the planning udgeting and institutional accountability functions. And by account-

ability, I refer simply to the fact that in exchange for the control of specified quantities of resources (people, dollars, space) we are required to make certain explicit commitments in terms of projected institutional, programmatic or service objectives that are expressed in measurable terms. And the consequence of making casual commitments, which we are unable to honor, is rather similar to the consequences of writing bad checks--it doesn't take very long before nobody wants to cash our checks any more. If the product of the planning process is not a set of clearly stated, explicit, measurable and achievable institutional goals for the library, then we are no longer credible in the planning and budgeting game.

In this critical area of institutional and fiscal accountability, may I submit that we have not been, and generally are not now, in a particularly strong position to respond effectively. For one thing, we have not always developed a sufficiently acute sense of collective urgency with respect to taking an active role in assuring that the institutions for which we are responsible as managers will, indeed, survive. For another, we have lacked adequate or effective means of identifying and describing the quality of our institutional product. It is service--by its very nature largely intangible and difficult to measure. Consequently, we are placed in a difficult posture with respect to accountability. We are neither able to plan on the basis of how much might ultimately be enough, nor have we been able to account in any very satisfactory way to fiscal authorities for precisely what we have accomplished with the resources that <u>have</u> been made available to us. We have little more to offer than statistics of collection size and circulation, and we are discovering that these are data of dubious authenticity and even more dubious significance to funding authorities. The great danger, to borrow a phrase from Robert Munn, is that the library comes to resemble "a bottomless pit" in the eyes of those who make the ultimate funding decisions.

Let me suggest that we desperately need, as managers, to find alternative vehicles of institutional accountability. Adequate measures will place less emphasis on traditional quantitative indicators of library performance such as circulation and acquisitions data, and more emphasis on qualitative evidence of providing meaningful services to clients. In justifying our institutional existence, we will, in my view, need to become less materials oriented and more client oriented, to find ways to collect and quantify client attitudes towards the library and client estimates of its resources and services and to compare these data over time. Finally, and most central to effective planning, accountability and budgeting, it will be essential that we devise and implement sound methods for establishing realistic, achievable, appropriate service goals and for reporting in a convincing and entirely candid manner the extent to which these goals have, or have

not been realized.

To summarize quickly, I have been trying in this initial overview of the current climate of library management to suggest that change of a very fundamental kind is both desirable and inevitable, that library managers must possess or quickly develop the ability to both initiate institutional change and to respond constructively and creatively to changes that result from the dynamic character of the larger governmental, fiscal and institutional environments in which all types of libraries exist, and that attempts to preserve the status quo at all costs are likely to prove both futile and counterproductive. In this respect, let me again quote the report of the Carnegie Commission on Higher Education in effectively highlighting the attitudinal barriers to urgently needed institutional change among administrators:

> The Commission speaks out against "the current survivalist mentality of higher education, particularly among administrators. The attitude is often one of maximum gain at no cost--THE MAXIMIN PRINCIPLE--and since all institutional gains of im- portance have costs, the no-cost doctrine means no gains of importance. This is not only the result of the instinct of faculty members and administrators who feel themselves (often correctly) as being on the defensive, but also of the actions of many boards of trustees in selecting "consensual" administrators (concerned solely with mere consent)...rather than builders... The rational approach for a consensual administrator who wants to hold on to his job is to take no risks, to assume a posture of low visibility, to say nothing but to say it well, while still being 'with it.' The graceful protection of the status quo is the course of action for survival."

Let me suggest to you strongly that the acceptable alternative to the authoritarian style in management, which has in these times fortunately become no longer viable, is not the form of consensual administration described by the Carnegie Commission, and regrettably widespread at present not only on college campuses, but in public, school and special libraries as well. Management by mere consensus cannot be effective as the exclusive approach. The alternative is to find and develop new styles of leadership--leadership that seeks consensus which is sound and responsive to present and future needs, but leadership that takes active responsibility for identifying appropriate directions for library development and for the vigorous, aggressive pursuit of clearly defined institutional and client interests. It is in the development of these new leadership styles and their mastery that the principal challenge as well as the chief opportunity for effective library management will be found.

Our topic this evening - the topic of this Institute - is management, sometimes called "administration." The people who do administration are called administrators. At some point during this institute, you may very well find that you are asking yourself the question, "just what exactly is an administrator." Anticipating that that question might arise, I'd like to close my remarks this evening by sharing with you one anonymous writer's answer to the question - "What Is An Administrator?"

"What Is An Administrator?"

"Administrators are a fortunate lot; for as everyone knows, an administrator has nothing to do; that is, except:

To decide what is to be done; to tell somebody to do it; to listen to reasons why it should not be done, why it should be done by somebody else, or why it should be done in a different way; and to prepare arguments in rebuttal that shall be convincing and conclusive.

To follow up to see if the thing has been done; to discover that it has not been done; to inquire why it has not been done; to listen to excuses from the person who should have done it and did not do it; and to think up arguments to overcome the excuses.

To follow up a second time to see if the thing has been done; to discover that it has been done incorrectly; to point out how it shall be done; to conclude that as long as it has been done it might as well be left as it is; to wonder if it was not the time to get rid of the person who cannot do a thing correctly; to reflect that in all probability any successor would be just as bad or worse.

To consider how much simpler and better the thing would have been had he done it himself in the first place; to reflect satisfactorily that if he had done it himself he would have been able to do it right in twenty minutes and that as things turned out he, himself, spent two days trying to find out why it is that it had taken somebody else three weeks to do it wrong and to realize such an idea would have a very demoralizing effect on the organization because it would strike at the very foundation of the belief of all employees that an administrator has nothing to do."

Maxims for Managerial Survival in Tough Times

1. The best managers make more mistakes than the poorest ones, but they don't repeat the same mistakes.

2. The content of management is problem solving.

3. The role of the manager is to address complex problems to which there exist no single 'right' answers.

4. One decision leads to another.

5. The effective manager anticipates accurately the consequences of alternative decisions.

6. The prudent manager hopes for the best and plans for the worst.

7. Given a dynamic external environment, no organization can ever remain static; it is either improving or it is declining, it is either expanding or it is contracting, it is either getting better or it is getting worse. (Galvin's First Law of Institutional Dynamics)

8. You gotta have a vision!

9. You'll never set things permanently right.

10. People solve problems; policies, systems, documents and procedures don't!

11. We have to be able to say how much might ultimately be enough.

12. Leadership is not authoritarianism; consensus is not leadership.

13. Management is a contact sport.

14. Though management is active and participatory, rather than primarily passive or reflective in character, its successful practice demands a reflective component.

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COMPUTER-BASED CIRCULATION CONTROL SYSTEMS:

A State of the Art Report

A Paper to Be Given at the
1978 Army Library Institute

22-26 May 1978
El Paso, Texas

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I. INTRODUCTION

A. MOTIVATION

It is the intent of this paper to report on the current state
of the art of computer based circulation control systems
for libraries. Some computer based circulation control
systems have been operating in libraries since the middle
1960's. During the early 1970's on-line circulation control
systems were developed and there has been increasing activity
in these systems ever since. In general, innovation in in-
formation technology is continuing. As a result it is rea-
sonable to expect that there will be continuing innovation
in circulation control systems and other automated systems
available to libraries. Although forecasting the future
is always risky, it is hoped that this review of the state
of the art will help to indicate the general directions of
our progress.

