PROCEEDINGS OF THE

TWENTY-NINTH ANNUAL MILITARY LIBRARIANS' WORKSHOP

29th MILITARY LIBRARIANS' WORKSHOP
UNITED STATES AIR FORCE ACADEMY
COLORADO SPRINGS, COLORADO

The Military Librarian As a Manager-- We Win With People

Hosted by

the U. S. Air Force Academy

(9-11 Oct 1985)

PROCEEDINGS OF THE

TWENTY-NINTH ANNUAL MILITARY

LIBRARIANS' WORKSHOP

9-11 October 1985

29th MILITARY LIBRARIANS WORKSHOP
UNITED STATES AIR FORCE ACADEMY
COLORADO SPRINGS, COLORADO
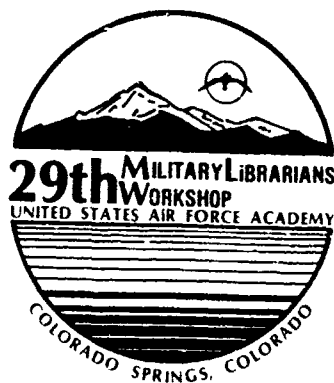
Theme:

THE MILITARY LIBRARIAN AS A MANAGER--

WE WIN WITH PEOPLE

Hosted by the United States Air Force Academy

CONTENTS

APPENDICES

SPONSORSHIP OF THE

29TH ANNUAL MILITARY LIBRARIANS' WORKSHOP

SPONSOR

UNITED STATES AIR FORCE ACADEMY
Lt Gen Winfield W. Scott, Jr.
Superintendent

HOST

Lt Col Reiner H. Schaeffer
Director of Academy Libraries

EXECUTIVE BOARD

Mr. Paul Klinefelter, Defense Technical Information Center, Chairman
Mr. Tony Dakan, Air Force Manpower and Personnel Center
Ms. Betty L. Fox, Defense Nuclear Agency
Ms. Pearl Robinson, Naval Ship Systems Engineering Station
Mr. Normand C. Varieur, U.S. Army Armament Munitions and Chemical Command

PROGRAM COMMITTEE

Lt Col Reiner H. Schaeffer
Capt James A. Robb, II
Mr. Donald J. Barrett
Ms. Lee R. McLaughlin
Ms. Maydeen Maika (Administration)

EDITORS

Lt Col Reiner H. Schaeffer ·
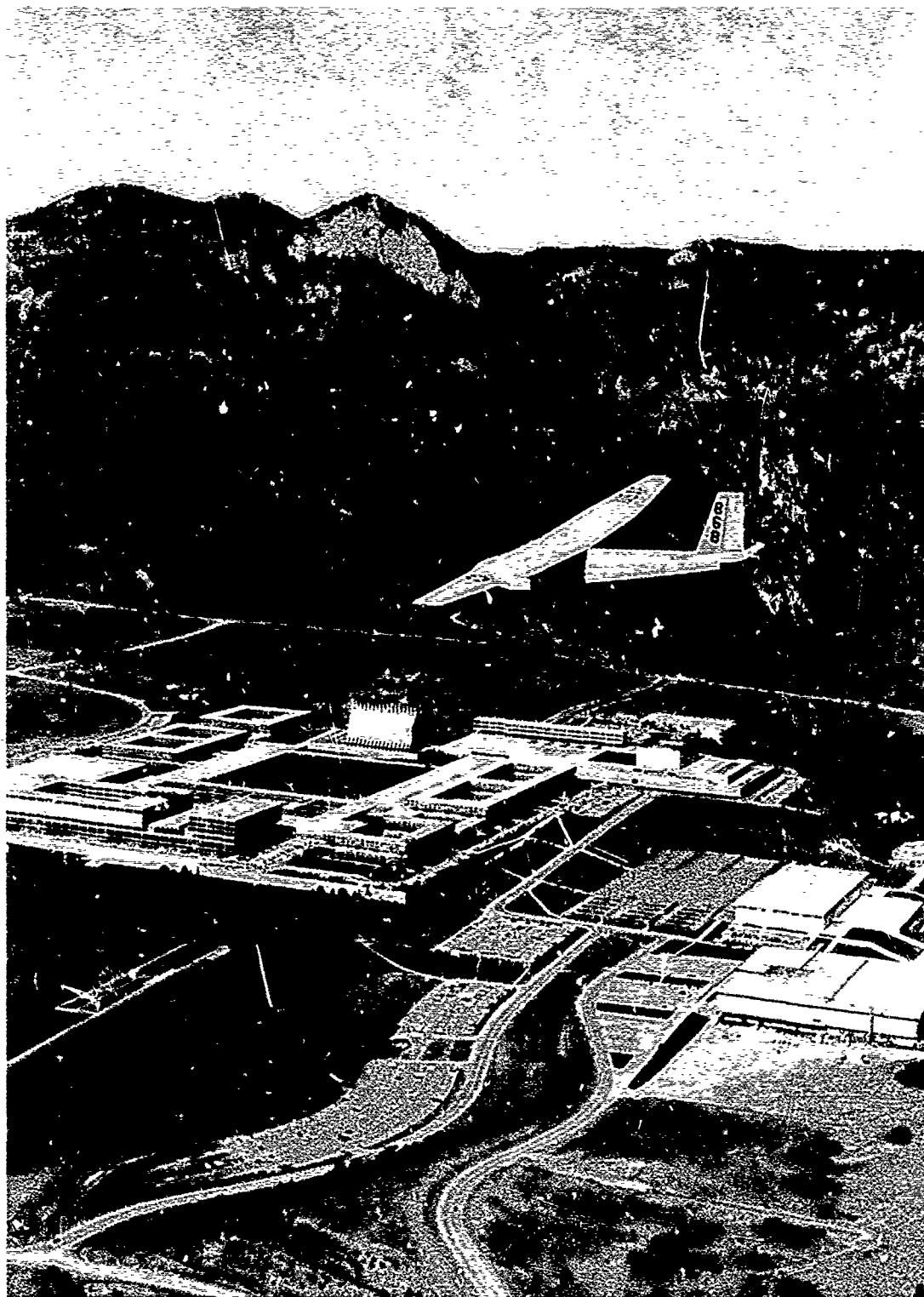Capt James A. Robb, II
Ms. Maydeen Maika