B. CONTEXT

Before launching into details of this review, we should pause
to remind ourselves of the place that circulation control
systems have in the library. As we all know, the purpose
a library exists is in order to provide an organized system
for sharing information among its clientele. Circulation
provides the mechanics of this information sharing process.
Circulation is a physical process and a control process. It
consists of maintaining a continuing flow of the physical
materials, books, tapes, records, etc. To maintain this
flow, circulation requires space - space for storing the
materials when not on loan, space for handling the materials
when they are in the process of being loaned or of being
returned from loan. The control portion of circulation is
concerned with keeping track of who is responsible for the
library materials - who has it, when it is due back, and so
forth. As we consider circulation control in depth, we
should remind ourselves that circulation has many other pro-
cedures which are not a part of circulation control. These
procedures include maintaining the collection through addi-
tion and removal of material, maintaining the order of the
stacks and of the room, inspection and repair of the materials,
sorting, and reshelving. Indeed, in some situations it may
be useful to consider as part of circulation the processes
of keeping the library open and maintaining the physical
security of the materials. It is useful to remember these

other procedures because we will need to continue to staff them even though computer based circulation control systems may give us improved control at reduced costs.

Circulation is closely associated with the other library processes of acquisition and bibliographic control. The library's patrons are often interested in the material on purchase as well as that on hand. Bibliographic control provides the mechanisms for translating the information the patron has in support of his request for information into an identification of the library's material which has the potential of satisfying this need or interest. From there, we can expect the patron to want to borrow some of the material.

While we may feel that it is difficult to measure the performance of the library, our users are seldom bothered by such difficulty. For the user there are but three questions: Can I get the material that I want: What is the cost to obtain it? And, how much delay is there before it is obtained? With the library, a circulation control system in turn should be judged by its contribution to improving the library's answers to these questions.

II. STRATEGIES OF CIRCULATION CONTROL

A.   PURPOSE AND FUNCTIONS

The principal purpose of circulation control is to provide control of physical items, books, journals, records, etc. whose use is shared among different people. This control is maintained by keeping track of such things as who is responsible for the item, who has it, where is it located, when is it due back, and what shall be done with it after that. By providing this control, it is possible to negotiate competition for use of the materials and satisfy this demand in an orderly manner. The basic circulation functions which must be available for this control are:

Charge	To temporarily assign the material to a specified person, location, or function (e.g. mends, missing, reserve). The charge period may be fixed or open.
Discharge	To release the assignment of the material and to return it to its normal assignment.

Other common circulation functions which enhance this control are:

Fines	Assessment of a fine for material not returned by a prespecified time in order to encourage the return of the material so

	that it will be available in the event of alternative demand. The due date may be set at the time of charging or at some subsequent time.
Holds	Listing of the patron who wishes to use specific material when it is available. Holds are commonly placed on an "as available" basis. However, expensive high demand materials are often "held" on a time reservation or booking basis, e.g. films.
Recalls	Notification to the present borrower that the material is to be returned by a specified time because the item is overdue or it is wanted by someone else.
Patron Restriction	Restriction of patrons from borrowing due to some condition which may be permanent or correctable.
Reserves	Short period loans (normally less than 24 hours) of materials expected to be used heavily and thus requiring immediate execution of the functions in order to operate properly.

Circulation support functions include:

| Item identification | Establishing the information which will be used to represent the item and control its circulation, e.g. the period of loan, those to whom it will be loaned. |
| Patron registration | Establishing the information about the patron, e.g. class of borrower, name and address. |

Although it is not common at the present time, circulation control systems may move toward greater control of the physical movement of materials both within the library and to and from the patron. This would include such functions as:

Packing Instructions	Indication of the items to be pulled from the shelves for transfer elsewhere, e.g. withdrawal of material from a reserve collection.
Shipping Instructions	Indication of when, how and where a set of materials is to be sent.
Shipment Receipt	Indication of receipt of the contents of a shipment at a

new location and transfer of
responsibility for the contents.

Some circulation systems provide analysis and summarization of cir-
culation activity as an aid to planning and management:

Transaction Volume	Types of transaction, charge, discharge, etc. Volume of transactions, time period loans.
Material Utilization	Classification and volume of material on loan, duplicate demand for specific material.
Patron Utilization	Classification and volume of patron activity. Patrons with high activity levels, restric-ted patrons.

Finally, some circulation systems are beginning to provide biblio-
graphic access.

Author – Title Key	Search based upon keys extrac-ted from all of the titles and authors without regard to whether the items are on loan.
Subject Headings	Search based upon the use of standard subject headings.

B.   IMPLEMENTATION ALTERNATIVES

In concept, each system must provide:

Transaction Records	Control data for each type of event. For example, for a charge, the item, the period and the patron, location or function concerned are speci-fied.
Master Files	Providing all necessary infor-mation about the items and patrons necessary to support all of the circulation func-tions.
Circulation Files	Providing the current infor-mation about items on loan or in special status and patrons in special status.

Optionally, the system may provide:

History Files	Maintaining information (not necessarily complete) about past circulation activity.

Even though two circulation control systems may provide support to

the same set of circulation functions, there is considerable
variation possible in the way in which the system may be im-
plemented and, thus, in the specific support provided.   The
major variation between systems results from the way in which
these transactions and files are handled.   The following are
the most common alternatives which are chosen.

Transaction Records

> Full information needed to support circulation with-out reference to a master file.
>
> Partial information, master file reference required.
>
> Meaningful transaction data e.g., material - call number and copy number patron - name
>
> Meaningless transaction data e.g., serial number.

Master Files

> Item identification.
>
> Loan transaction control-loan period, acceptable patron (s).
>
> Location control for transfer, return of material.
>
> Patron identification, service access, service period.
>
> Bibliographic content providing author, title, subject access.

Circulation Files

> Full inventory all items and patrons re-gardless of loan status.
>
> Transaction inventory only those items or patrons currently active, e.g. on loan, at binding, non-cir-culating, restricted borrower.
>
> Full information possible to reconstruct transaction sequence.
>
> Partial information item identification, patron class, transaction and date only.
>
> History kept for limited period and then destroyed.
>
> No information transaction purged as soon

as material returned and
released.

Depending upon the alternatives selected, certain of the files may
have a combined function so that another file is not necessary.
For example, a common approach is to provide all information
needed for circulation in each book so that maintaining a sepa-
rate master file is not necessary. Conceptually, the master
file has been distributed among the books and the needed in-
formation is transferred to the circulation files as a trans-
action. In a similar manner, the patron who fills out name
and address on each charge card is providing master file
information so that a patron master file need not be maintained.

Figure 1 provides the common alternatives selected for four alter-
native implementations: manual; periodic (batch) processing;
mixed periodic and immediate (on-line) processing, and, immediate
processing. It should be emphasized that these alternatives are
only typical and there is considerable variation within imple-
mentation types. For example, an on-line system may use full
transaction information. Alternatively, a batch system could
use partial item transaction information. The only requirement
is that all necessary information be available form some source.
At the same time, there is greater uniformity in the functions
supported by the various systems within a given type. As the
figure shows, the functions supported by an on-line system and
a mixed mode system are very similar. The major difference is
the bibliographic access to the entire inventory via author-
title search key that is provided by the on-line system and not
by the mixed mode system. And a second less important difference
is the separate nature of creating new master file information
for material and patrons under a mixed mode system, but carried
out as an integral part of on-line operations.