Lt Gen Winfield W. Scott, Jr.
Superintendent
United States Air Force Academy

Brig Gen Ervin J. Rokke
Dean of the Faculty
United States Air Force Academy

Col John T. May
Vice Dean of the Faculty
United States Air Force Academy

CADET AREA

UNITED STATES AIR FORCE ACADEMY

Preface

Our main objective in planning this workshop was to present a program that not only "informs" attendees about the complexities of the management process, but also challenges each participant to take home some new knowledge and apply it in his/her own library arena. We believe our program with the theme, "The Military Librarian As a Manager--We Win With People," achieved this goal.

While we have summarized only some of the workshop's content and materials in these proceedings, we believe that this booklet will also serve as a future reference to attendees and as a source of general information for librarians who could not attend the workshop.

My special thanks go to the Superintendent, Lt Gen Winfield W. Scott, Jr., for making the Air Force Academy facilities available during this conference and for supporting this event so excellently through the various mission elements, especially through the Director of Conferences, Ms. Janet Shea, who did an absolutely superb job.

I would also like to recognize the Colorado Springs Hilton Inn staff, specifically Ms. Barbara Kuipers, Director of Sales, who provided not only first-class facilities but also excellent, professional service.

The key to this successful workshop was obviously my dedicated Library staff, particularly Mr. Don Barrett, Capt Jim Robb, Ms. Lee McLaughlin, and Ms. Maydeen Maika, whose hard work--from the initial brainstorming session to the completion of the workshop--never ceased. I'm very thankful to all of them for their help and expertise.

Also, I applaud all of our special speakers for their outstanding presentations: Col John May for his Welcoming Remarks; Lt Col Bob Pizzi for presenting "The Military Librarian As a Manager" and "Why and How We Win With People;" Lt Col Bill McCarron and Major Jon Eller for the "Writing for Executives" lesson; Maj Bill Clover for the presentation of "Motivation and Leadership in Libraries;" Maj Jon Stevens for his seminar on "Microcomputers in Libraries;" Dr. Barbara Schindler Jones for her seminar on "Organizational Communication in Libraries;" Dr. Freeman Rader for the "Communication Briefing Techniques;" Lt Col Tom McCann for the Air Force Academy Academic Briefing; Lt Col Bruce Doyle for the special presentation of "Pilgrimage" and audiovisual support throughout the conference; and, of course, our two cadets, C1C Michael T. Forsyth and C1C Carolyn M. Reed for enlightening the audience about our fine institution.

I also thank the members of the MLW Executive Board Committee, and especially my friend and colleague, Mr. Paul Klinefelter, for their strong support for our conference. Finally, my staff and I thank all our fellow attendees for their enthusiastic participation.