III.   ON LINE CIRCULATION CONTROL SYSTEMS

A.   SOURCES OF CIRCULATION CONTROL SYSTEMS

If you wish to install an on-line circulation control system,
there are basically three sources: independent develop-
ment; transfer of a system from some other library; or,
acquisition of a vendor supplied system. The earliest
circulation systems were independently developed. Then,
in a few cases, circulation systems were transferred
from other libraries, modified and installed. More re-
cently, some vendors have begun providing circulation sys-

FIGURE 1

TYPICAL IMPLEMENTATION ALTERNATIVES

| | ----------------Implementation Type--------------- | | | |
	Manual	Batch	Mixed Mode	On-Line
TRANSACTION RECORDS				
Item Information	Full	Full	Full	Partial
Patron Information	Full	Partial	Full	Partial
MASTER FILES	None			
Patron		Yes	Yes	Yes
Item Circulation		No	No	Yes
Item Bibliographic		No	No	
Call Number				Yes
Author-Title				Yes
Subject				No
CIRCULATION FILES				
Restricted Item	No	No	Yes	Yes
Restricted Patron	No	No	Yes	Yes
Charged Items	Yes	Yes & Printed	Yes & Printed	Yes
Full Inventory	No	No	No	Yes
HISTORY FILES	No	Yes	Yes	Yes
REQUIRED FUNCTIONS				
Charge	Yes	Yes	Yes	Yes
Discharge	Yes	Yes	Yes	Yes
OPTIONAL FUNCTIONS				
Fines				
immediate/delayed	Immed.	Delay	Delay	Immed.
Holds				
checked on charge		No	Yes	Yes
checked on return	Return	Delay	Yes	Yes
Recalls	Yes	Yes	Yes	Yes
Patron restriction				
checked on charge	No	No	Yes	Yes
Reserves	Yes	Partial	Yes	Yes
SUPPORT FUNCTIONS				
Item Identification	Yes	Separate	Separate	Yes
Patron Identification	Yes	Separate	Separate	Yes
ANALYSIS				
Transaction Volume	Loans	Yes	Yes	Yes
Material Utilization	No	Yes	Yes	Yes
Patron Utilization	No	Yes	Yes	Yes
BIBLIOGRAPHIC ACCESS				
Call Number	Charges	Charges	Charges	Yes
Author-Title	No	No	No	Yes
Subject	No	No	No	No

tems to libraries.

At present, these vendors are concentrating on supplying total systems consisting of both equipment and the necessary computer programs and procedures. By contrast, the present independent development or transfer of systems from other libraries tends to be focused upon the use of computing facilities which are shared with other applications, applications which may be completely unrelated to the library.

B. NON-COMMERCIAL SYSTEMS

Figure 2 gives a half dozen examples of non-commercial systems which are available. These systems were developed by the individual libraries but are now available for transfer to other libraries. The libraries that developed these are:

1.	Harford Community College Bel Air, MD.	IBM 370/125
2.	Bucks County Community College Newtown, PA.	DEC PDP10

3.	Virginia Polytechnic Institute
	    and State University
	    Blacksburg, VA.
		HP3000CX

4.	East Brunswick Public Library East Brunswick, N.J.	IBM System/3
5.	Bucknell University Lewisburg, PA.	Xerox Sigma 7

6.	Ohio State University
	    Columbus, OH.
		IBM System/360-
		    System/370

With the exception of the VPI circulation system, all of the other systems are operating on computing facilities which are shared with non-library applications. With the exception of Bucknell, all of these systems are full inventory systems. That is, all items available for loan are maintained in the on-line system at all times regardless of whether they are on loan or on the shelf. The Bucknell system was developed so that it can operate either as a full inventory system or as an absence system, in which only those items presently charged out are listed in the on-line system. And finally, all of the on-line systems which have become operational in the last two years utilize serial number identification of both patrons and of materials so that they can make use of the numeric bar code or the numeric OCR-A transaction technologies.

FIGURE 2

CHARACTERISTICS OF NON-COMMERCIAL SYSTEMS

	1.	2.	3.	4.	5.	6.
LIBRARY	HCC	BCC	VPI	EB	BU	OSU
DATA OPERATIONAL	1/77	9/76	p. 4/76	9/76	1972	1970
COMPUTER SYSTEM	IBM 370/125	DEC PDP10	HP 3000 CX	IBM Sys./3	Xerox Sigma 7	IBM Sys./360-Sys./370
IMPLEMENTATION SOFTWARE	COBOL, CICS	COBOL	COBOL, IMAGE	RPG-11, TOTAL	FORTRAN, DMS	-------
TRANSACTION TECHNOLOGY	numeric bar code	alpha bar code	numeric bar code	numeric OCRA	alpha punched card	alpha keyboard
TYPE OF I.D.						
Material	serial #	serial #	serial #	serial #	call #+	call #
Patron	serial #	serial #	serial #	serial #	serial #	serial #
FILE ACCESS BY						
Item #	yes	yes	yes	yes	------	title #
Patron #	yes	yes	yes	yes	yes	yes
Call #	yes	yes	yes	no	yes	yes
Author-title	no	no	yes	yes	yes	yes
Author	no	no	yes	no	no	yes
Title	no	no	yes	no	no	yes
Subject	no	no	yes	no	yes	no
FULL INVENTORY	yes	no	yes	yes	option	yes
ON-LINE UPDATE						
Items	yes	yes +b.	yes	no	yes	no *
Patrons	yes	?	yes	yes	yes	yes
BRANCH OPS	yes	?	?	no	no	yes
ITEM HOLD	yes	yes	yes	yes	yes	yes
PATRON HOLD	yes		yes	yes	yes	yes
FINE NOTICES	yes	?	?	no	listing	yes
AVAILABLE NOTICES	yes	?	?	yes	listing	yes
RESERVES	yes	?	?	no	yes	no
RECALLS	not yet	?	?	?	yes	no
LOST ITEM SEARCHES	yes	?	?	?	no	no
MARC INPUT					yes	yes
SOURCE CODE AVAILABLE	yes	yes	yes	yes	yes	yes
CHARGE SLIP					yes	yes
DISCHARGE SLIP						yes

*In process of development

C.   COMMERCIAL SYSTEMS
     Figure 3 provides the characteristics of available commercial
        systems.   The systems listed are supplied by:
        1.   CL Systems, Inc.   DEC PDP11
        2.   3M Company   D.G. Nova
        3.   Gaylord Bros., Inc.   DEC PDP11
        4.   DataPhase Systems, Inc.   Eclipse Nova, DEC PDP11
        5.   Universal Library Systems, Ltd.   DEC PDP11
        6.   Systems Control, Inc.   DEC PDP11
        7.   Cincinnati Electronics   Varian

     CL Systems, Inc. together with its predecessor, Computer
        Library Services, Inc., is both the oldest supplier of
        turnkey circulation systems and also the largest supplier.
        To date, CL Systems, Inc. represents more installed on-line
        circulation systems than all other suppliers and independently
        developed systems put together.   As with the non-commercial
        systems developed during the last two years, all of the
        commercial systems are full inventory systems and utilize
        either the numeric bar code or the numeric OCR-A transaction
        technologies.   A significant difference is that all of the
        commercial systems are mounted on minicomputers whereas the
        tendency of the non-commercial systems was to be mounted on
        larger main frame computers.
     The development of a commercially viable circulation system is
        an achievement that should not be underestimated.   For
        example, although 3M is listed in the figure as having a
        commercial system, they have just recently announced the with-
        drawal of their circulation system from the market.
     On-line circulation systems are developing as a competitive market
        area.   This is a relatively young and untapped market.   De-
        pending on how one wishes to count them, there are anywhere
        between 10,000 and 100,000 libraries in the United States.
        And similarly, by any means of counting, less than 1000
        of these libraries have a computer based circulation system
        at this time.   I expect that new firms will enter the market
        and some may leave it.   In any event, some interesting develop-
        ments are likely to await us.

                    IV.   THE PROCESS OF IMPLEMENTATION

A.   STAGES OF IMPLEMENTATION
     Implementation of a new computer application usually takes

FIGURE 3

CHARACTERISTICS OF COMMERCIAL SYSTEMS

	1	2	3	4	5	6	7
COMPANY	CLSI	3M	Gaylord	Data Phase	ULS	SCI	Cin. Elec.
DATA OPERATIONAL	1973	1977	1976	1977	1977	1977	1978
COMPUTER SYSTEM	DEC PDP11	D.G. Nova	host+ DEC PDP11 Assembly	D.G. Eclipse Nova, or DEC PDP11	DEC PDP11	DEC PDP11	Varian
IMPLEMENTATION SOFTWARE	Assembly	FORTRAN IV	FORTRAN	MUMPS	BASIC	BASIC	FORTRAN, TOTAL
TRANSACTION TECHNOLOGY	numeric bar code	numeric bar code	numeric bar code	numeric OCRA	numeric bar code	numeric bar code	numeric bar code
TYPE OF I.D.							
Material	serial #	serial #	serial #	serial #	serial #	serial #	serial #
Patron	serial #	serial #	serial #	serial #	serial #	serial #	serial #
FILE ACCESS BY							
Item #	yes	yes	yes	yes	yes	yes[2]	
Patron #	yes	yes	yes	yes	yes	yes	
Call #	yes	yes	yes	yes	yes	no[3]	
Author-title	yes	yes	yes	yes	yes	yes	
Author	*[1]	yes	yes	yes		no	
Title		yes	yes	yes	yes	no	
Patron Name	yes	yes	yes	yes	yes	yes	
FULL INVENTORY	yes	yes	yes	yes	yes	yes	yes
ON-LINE UPDATE							
Items	yes	yes	yes	yes		yes	
Patrons	yes	yes		yes		yes	
BRANCH OPS	yes	yes	yes	yes	yes	yes	
ITEMS HOLD	in[4]	in[4]	in[4]	yes	yes	yes	
PATRONS HOLD	yes		yes	yes	yes	yes	
FINES	yes	yes	yes	yes	yes	yes	
AVAILABLE ITEMS	yes	yes	yes			yes	
RESERVES		yes	yes	yes		yes	
RECALLS	yes	yes	yes	yes			
LOST ITEM SEARCHES		yes	yes	yes		yes	
MARC INPUT	yes	yes	central	yes		yes	
SOURCE CODE AVAILABLE	yes[5]	yes[5]	no	yes	yes	yes	
CHARGE SLIP	no	no		optional		yes	yes

1 Blank indicates unknown whether system has the capability
2 Access by LC card number and ISBN also
3 Under development
4 Checked on discharge, but not charge out
5 No delivery of code for operational purposes has been made

place as a continuous flow of work. Even so, it is useful to divide this work into stages in order to track progress of the implementation and to reflect the different types of work called for. Unfortuantely, there is no single, correct method of defining these stages. For our purposes, we will define them as planning and control, selection, preparation, installation and operation.

B.   PLANNING AND CONTROL
In order to achieve stable operations with a new system with a minimum amount of trauma, it is desirable to begin by identifying all the tasks which must be performed, the relationship of these tasks and the amount of effort required for their performance. It is desirable to follow-up and establish a schedule and staff these implementation tasks. Then, project control should be established in order to continue to monitor the progress of the implementation in relation to the original plan and to make changes in staffing, scheduling, and tasks as necessary in order to achieve a satisfactory implementation.
At the end of the planning stage one should have a document that lays out the expectations of what is to be achieved by the implementation and what the costs of the implementation are likely to be. Before proceeding to the next stage of the implementation, it is desirable to review whether the project plan makes it likely that the original objectives of the project will be met. With respect to the present state of the art, I think that it is fair to say that in most cases libraries do not invest in formal project planning and control to the extent that other institutions have found desirable in their automation efforts.

C.   SYSTEM SELECTION
Depending upon the particular institution, system selection can become a complicated matter. First, there is the issue of whether the procurement is to be a competitive procurement. If so, there will be the necessity to establish formal specifications for the procurement and normal procedures to evaluate and select the system from the bids received. And second, there is the issue of the number of libraries for which the selection is to be effective. The greater the number of libraries and different organizations affected, the greater the difficulties in developing satisfactory specifications.

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Regardless of the degree of formality of the specification, bidding, and selection procedure and regardless of the degree of complexity introduced by procurement for multiple libraries, the elements of the selection process are the same. In general there is a study of the systems available, their strengths and weaknesses, and study of the internal circulation operations. From this work there will be an identification of the minimum functions, the other desirable functions to be performed by the new system. Then, the library should establish test and acceptance procedures that define precisely the way in which the new system is to perform in the library in order to meet its objectives. With this information the library is then in the position to review and select the most desirable system from among the options available.

Following the review and selection of the vendor it will be necessary to establish a specific contract which will spell out the required performance of both the supplier of the circulation system and the library.

The selection processes used by libraries have not been especially strong. Many times the technical work to develop the system specification has been cursory. Even when the specifications are formal they have seldom been laid out carefully. Many times they suffer from being redundant, incomprehensible, and in some cases contradictory. While page after page of the specifications will be devoted to exhaustive definitions of general requirements for the vendor, the definition of what the system is to do will be very general. I believe that the source of the difficulty is the library tends to underestimate the cost, time and effort that will be required to obtain a satisfactory system. Also, the library is not in the habit of having many choices between automated systems.

D.   PREPARATION

While one is in the heady world of project planning and selection of systems it is easy to overlook the mundane world of making physical preparations for the new system. Nonetheless, it is necessary to have appropriate facilities and layout for the new system. In general the problems of physical space preparation are not so much in knowing what is to be done as it is in getting the changes made smoothly, on time, and accurately. These problems mount rapidly if one is working within an organizational context such that space preparation is carried on by some other unit such as buildings and grounds which is not subject to manipulation by the normal, financial incentives. The only alternative seems to be to maintain a constant follow-up on the people who are to do the

work.

Preparation of the files and the identification information for the patrons and for the materials is necessary to support the operation of a new system. Depending upon the system selected it may be necessary that this preparation take place after the installation of the system rather than before. Depending upon the size of library collection and the patron group, this preparation effort can be substantial. However, as a normal rule, the file preparation proceeds well. I believe that, in general, librarians are sensitive to the amount of work that is involved in file preparation. This may be a result of their continuing experience with cataloging and processing. And as a result, they do not tend to underestimate the amount of work that will be required to prepare the materials and the patrons for the new system. Where problems have arisin in file preparation, it usually has been a reflection of problems in other areas, such as, delay in system installation or a failure to realize that use of the system for circulation may slow down the rate of file preparation that can be maintained.