REINER H. SCHAEFFER, Lt Col, USAF
Director of Academy Libraries

vii

TWENTY-NINTH ANNUAL MILITARY
LIBRARIANS' WORKSHOP
(9-11 Oct 1985)

PROGRAM

USAF ACADEMY, COLORADO SPRINGS, CO 80840

HILTON INN
505 Popes Bluff Trail
Colorado Springs CO
(303) 598-7656

THEME: "The Military Librarian As a Manager--
We Win With People"

TUESDAY (8 OCT)

1700 - 2100	Registration	Lobby
	Dinner (On Your Own at Hotel or Nearby Restaurant)	

WEDNESDAY (9 OCT)

0630 - 0800	Breakfast (On Your Own)	
0630 - 0800	Registration continued (Coffee and Sweet Rolls)	Foyer
	GENERAL SESSION	Ballroom
0800 - 0815	Welcoming Rem... (Lt Col Reiner H. Schaeffer, Director of Academy Libraries)	
0815 - 0915	"The Military Librarian as a Manager" (Lt Col Robert E. Pizzi, Department of Management)	
0915 - 0945	BREAK (Prepare for Trip to USAFA)	
0945	Board buses	Front Entry
1010 - 1215	TOUR OF ACADEMY FACILITIES	Air Force Academy
	--Field House --Arnold Hall --Chapel --Noon Formation	
1230 - 1330	Lunch	Arnold Hall
1330 - 1345	Proceed to Fairchild Hall	

| 1400 - 1515 | ACADEMY BRIEFINGS | Fairchild Hall (H1) |
| | | |

Welcoming Remarks
(Lt Gen Winfield W. Scott, Jr., Superintendent)

Command and Academic Briefing
(Lt Col Thomas E. McCann, Director of Research)

Academy Libraries Briefing
(Lt Col Schaeffer)

Multi-Media Presentation "Pilgrimage"
(Lt Col Bruford L. Doyle,
Director of Audio-Visual Services)

1515 - 1530	Proceed to Academic Library	
1530 - 1700	LIBRARY VISIT	

(Refreshments) — Academic Library Staff Room

-Tour of Library including Gimbel
 Aeronautics History Collection
-Demonstration of GEAC Integrated
 Library System
-Visit to Community or Medical Libraries — Community Center/Hospital
 (For Interested Librarians)

1700	Board buses and return to Hilton Inn	
1830	Free Evening or Attend Flying "W" Ranch (Preregistration Required)	Winter Steak House

THURSDAY (10 OCT)

| 0630 - 0800 | Breakfast (On Your Own) | |

GENERAL SESSION

0800 - 0900	"Why and How We Win With People" (Lt Col Pizzi)	Ballroom
0900 - 0920	BREAK (Coffee and Sweet Rolls)	Foyer
0920 - 1130	"Writing for Executives" (Lt Col William E. McCarron, Department of English)	Ballroom
1145 - 1230	Lunch	Ballroom

Time	Event	Location
1230 - 1310	Cadet Speakers	Ballroom
1310 - 1330	BREAK	
1330 - 1430	Workshop Seminar I	Ballroom

Group A - "Microcomputers for Libraries"   1
(Maj Jonathan L. Stevens, Director of
Education Research Computer Center)

Group B - "Organizational Communication
in Libraries"   2
(Dr. Barbara Schindler Jones,
Communications Consultant)

Group C - "Communication Briefing Techniques"   3
(Dr. Freeman Rader, Department of
Communications, USC)

| 1430 - 1450 | BREAK
(Refreshments) | Foyer |
| 1450 - 1550 | Workshop Seminar II | Ballroom |

Group B - "Microcomputers for Libraries"   1
(Maj Stevens)

Group C - "Organizational Communication
in Libraries"   2
(Dr. Schindler Jones)

Group A - "Communication Briefing Techniques"   3
(Dr. Rader)

| 1550 - 1600 | BREAK
(Refreshments) | Foyer |
| 1600 - 1700 | Workshop Seminar III | Ballroom |

Group C - "Microcomputers for Libraries"   1
(Maj Stevens)

Group A - "Organizational Communication
in Libraries"   2
(Dr. Schindler Jones)

Group B - "Communication Briefing Techniques"   3
(Dr. Rader)

| 1730 - 1915 | Cocktails and Informal Gathering
(Cash Bar and Free Hors d'oeuvres) | Ballroom |
| 1930 | Presentations | Ballroom |

FREE EVENING

x

FRIDAY (11 OCT)

0630 - 0800   Breakfast (On Your Own)