Preparation of patrons and staff, in the form of publicity and instruction, is necessary if the implementation of the new system is to proceed successfully. Such preparation is substantially aided if there has been clarification of the benefits of the system for the patron as well as any new procedures that will be required. And good documentation of the procedures to be used by the staff for operating the system will help greatly. Even with good documentation, however, in most instances it is necessary to carry out extensive exercises on the new system in order to train the staff in the new procedures that will be used. It is a general rule in all organizations that operating staff seldom use documentation. However, such documentation is used by some; still others will use it for reference about unusual procedures which occur after the system is in operation.

At the present time preparation of patrons and staff is about as good for circulation systems as it is for other areas of computer applications. However, computer based systems in general have greater potential and flexibility than is being used in routine operations.

E.   INSTALLATION

Installation consists of moving in and setting up all of the necessary equipment and computer programs. It involves

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setting up terminals, communication equipment, the com-
munication and computing facilities. Then it is necessary
to load the programs and the initial files that will be
used. Following this there is testing to assure the
proper operation of the equipment. And then, it is desir-
able to carry out explicit performance tests, using pre-
viously prepared data, designed to verify the ability of
the system to meet the previously established performance
specifications. Following this testing, any necessary
corrections will be made and the system retested. This
will be done until the system is accepted.
In some cases it is not possible or practical to establish in
advance of regular operations that a new system is opera-
ting properly. The general response to this situation is to
run "parallel". That is, present operations are not im-
mediately discontinued, but rather, are carried on in
parallel with the new operation and then the results of each
are compared with the other. As a general rule, parallel
operations tend to continue for a period of three to six
months, after which the former operations are terminated
and the new system is operated alone.
Circulation systems could have most of their performance veri-
fied by formal testing. However, to date there has been
little formal testing used to accept new circulation systems
or to identify performance problems. But it is reasonable
to expect that increasing experience in the installation of
circulation systems, such formal testing will become more
routine.

F.   OPERATION
After a new circulation system is placed in routine operation
the work associated with the system is by no means complete.
Of course, it is necessary to carry out the standard circu-
lation operations. In addition, there are new processes
which are required in order to maintain the system. First,
it is necessary to see preventative maintenance and corrective
maintenance with respect to the circulation equipment. Second,
it is necessary to continue to maintain patron and material
files and identification. And third, circulation systems are
still in a developmental stage. As a result, it's desirable
to incorporate changes to the system as they become available
from the vendor and to identify desirable modifications that
could be incorporated into the system.
During the initial period of operation of the new system special
requirements are placed on management to insure that the
planned changes are put into effect in order to realize the

system's original objectives. It appears that the perform-
ance of management has been spotty with respect to the planned
reductions of staff in order to accomplish the cost benefits
originally anticipated. However, it is unclear whether the
operating management has failed to follow through, or whether
the anticipated reductions were unrealistic. At the same
time, I should hasten to point out that some libraries have
installed circulation systems and both reduced their staffing
requirements and improved the circulation services to their
patrons.

V.   COSTS AND BENEFITS

A.   ALTERNATIVE METHODS OF EVALUATION
   In approaching the evaluation of relative costs and benefits
      of alternative systems, it is desirable to be cautious
      and to establish the basis on which the evaluation is to
      take place. Not everyone has the same approach to eval-
      uation and thus, different people given the same data,
      may make quite different judgments about the relative
      costs of alternative systems. There are at least three
      characteristics of evaluation which can cause problems
      and differences either separately or in combination with
      each other. The first characteristic is the type of
      evaluation which I call the "bad old system vs. the
      good new system." The second is that of full cost vs.
      marginal cost allocation. And the third is capital bud-
      get vs. annual budget.
   In bad old system vs. good new system evaluation the current
      manual operating system with all of its costs and all of
      its blemishes is compared with a new conceptual automated
      system in which any awkwardnesses in operating procedure
      have been corrected. Under this method of evaluation,
      the potential for reorganizing the current system in order
      to yield significant improvement for a smaller investment
      is ignored. Instead all of the procedural improvements
      are represented as an integral part of the new automated
      system and all benefits are ascribed to the new system
      even though other methods of obtaining the benefits may
      be available. This approach has been a long time favorite
      of computer salesmen and others who have packaged solutions
      for sale. I believe this has been the most common basis
      for evaluation of alternative systems. Before we dismiss

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this method of evaluation, let me make a point in its defense. One characteristic of automated systems is that they establish procedures which are difficult to change without explicit intent to do so. By contrast, manual systems are readily changed and, as a result, can suffer from unintentional and desirable change as the staff changes. The very fact that the bad old system exists as it does can be taken as indication that even if one were to work hard to improve it at the present moment, the subsequent change of a few key people could serve to destroy the improvements made. Where the procedures are geared to an automated system they have much greater permanence and resistance to unanticipated change. Thus, it can be quite practical and realistic to compare the current system as it is rather than as it might be.

In analyzing the cost of the system it is often the case that certain resources are utilized which are already available Examples which come to mind are space, utilities, and computation capacity in a shared computer facility. Under one method of analysis, full allocation, the costs of all of these shared facilities are allocated to the system based upon an estimate of the proportion of the capacity of the facilities which is used by the operation. Under the method of marginal cost analysis, the allocation of any costs for such shared facilities is ignored and one computes only the costs of additional resources which are required in order to operate the system. One can present arguments for either approach. Indeed, under different circumstances, a person might prefer one or the other basis for the analysis, without having a vested interest in achieving a particular outcome from the analysis. For example, if one has a great deal of alternative demand for an existing facility it is likely that one will prefer to allocate the facility costs because by doing so one is able to gauge the relative merits of competing demands for the facility based on the total cost impact in the organization. On the other hand if there is sufficient capacity on a shared facility to handle all demand and if there is no possibility of reducing that capacity or its attendant costs it is quite likely that allocating out the costs of the facility may lead to an erroneous evaluation of the impact of alternative approaches on the total cost to the organization. As a result managements often will take different approaches depending upon their judgment of the likely future demand and cost of the facility.

Finally, everyone knows that capital budgets and annual operating budgets represent different kinds of money because their rules of expenditure and justification are different. How then,

does one relate a one time capital expenditure to recurring annual expenditures? This question has fascinated accountants and economists for many years and will continue to do so for many years to come. In theory, one can convert a one time cost for the purchase of a facility into an annual cost by estimating the number of years of useful life that the facility will have, the expected risk of the investment and then incorporating the cost of money as if it were borrowed and repaid over the life of the facility. The risk is essentially concerned with unexpected obsolesence of the facility as a result of development of a new and different facility or of some sort of catastrophic failure of the system. When these factors are combined, they result in pay back periods ranging from $2\frac{1}{2}$ to 20 years. In the computer field 4 to 7 year periods are quite common with the use of interest rates in the range of 6 to 14%.

A common practice in libraries is to attempt to ignore one time costs entirely in the evaluation of new systems. Where this can not be done then at least the interest costs of money and the facility risk factor are to be ignored. This has led to investment in systems which effectively never pay back their initial investment, because even though annual costs may be reduced, the systems are obsolete before full recovery is made.

Analysis of annual costs is of course difficult as well, since casual reflection will indicate that annual costs can change dramatically within a relatively short period of time. Notice, for example, that over the last five years, a large number of the prices of goods and services in our society have more than doubled as a result of inflation. This factor should also be considered when comparing one time costs with continuing annual costs.

B. THE RESULTS TO DATE

Without question the current generation of on-line circulation control systems has improved the overall performance of circulation in the most of the libraries in which they have been installed. With few exceptions, the systems have operated with a high degree of reliability and have enabled the circulation staff to maintain an orderly flow of materials and to maintain accurate information about due dates, holds and so forth. This improved control has often resulted in marked increases in loan rates. Thus, I feel quite secure in the assertion that for most libraries the introduction of an on-line circulation control system has contributed to a net improvement in the libraries' ability to carry out its mission.

Because of the many approaches to cost analysis and the imperfect
information that is available, I would not be willing to guess
whether there has been a net increase or reduction in the costs
required for the level of service provided. That is, on a
basis of comparable procedures, with full allocation of costs,
including initial capital costs, I would not be willing to
assert that on-line circulation control systems represent the
most cost effective approach available. Nor would I assert the
opposite. Luckily, this situation does not have a strong in-
fluence because, first one can make such a determination in the
analysis of specific libraries; and second, because there are
many situations in which it is thought to be easier to get capital
budget for equipment than it is annual budget for operating staff.
In order to obtain a notion of the approximate costs of
on-line circulation systems let's consider an example of
an independent, vendor supplied turnkey system. This will
be a minimum system with one terminal and sufficient in-
ternal storage for a collection of 60,000 volumes consist-
ing of 30,000 different titles, and a rate of addition to
the collection of 6000 volumes (3000 titles) per year.
Such a system will have the following approximate initial
costs:

	minimum	maximum
Internal Staff		
Project Planning & Control	$5,000	$15,000
File Preparation	9,000	18,000
Sub Total, Internal	$14,000	$33,000
External, Vendor System	$100,000	$130,000
Total Initial	$114,000	$163,000

New annual expenditures for file preparation will be in
the range of $900-$1800 and annual maintenance will be in
the range of $6000-$9000.

Now, if there is to be a return of the initial costs, then
there must be a reduction in circulation which is greater
than the increased maintenance cost, $6000-$9000 per year.
Figure 4 shows the effect on payback of our variables--
full cost allocation versus marginal cost allocation, pay-
back period and interest rates. The figure displays the
amount of annual staff cost reduction which is needed to
pay back the initial system costs with reduced total
annual costs. From this figure one can see, for example,
that for each $100,000 of initial cost and $6900 of added
annual costs one must have staff reductions of $16,900
per year to repay the initial costs in 10 years with no
interest charge; $24,800, in 7 years at 6% interest; and

FIGURE 4

ANNUAL STAFF COSTS

REDUCTION NEEDED FOR BREAKEVEN

			Minimum Estimate		Maximum Estimate	
			Marginal			
INITIAL COST			$100,000	$114,000	$130,000	$163,000
ANNUAL MAINTENANCE			6,000	6,000	9,000	9,000
ANNUAL FILE PREP			900	900	1,800	1,800

Payback Period, Years	Interest Rate %	Present Value*				
never**	0		6,900	6,900	10,800	10,800
10	0	10	16,900	18,300	23,800	27,100
7	0	7	21,200	23,200	29,400	34,100
11	6	5.58	24,800	27,300	34,100	40,000
11	12	4.56	28,800	31,900	39,300	46,500
5	0	5	26,900	29,700	36,800	43,400
11	6	4.21	30,600	34,000	41,700	49,500
11	12	3.60	34,700	38,600	46,900	56,100

* This is the present value of $1 paid each year for the number of years indicated at the interest rate given.
** That is, annual reductions in staff costs are equal to the annual increases in costs for the new system.

$34,700 in 5 years at 12% interest. When one looks at alternative systems from the point of view of a banker, the requirements for performance improvement become very much larger in order to justify the investment.

Can a library expect to obtain a staff cost reduction of anything like $20,000-$30,000 per year from the introduction of an on-line circulation system? The answer is a definite perhaps. Let's suppose our library wishes to reduce cost by $25,000 per year and that it has circulation of 100,000 loans per year. That means an average reduction of $0.25 in staff costs per loan. If we assume a staff cost, including fringe benefits, of $3.60 per hour, that represents a reduction of 4.2 minutes per loan. After installation, the on-line circulation system will require an average of about three minutes of staff time per loan. This would represent a full time equivalent staffing of $2\frac{1}{2}$ people. Therefore, if the staff is presently spending more than 7.2 minutes per loan, (thus, a circulation staff of 6 fte or more) it is likely that the new system can be fully cost justified against the present system. In some instances, libraries with loan volumes in the range of 100,000 per year do have staffs of this level. In other cases, however, they are not attempting to offer as much servie, particularly in processing holds and in obtaining the return of overdues and replacing missing materials as a result, their current costs are much lower. Indeed, in some cases, their present total costs are less than the amount that would have to be saved in order to cost justify the system on a full allocation basis.

As a result of my experience I have established the following rules of thumb: If a library wishes to provide full circulation service and it has more than 250,000 loans per year from a single location, it is very likely that an on-line circulation system will be fully cost justifiable; for annual volume in the range of 100,000-250,000 loans, it is possible that on-line system is cost justified; for annual volumes less than 100,000 full cost justification is likely only under quite special circumstances.

VI. FUTURE DIRECTIONS

For the immediate future, there are several directions of current development which will continue to be pursued:

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First, vendors of circulation systems have already begun
to include elements of bibliographic access - e.g., search
by author, title or subject - in their circulation control
systems. Second, use of both bar code wands and OCR-A numeric
wands will continue, with OCR-A wands slowly increasing their
share of the market as their costs come down. Third, system
costs will continue to come down with the result that more
libraries will convert to on-line circulation control. And
fourth, general enabling contracts have been set up which
allow different libraries to procure comparable systems
under comparable conditions. This approach is likely to be
used by more libraries with the effect of moving toward a
set of de facto standard contracts for circulation systems.

In the longer term, doubtless there will be circulation systems
mounted on microcomputers. These systems will supplement
and replace the present systems on minicomputers. These
systems will be substantially less expensive and will make
it desirable for many more libraries to automate their cir-
culation.

One development which I have not yet seen, but which I hope will
come to pass is the development of standards which will allow
the connection of the circulation systems of different vendors
in a true multi-system network. When this occurs, there will
be a substantial improvement in the interlibrary lending of
materials. There has been some experience with interlibrary
loan between libraries using the same vendor's system. This,
however, does not require the standards work that the full
network will require. At present, there are no standards
for the format or content of circulation records and there
are no standards for the formation of transactions to represent
charges, holds, file queries, etc. To establish such standards
is a formidable effort, but necessary if we are to have modular,
interconnecting library systems. The only alternative to this
is modularity through monopoly.

VII. SUMMARY

In summary, there has been very substantial progress in the
development of computer based circulation systems. Even
so, these systems are at an early stage of development
whose relative advantages and costs must be weighed carefully
in each situation. The prospects for the future are for a
continued reduction in cost and improvement of the systems

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during at least the next four years. As a result, the
systems will be acquired by an increasing number of libraries.
And finally, this will create an attractive, but highly com-
petitive, market place for the vendors.