GENERAL SESSION

0800 - 0930   "Motivation and Leadership in Libraries"   Ballroom
               (Maj William H. Clover,
               Department of Behavioral Sciences and
               Leadership)

0930 - 0950   BREAK   Foyer
               (Coffee and Rolls)

0950 - 1100   Annual Service Updates and   Ballroom
               Career Programs
                   --Canada
                   --Federal Library Information Center Committee
                   --DOD
                   --Air Force
                   --Army
                   --Navy
                   --SLA/MLD Business Meeting

1100 - 1130   Announcements, Formal Presentations,   Ballroom
               and Closing Remarks
               (Paul Klinefelter, Chairman,
               MLW Executive Board)

1130 - 1200   Checkout and Departure

AUF WIEDERSEHEN!

FIRST GENERAL SESSION

Welcoming Remarks

Lt Col Reiner H. Schaeffer
Director of Academy Libraries and
Associate Professor of German
United States Air Force Academy

Ph.D., Ohio State University
(Foreign Language Education)
M.P.A., University of Missouri
at Kansas City (Organizational
Behavior)
B.G.S., University of Nebraska at Omaha
(Business/Economics)
National Certificate, Government of
Switzerland (Business School)

Good morning, fellow librarians. The 29th Military Librarians' Workshop is now officially in session.

On behalf of the Superintendent, Lt Gen Winfield W. Scott, Jr., and the Dean of the Faculty, Brig Gen Ervin J. Rokke, I am extremely pleased to welcome you to Colorado Springs and the United States Air Force Academy. We at the Academy are very happy to again host a Military Librarians' Workshop as we did in 1961 and 1975. Since the last workshop, our library facilities have changed considerably. You will now find a significant space improvement in our Library with the addition of some 45,000 square feet, all on one floor. Furthermore, since June 1985, we have an automated integrated library system. We are very excited to share our facilities and this system with you this afternoon.

Since my appointment as Director of Academy Libraries on 1 January 1982, I have been extremely impressed with the dedication, professional knowledge, service orientation, and the very high standards of the library staff. Although I consider myself what we may call "a people-oriented manager" (whatever that means), I am doubly sure today that we, as managers, do not do enough in the area of communication with our people, by working toward mutual commitment and understanding at all times. Thus, I hope that this workshop with the theme, "The Military Librarian As a Manager--We Win With People," has something to offer to all of us. In a way, each member of an organization is an integral part of the management process. As Donald Brown puts it: "Every person engaged in a given enterprise is called upon to perform a managerial function, or at least to perform a function that is directly serving the purpose of management." While there obviously is no one or best managerial approach--we have to do whatever works best for us in a given situation--I am sure that there is only one way to win in this complex management process, and that is "with people."

In addition to the formal program of this workshop, we always learn the most, of course, by simply interacting and talking with one another about common areas of interest, problems, and mutual concerns. Our best teacher is experience and by sharing these managerial experiences, we learn. So let's have a meaningful and challenging workshop and return home with some new ideas on how to "win with people!"

The Military Librarian As a Manager

Lt Col Robert E. Pizzi
Deputy Head, Department of Management
United States Air Force Academy

Ph.D., University of Washington
  (Business Policy)
M.S., University of Wyoming (Business
  Administration)
B.S., Duquesne University (Business
  Administration)

Lt Col Pizzi told us that the Management Equation is simple: People + Resources + Money = Mission Accomplishment. He explained that all of us are managers since we all deal with these three variables. We discussed our individual involvement with these resources as managers in the library.

We discussed how all three variables were going down while our mission was going up. In other words, we had to do more with less. It's imperative that we become better managers. We need to get more from ourselves and the people who work for/with us.

Next we launched into a discussion of what we as individuals bring to the workplace. We decided that we set the tone at work. If we are positive then the work environment will be positive. Colonel Pizzi led us in a discussion on personal awareness. The topics we covered were accepting, owning, thinking, growing, discovering, coping, motivating, centering, and being.

ACCEPTING

Accept yourself as a worthwhile, unique, and capable person.

OWNING

Own full responsibility for what you are, where you are, and the quality of life you have.

THINKING

Your attitude speaks louder than your words or your actions. Change the way you think about things, and you will change your life.

GROWING

Think results, not activities. Concentrate on things you can do something about. Learn from mistakes; forgive yourself for making mistakes and forget about them.

COPING

Stress, problems, and defeats are relative to the way you approach them. Develop a plan for dealing successfully with stress, problems, and defeats. Recognize the consequences of successful and unsuccessful coping.