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INNOVATION AND ITS EFFECTS UPON LIBRARY STAFFING

A Paper to Be Given at the
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I. INTRODUCTION

I'd like to discuss with you the effects of innovation on library staffing and particularly on the use of para-professionals. Innovation refers to any change in library operations, whether a reorganization of existing staff and equipment to provide existing or new services or the introduction of new types of staff or equipment. There has been an increasing use of para-professionals in libraries. To see this, consider the number of librarians and library attendants working in libraries in 1960 and in 1970. For the United States as a whole, there were:*

	1960	1970	Average Annual Growth %
Librarians	75,672	123,549	5.1
Attendants & Assistants	37,059	126,207	13.1

Notice that while all staffing grew during the decade, librarian staff grew more slowly than did library attendant staff. Indeed, librarians increased at the average compound annual rate of 5.1% while the rest of the staff grew at 13.1% - more than twice as fast. While these data are from seven years ago, I think it safe to assume that non-librarian staff is continuing to grow in proportion to librarian staff. It is my guess that this growth of library attendant staff signals primarily an increasing use of para-professionals - that is, people capable of performing functions which were formerly performed by professional librarians.

It seems to me that this increasing use of para-professionals has resulted from a number of forces. First, there has been a centralization of those functions which require specialized training or knowledge, but which are not used in substantial amounts in each library. Book selection for branch libraries is an example of this. Second, there has been a separation and standardization of certain functions in order to make them more readily executable, e.g. the separation of original and "copy" cataloging. Third, during the 60's there was a rapid growth of libraries and a concommitant demand for librarians which could not be filled immediately. Therefore, it's my guess that many tasks were taken over by non-professionals without restructuring of any sort. Fourth, and finally, there has been continuing pressure to make hiring and promotion

*Source: U.S. Dept. of Labor, Bureau of Labor Statistics, Bulletin #1852, 1975 LIBRARY MANPOWER: A STUDY OF DEMAND AND SUPPLY, pp. 90-91.

policies meet equal opportunity requirements. This has resulted in tighter definition of the functions to be performed in a particular job and the skills required to perform those functions.

While I do not expect the growth of numbers of librarians to continue at the rate of the last decade, the other forces will provide continuing pressures to make increased use of para-professionals. From my point of view this increased use is most desirable if we carry it out actively. That is, we should anticipate the pressures and identify ways in which we can make changes that reduce training requirements while still retaining the quality of performance. We should then make those changes and thus, keep the pressures from building up to the point that they are driving us.

Some years ago I was reviewing the basic ideas of mathematics and I came across something that impressed me greatly. It's in AN INTRODUCTION TO MATHEMATICS, and I would like to read it to you.

> "It is a profoundly erroneous truism, repeated by all copy-books and by eminent people when they are making speeches, that we should cultivate the habit of thinking of what we are doing. The precise opposite is the case. Civilization advances by extending the number of important operations which we can perform without thinking about them. Operations of thought are like cavalry charges in battle---they are strictly limited in number, they require fresh horses, and must only be made at decisive moments."

That was written by Alfred North Whitehead in 1911. I believe that his statement was, and is, correct. Extending this, I submit to you that it is a proper exercise of our thought to attempt to organize our libraries so as to minimize the amount of thought which is required to perform our continuing operations. This will lead to innovations which reduce skills required while retaining, or improving the quality of library service.

II. SKILLS AND PROCEDURES

Before we discuss the influences of innovation, we should consider the distinction between a skill and a procedure. A skill is familiar knowledge of a field as shown by dexterity of execution. A procedure is a sequence of actions which may require different skills. Most of

the skills that we use daily in libraries are quite common. They are
skills such as reading, writing, alphabetic sorting and arranging,
adding, multiplying, subtracting, touching, turning and lifting things.
We combine these various elemental skills in procedures in order to
obtain the results that we want, such as charging books, shelving books,
or typing orders. I suspect that the most important skill for successful
work in libraries is to be able to sort and arrange alphabetically and
numerically. One is constantly shelving, retrieving, filing, with-
drawing and searching. All depend on getting the elements in the proper
sequence.

     To carry out a procedure, one must know, or be told, the steps
that are required and have the skills necessary to perform them.
The time requirements during the execution of a procedure sometimes
will cause us to call that procedure a skill. For example, a person
who can read text and press keys can type a letter, but a skilled
typist can produce results with a dexterity and speed that simply
cannot be achieved by someone who is unpracticed.

     Many activities which are considered skilled, do not depend upon
physical dexterity for their timely performance. Instead, they de-
pend upon the memory of the person of what procedures are to be
carried out. For example, a pilot relying on his memory while
checking out a Piper Cub in preparation for takeoff might be con-
sidered more skilled than one using an exhaustively documented pro-
cedure to check out a Boeing 747. This memory skill is important
and desirable only if the dexterity of execution is important to
the overall result. If not, we progress by recording the procedure
so that it can be performed competently without having to think
and remember what to do.

     Much of what we do in libraries depends upon remembering pro-
cedural sequences rather than having them committed to documentation.
To decide whether this use of memory can be considered skilled, one
should compare the overall results achieved with those obtained
using a documented procedure. Under this test, charging out mater-
ials to patrons is a more important skill than is checking in jour-
nals as they are received. The former is more frequent than the
latter and the former is performed in a situation where a patron is
waiting; the latter is not.

III. EFFECTS OF INNOVATION

     Let us now proceed to the effects of innovation. Figure 1 gives

examples of innovation effects upon staffing of libraries. This figure is intended to be indicative of the kinds of changes that have been taking place, rather than all inclusive. There are two quite different kinds of innovations which have been taking place in the library community. One of them is the centralization of certain kinds of library functions, such as that represented by the formation of library systems or the expansion of the Library of Congress' cataloging coverage. This innovation changes the location in which the work is performed, but not the procedures or skills. The other type of innovation is that of increasing utilization of automation, either in the libraries or in organizations supplying services to libraries. Usually, automation changes the procedures and the skills which are used.

It is interesting to note that to this point, automation has not resulted in a simplification of the librarian's functions, although it has resulted in simplification of the functions of the para-professional. Indeed, the availability of on-line systems, such as those of Lockheed and SDC, has increased the complexity (and power) of index searching. It is not surprising that para-professional work is the first to be simplified. This pattern has been common in other fields as well. After all, before one can automate a function, one must understand it and define it in explicit terms. By contrast, the activities which we consider to be professional are not well defined. Rather, they are the application of a body of tools and techniques which have been learned previously. While the techniques may be specific, the rules of application are not. We hope that this application is successful, but, by and large, there are not explicit standards by which the quality of performance is judged.

Returning to the figure, note that innovation has contributed to the reduction of skills required of the para-professional library staff. In ordering, for example, the task of receiving books and checking them against those on order is very much simplified in a situation where the ISBN can be found both in the book and in the order. This matching greatly reduces the problem of deciding whether the item ordered and item delivered are the same. As another example, in maintaining the card catalog the potential for misfiling catalog cards as they arrive is huge. In this situation, the para-professional must know the filing rules and be able to interpret and apply those rules to the particular case at hand. By contrast, a microform catalog requires only that the para-professional be capable of filing a numbered set of items and of accounting for the receipt of supplements to the catalog. It's worth noting that even the untrained user has a better chance of finding the desired material in a book form or microform catalog. Because it presents him with many entries on the page rather than one at a time, it is

FIGURE 1

INNOVATION EFFECTS ON FUNCTIONS AND STAFFING

Function	Innovation Example	Staff Level*	Nature of Effect
ACQUISITIONS			
Selection	Formation of library systems	L	Increased copy quantities, reduced amount of selection per copy.
Ordering	On-line computer control	P	Reduced errors, transcription skill not as important to maintain accuracy.
CATALOGING			
Source Information	LC expansion of coverage catalog vendors and OCLC network	L	Reduction in _amount_ of work to be done.
Catalog "file"	Book or microform catalogs	P	Filing (and mis-filing) nearly eliminated.
CIRCULATION	Computer control	P	Reduced mis-filing; reduced effort in recalls, overdues.
INTERLIBRARY LOAN	Remote catalogs	P	Reduced error in identifying item and in directing request.
REFERENCE			
Index searching	Lockheed & SDC on-line services	L	Increased training requirement: manual and on-line searching are different.
EXIT SECURITY	Automated Gate Guards	G	Virtual elimination of exit surveillance.