DISCOVERING

Get involved--interact. Get periodic feedback from friends, employees, peers, and bosses.

MOTIVATING

Think, talk, and act like a motivated person. Find ways to get positive reinforcement, support, and encouragement.

CENTERING

Establish worthwhile goals and values. Approach life as a "whole" person.

BEING

Learn to be good at your best self.

Colonel Pizzi left us with the thought that we, not the speakers at this conference, are the experts. He encouraged us to visit and communicate with each other during and after the conference. He said that there is no management problem that at least one of us hasn't seen before. We are the experts!!!

Lt Col Pizzi in Action!

3

TOUR OF ACADEMY FACILITIES

After the first general session on 9 October, conference attendees boarded buses for the trip to the Air Force Academy. During the remainder of the morning attendees toured some of the Academy facilities. We started at Arnold Hall, the cadet recreation center, where representatives from the Public Affairs office presented a short briefing on the Academy, followed by a film on cadet life.

The next stop on the tour was the Field House which contains a full-size hockey rink, basketball court, and indoor football field, as well as the most popular stop, the gift shop.

Our final stop of the morning was a visit to the Cadet Chapel. Conferees walked through the Protestant, Catholic, and Jewish chapels and viewed the three-dimensional re-creation of Christ, based on studies by Academy faculty members of the Shroud of Turin. Due to unusually inclement weather, we were unable to view the cadet noon formation.

After a nice lunch in Arnold Hall, the group went to Fairchild Hall, the academic building, for an afternoon of briefings on the Academy and a tour of the Academic Library. The first speaker was Col John T. May, Vice Dean of the Faculty, who welcomed the conferees to the Academy on behalf of the Superintendent, Lt Gen Winfield W. Scott, Jr. and the Dean of Faculty, Brig Gen Ervin J. Rokke, who were both TDY during the conference.

Lt Col Thomas E. McCann, Director of Research and Computer-Based Education, then presented a slide briefing summarizing the Academy's academic research, faculty composition, and cadet schedule. He stressed the Air Force Academy's primary missions, which are "preparing young men and women to be the best Second Lieutenants in the world; motivating them toward Air Force careers; and providing a strong educational foundation which will prepare them to take the reins of leadership in a world filled with social, economic, and political challenges."

The third presentation, on the Academy Library system, was given by Lt Col Reiner H. Schaeffer, Director of Academy Libraries. In this briefing he discussed the library system, consisting of the Academic, Community Center, Medical, Law, and Departmental/Office libraries; gave a brief history of the Academy libraries; presented an overview of the Academic Library's collection size and composition; elaborated on the Library's patron services with specific emphasis on the new integrated computer system and the Gimbel Aeronautical Collection; and addressed the Academic Library's recent renovation project which added 45,000 square feet of usable floorspace, some 22,000 linear feet of shelfspace, and 500 additional seats for studying.

Following Col Schaeffer, Lt Col Bruford L. Doyle, Director of Audio-Visual Services, presented "Pilgrimage," a multimedia program commemorating the visit of noted author James Dickey to the Air Force Academy. Mr Dickey flew the P-61B reconnaissance plane in the Pacific theatre during World War II, and much of the presentation reflects his wartime experiences. The program was composed of readings of Mr Dickey's poetry as background to film and photographs from the Air Force Archives. The show uses nine slide projectors and two motion picture projectors coordinated by the Arion 828 multimedia computer system.

Following these presentations, the group moved to the Academic Library, and the conferees assembled in six small groups to make movement around the library easier.

Primary points of interest in the Library were the Gimbel Aeronautical History Collection; Special Collections/Archives; the new Geac computer system; and the main floor of the library.

An Academic Library staff member conducted each group of attendees to the various points of interest. After a few minutes in each of these areas, the conferees were given discretionary time to investigate the Academic Library on their own.

After the return trip to the Hilton Inn, many of the conferees joined us for a special evening at the Flying "W" Ranch. Everyone who went seemed to thoroughly enjoy the steak dinner, rustic atmosphere, and Western music.

(Additional information on the Air Force Academy is in Appendix II.)

SECOND GENERAL SESSION

Why and How We Win With People

Lt Col Robert E. Pizzi

Lt Colonel Pizzi led us in a discussion of how librarians can get more from their co-workers and subordinates. The first half of the discussion centered around the two attached hand-outs, "Organization Climate" and "How Healthy is Your Team?". Colonel Pizzi encouraged us to have our subordinates take the surveys without identifying themselves and then compare their perceptions with ours. We as managers must work to make our subordinates' goals and objectives congruent with ours and those of our organizations—a real challenge.

Next, Colonel Pizzi discussed a technique for us to consider when dealing with subordinates. The technique, "Management by Objectives" (MBO), is merely a meeting between the superior and the subordinates for the purpose of setting goals for the subordinate. Using this technique guarantees that the manager and the subordinate are working on the same wave length, i.e., they agree on what the subordinate should be working on, when, and what results are expected. There can be no surprises.

Our discussion revolved around these main points:

MBO is an Objective Setting Process.

This process permits a negotiation between superior and subordinates about what is important about the job we are doing, what is the best way to do it, and how we will measure results.

MBO is a Management Development Program.

This program is proactive rather than reactive. It emphasizes accomplishment and results. It is a participative management style.

MBO is an Approach to Performance Appraisal.

The method will aid in selecting who should get the best appraisals. There should be no surprises.

The MBO Process

The process consists of goal setting, action planning, self-control, and periodic reviews. You must determine who, what, where, and when to be most effective.

Potential Problems

Problems include management commitment, defining output, integrity of communications, linking performance to appraisals, time required for results, dependence on administration, and management mobility.

Colonel Pizzi again emphasized the fact that we were the experts, and we had the answers to management problems. He encouraged us to interact more as professional librarians. He challenged us to "make it happen."

6

ORGANIZATION CLIMATE*

How _accurate_ is the statement in describing your _job_? Circle the number that most correctly describes each statement.

1	2	3	4	5	6	7
Very Inaccurate	Mostly Inaccurate	Slightly Inaccurate	Uncertain	Slightly Accurate	Mostly Accurate	Very Accurate

(CIRCLE ONE)

1. There is good rapport between superiors and subordinates in this organization. 1 2 3 4 5 6 7

2. When there is personal conflict in the organization, those involved openly discuss the problem. 1 2 3 4 5 6 7

3. My immediate supervisor communicates with me _often_. 1 2 3 4 5 6 7

4. I am encouraged to be innovative in the performance of my tasks. 1 2 3 4 5 6 7

5. My supervisor provides me with adequate information to perform my job in the best manner. 1 2 3 4 5 6 7

6. Rewards and encouragement outweigh threats and criticism. 1 2 3 4 5 6 7

7. The working environment is relaxed. 1 2 3 4 5 6 7

8. It is hard to get people higher up in this organization to listen to people at my level. 1 2 3 4 5 6 7

9. I am encouraged to say what I _really_ think. 1 2 3 4 5 6 7

10. Relations between different levels of organization are informal. 1 2 3 4 5 6 7

11. In this organization, people are rewarded in proportion to the excellence of their performance. 1 2 3 4 5 6 7

12. There is a great deal of criticism in this organization. 1 2 3 4 5 6 7

*Used with permission from William Rosenbach and Denis Umstot.

7

HOW HEALTHY IS YOUR TEAM?

Directions: Circle the number for each item which best represents your team.

#	Low	Scale	High
1.	Low Productivity	1 2 3 4 5 6	High Productivity
2.	Poorly Defined Goals	1 2 3 4 5 6	Well-Defined Goals
3.	Low Trust Among Members	1 2 3 4 5 6	High Trust Among Members
4.	Conflicts And Problems Are Not Confronted	1 2 3 4 5 6	Conflicts And Problems Are Confronted
5.	Closed And Ineffective Communications	1 2 3 4 5 6	Open And Effective Communications
6.	Ineffective Meetings	1 2 3 4 5 6	Effective Meetings
7.	Members Underutilized	1 2 3 4 5 6	Members Fully Utilized
8.	Every Member For Himself	1 2 3 4 5 6	Team Effort
9.	Members Not Involved In Major Decisions	1 2 3 4 5 6	Members Involved In Major Decisions
10.	Disorganized	1 2 3 4 5 6	Well-Organized
11.	Low Morale	1 2 3 4 5 6	High Morale
12.	Member Responsibilities Not Clearly Defined	1 2 3 4 5 6	Member Responsibilities Clearly Defined
13.	Members Do Not Know Where They Stand	1 2 3 4 5 6	Members Know Exactly Where They Stand
14.	Policies Are Rigid And Restrictive	1 2 3 4 5 6	Policies Are Flexible And Helpful
15.	Team Leader Is Very Ineffective	1 2 3 4 5 6	Team Leader Is Very Effective

SCORING

Total Score (Add the Circled Numbers)_____

Team Health

Unhealthy Team   (15-59)
Healthy Team   (60-90)