* L: Librarian
  P: Para-professional
  G: General staff

much easier for him to see the sequence in which the items are presented.

In addition to centralization and automation, there is another type of innovation by which improvement can be obtained. That is through reorganization, simplification and standardization of operations. This results in the development of procedures which are the same in different operations and which have less stringent training and memory requirements. Figure 2 presents some areas of possible improvement through this type of innovation.

FIGURE 2

AREAS OF POTENTIAL INNOVATION THROUGH STANDARDIZATION

FUNCTION	POSSIBLE INNOVATION
LIBRARY OPEN	Procedure check list and procedure definitions for standard library operations to allow procedures to be carried out by someone who does "remember" them.
ACQUISITION Selection	Maintain information on the demand of current holdings for classes of material.
CIRCULATION Physical Control	Identify materials by their locations in order to simplify reshelving and shelf checking.
REFERENCE	Set up two-tier system for reference questions - para-professional search and answer; first, get procedure instructions on the others, forward the failures for professional search and return their answers to the requestor.

Basically, this represents a clarification of the procedures which are to be followed in order to achieve any given result. For example, it should be possible for anyone who can read and write and count to be able to open a branch library, keep it open through the day and close

it in the proper condition. The next day, it should not be possible to tell whether the person who had taken care of the operations was professional or para-professional. This does not mean that all the functions of the library could have been carried out in that period. Thus, no original cataloging, no complicated information searches, no book selection may have been carried out. But, even so, these are but a fraction of the activities normally carried out. Most of the rest could be carried out by a literate conscientious person, if <u>clear</u> documentation of the procedures were available.

Selection appears to me to present a more difficult problem. However, by approaching it through maintaining information on the demand for, and the current holdings of, the various classes of material in the library and keeping track of budget expenditure year by year, we should be able to produce more explicit guidelines to the selection process. While these guidelines are not likely to be so explicit that they could be executed by a computer, they should at least resolve the questions of how repeat service to the same patrons is going to be valued in relation to one-time service to other patrons.

A great deal of the physical work of the library is involved in moving the materials around; particularly, in sorting and reshelving them when they have returned from loan or have been left around the building. In many situations, this work can be simplified by defining the circumstances under which pickups are to be made, how the sorting is to be carried out, and how the reshelving is to be performed. For instance, in comparison to handling standard call numbers, it is considerably easier to sort and reshelve if the materials are identified by the designation of rows and shelves of the stacks or display tables where they are kept. By the same token, it is possible to code the material so that by looking at a shelf on can identify quickly any material which does not belong on that shelf. Yes, this identification creates additional work in physical processing when the materials are first received. But the simplicity achieved in maintaining the physical collection will repay the effort if the collection is one which is used. And maintaining better order, it will make use of the collection more possible.

In order to obtain greater participation of para-professionals in the reference function, one might set up a two-tier system for handling reference questions in the following way. The para-professional deals directly with the patron and answers those questions which he can; those which he can not answer are referred to a professional resource person who gives the para-professional instruction on how to search for the answer to the question. Then, only in the situation in which the question still could not be answered would it be forwarded to be handled by the professional. And even then, the para-professional will receive the results and provide them to

the requestor so that the method by which the question was finally answered can also be communicated.

These then, are some areas of possible innovation which do not require automation or centralization. This list of possible changes is by no means complete. Further, the ideas presented are most general in nature. They would require detailed work before their application and value could be properly assessed. Yet they do give a basis for asserting that in the future we will be able to make increased use of para-professionals. Given that we can expect both automation and centralization to continue, our rate of increasing use of para-professionals might be at least half the rate of the decade of the 1960's.

IV. ACTION TOWARD INNOVATION

It is now time to consider how you might proceed with innovation in your libraries. By the same token however, such new services are being developed and made available to your libraries. And so, my first recommendation is that you consider carefully any innovations, whether involving automation, centralization, or standardization, which have been implemented elsewhere. The effort necessary to develop operational automated systems can be substantial. Similarly, there is usually significant effort involved in reorganizing to achieve centralization. Since the point of such change is to improve service and cost, it is desirable to take advantage of any innovations available from elsewhere that can be seen to be an improvement.

If in addition, you undertake independent innovation, I suggest that you concentrate first on standardization. Through the documentation necessary to standardization you will be able to identify those situations in which automation or centralization seem to be not only feasible but desirable as well. This does not mean that I am recommending that the standardization effort be made by each library independently. On the contrary, the standardization effort should be carried out across the libraries of the community. By this approach, the similarities and differences of current practice can be observed directly. Even after the work is completed, it is not necessary that every job is performed the same way in every library. But it is desirable that we be clear on how each job is performed and with what variety. Then we can separate those activities in which the procedure is arbitrary from those which serve definitive purposes in the individual libraries. Therefore, to begin, collect all available procedure descriptions which define the way the various functions are carried

out. Similarly, collect all job descriptions defining the work per-
formed and the skills necessary to perform it. Unless this sort of
analysis has been done recently, it is reasonable to expect that
some restructuring could be done and some reduction of skills required
for competent performance achieved.

If by analysis and reorganization we find that we can improve
services and operations at the rate of 3% per year we will be doing
as well as the society in general. If we include all types of inno-
vation, including automation and centralization, we should be able
to achieve a higher rate than this. The computer field, for example,
has been changing at more than 15% per year and the forecast is for
a continuation for at least the next five years. If we approach
innovation with a view to simplifying our procedures, we should be
able to make substantial progress.

In closing, I would like to repeat part of Alfred North Whitehead's
comment and then suggest an extension. "Civilization advances by
extending the number of important operations which we can perform with-
out thinking about them." It seems to me that it is by directing our
thinking toward those things that we might do differently, that we
gain new understanding whereby we may extend the number of important
operations which we can perform without thinking about them. Thus,
we must think deeply about how to operate our libraries with less
thought. To the extent that we are successful, our civilization will
be better for it.

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* - Indicates registrants who were unable to attend the Institute.

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Recreation Services Library Program
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BONILLA, Maria G.
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Moffett Field, CA 94035

BUELNA, Joseph L.
Post Library, Box 317
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BURGESS, Edwin B.
Combined Arms Research Library
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Fort Leavenworth, KS 66027

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University of California
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BURNS, Dean A.
US Army Library
Bldg. 244
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BUSEY, Madge J.
Van Noy Library, Bldg. 1024
US Army Engr Cen & Ft Belvoir
Fort Belvoir, VA 22060

BYERS, Tina M.
Combined Arms Research Library
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Fort Leavenworth, KS 66027

BYRN, James H.
USA Field Artillery School
Morris Swett Technical Library, Snow Hall
Fort Sill, OK 73503

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El Paso, TX 79902

CARNEY, Patrick J.
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CASEY, Philip M.
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CATHEY, Eva M.
USAMMCS Technical Library
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CHANEY, A. Virginia
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