Writing for Executives

Lt Col William E. McCarron
Deputy Head, Department of English
United States Air Force Academy

Ph.D., University of New Mexico
    (English)
M.A., Boston College (English)
B.A., Holy Cross (English)

Maj Jonathan R. Eller
Assistant Professor of English
United States Air Force Academy

Ph.D., Indiana University (English)
M.A., Indiana University (English)
B.S., United States Air Force Academy
B.A., University of Maryland
    (English)

Lt Col McCarron and Maj Eller presented the Academy English Department's three-hour "Executive Writing Course" covering organized, spoken and concise writing. A brief summary of this presentation follows:

Most problems with organized writing begin with a failure on the writer's part to put the main point in the opening paragraph of a letter, memo, report, or operating instruction. A related problem is the failure to group ideas by subject matter. For example, in a memorandum addressing both building repairs and repair costs, the writer should first address all the repairs in one paragraph and then the costs in a separate paragraph.

Spoken writing is simply telephone conversation cleaned up--clear, everyday words without the "uh huhs" and "you knows." Writing can easily achieve a spoken quality when the writer uses personal pronouns, contractions, simpler (not simplified) words and phrases, and occasional questions. For example, consider the leaden "bureaucratese" in this opening sentence from a NORAD test report: "An operationally effective and satisfactorily performing computer system is possible only if additional funding is made available to accommodate the requisite time for a more orderly completion of the system development effort." Here's the re-write, emphasizing spoken English: "Will the new computer system work? Yes, but we'll have to spend more money to pay the contractor for the extra time he now needs."

Concise writing means freeing drafts from excess words, eliminating smothered verbs, toning down acronyms. Consider the following bulky sentence: "It is requested that the widest possible dissemination of this guidance be made to officials and individuals responsible for the submission of information in compliance with the Privacy Act." An easier, more concise version would read: "Please pass this guidance to all who release information under the Privacy Act."

The course concluded with some special applications of organized, spoken, concise writing: letters of recognition, civilian evaluations, and officer effectiveness reports. As writers, we can apply the guidelines outlined in the "Executive Writing Course" pamphlet (see Appendix III). As reviewers and signers of correspondence, we can encourage those working for us to use the organized, spoken style in all their writing.

Life at USAFA

C1C Michael T. Forsyth, Cadet Squadron 2
and C1C Carolyn M. Reed, Cadet Squadron 4

Before lunch, conference attendees had the opportunity to interact with two Air
Force Academy cadets, Class of 1986. Below is a summary of some of the cadets'
comments and answers to questions from the audience.

Lt Col Schaeffer: We are very fortunate to have with us this afternoon two
cadets from the Cadet Wing. We have exactly one-half hour and then we have to
get these two young people back to the Academy because classes are calling.
They will introduce themselves, briefly talk about their backgrounds, why
they're here, and how much "fun " cadet life is. After that, we'll have some
time to entertain questions from the floor. We have no prepared questions like
they do in most places, because I'd like you to ask what you think is
interesting. Cadet First Class Carolyn Reed is a senior from Squadron 4 and C1C
Michael Forsyth is from Squadron 2.

I'm C1C Carolyn Reed and I'm from Balsam Lake, Wisconsin. The climate here
doesn't seem that bad to me. It's rather mild compared to back home where it
gets really cold. I can't really think back and remember just why I picked or
decided to come to the Academy. I think it was more a lack of not knowing what
the Academy was like that brought me here. I think I would have been scared off
if I knew a whole lot about it. I remember thinking back, well, I'll never have
to decide what I want to wear to school in the morning. I looked at all the

benefits, but I never really thought about if I want to be a pilot or if I want to work with people. I also liked the idea that I was going to get away from home; I lived in a real small community; I wanted to get out and do something. I wanted to meet people from all over. I've really found that there are a lot of really great people at the Academy, all the valedictorians in high school, all the athletes--a very outstanding group of people. Right now my plans after graduation are to go to pilot training if my eyes stay good enough, and I'd like to fly for as many years as they'll let me.

I'm C1C Mike Forsyth. My hometown is Oskaloosa, Iowa. It's about 60 miles southeast of Des Moines. The original reason why I came to the Academy is that I wanted to get into space. I was interested in the space shuttle program; I wanted to do something with it. I thought I would come to the Academy and I would major in aeronautical engineering. When I got to the Academy, my interests changed, which happens to a lot of cadets. My interests changed from being an aeronautical engineer to becoming a management major. They give you a lot of engineering here. I want to work in systems acquisition and maybe work in Florida--still close to the space program, that's where my interests lie. The Academy's been a fun time for me. As cadets, we get a lot of chances to go around and see the real Air Force. It's been a real good experience. That's basically why I'm at the Academy. Questions?

Paul Klinefelter: Cadet Forsyth, tell us a little about your day; do you have enough time for all your activities?

Cadet Forsyth: An average day is pretty long. We get up at about 0600 in the morning; it goes until 2300. My academic load right now is 24 hours of credit. The average load is approximately 20 hours. I overloaded just to get some classes I really wanted. It's been a really busy time. As you progress in your cadet career, you don't feel the time pressure as much. You learn to deal with it a lot better. As a freshman, you don't have as big a class load, but you feel like you're running around more.

Question: Cadet Reed, what do you consider your chances of getting into flight school?

Cadet Reed: My eyes right now are good enough, probably 100 percent. Anyone who goes to the Academy and is physically qualified is practically guaranteed a flight slot. So, even if my eyes are 20/100, I'm guaranteed a position over someone who graduates from ROTC with perfect vision just because the Academy guarantees it.

Cadet Forsyth: As opposed to the other commissioning sources, cadets who graduate and are physically qualified are able to go to pilot training. For ROTC or Officers' Training School candidates, however, it's very competitive to get into flight school.

Question: This is a library question. The library is vastly different obviously from the high school and maybe public libraries. Tell us how you use the library in your career at the Air Force Academy.

Cadet Forsyth: The library is basically very easy to use. I use it mainly to go there and study. The lighting is a lot better than it is in the room.

Cadet Reed: It's a lot quieter there. We live in the dorms and the people play their stereos. It's hard to study when they start goofing around. The research and everything is readily available and there are all kinds of people to help you if you want to look through government periodicals, NASA reports, whatever you're writing about. I'd say the primary use, too, is just a place to get away from the squadron and study, unless you're a history major and do research all the time.

Lt Col Schaeffer: Would you briefly talk about your squadron position? Maybe you can follow it up by explaining the Superintendent's List, and what you do as squadron commander?

Cadet Reed: Right now, I'm a squadron commander. That means I have 123 people in my squadron. I just love problems coming up and making a decision. It's important to see if I can accomplish something for my squadron, get us a party together, do something, make sure everybody's working on academics. I've been told by a lot of officers that you don't usually get the chance to command until later in your officer career. So I think that as a cadet it's a great experience just to have that position.

Cadet Forsyth: I'm the squadron resources officer which is academics, logistics, and making sure supplies are in the squadron. I am also running Admin in the squadron. I have eight people working for me; there are four junior and four sophomores. Basically, what it is is that I just watch and make sure they take care of everything. Our jobs give us experience in what we will be doing out in the "real" Air Force. In my squadron, I have a squadron commander for whom I work and she has ultimate command of those 123 people. I have eight people under me. Jobs last for a semester. They start from August until December and then they rotate; everyone will get a new job in the spring.

Question: I have two questions. One, how are you chosen for these jobs in the squadron?

Cadet Reed: Each squadron has an officer associated with it who is called the Air Officer Commanding and he/she usually selects a person.

Question: The other question I have is when you go out to Air Force bases as third lieutenants in the summer, do you find they just pat you on the head and drag you around or do you find they actually give you a meaningful experience to help see what's going on?

Cadet Forsyth: That was the best program I went on; it's called "Operation Air Force." You really get to see an Air Force base. What goes on as far as whether you actually get to do something or whether you're just being led around depends on which base you go to. I've heard of some bases where it isn't very well run. I've heard of other bases where they really put you to work. I went to Moody AFB, Georgia, and we had a really good time. We got to see what they did; we went flying a few times; and we got to stay with other people throughout our stay. It was a good experience!

Question: What was your major personal adjustment when you came to the Academy?

Cadet Reed: I grew up in an all-girl family. My dad died when I was young, and I had a sister and a mom. Moving into a dorm with 4,000 guys was a big change. It was real hard for me. I never had a brother. You don't lock your doors a lot of times. You have to get used to the lack of privacy and living with the guys.

Cadet Forsyth: The biggest adjustment I had was adjusting to the time they demand of you especially during your freshman year and the lack of freedom. As a freshman you probably get out in a semester maybe twice, maybe three or four times, but you're there all the time on the weekends and everything. It seems really bad if you look at it in your own perspective. But if you look at it another way, if there are 1,500 other people going through the same thing you are, you know that you can make it.

Question: You all probably know someone who left after their freshman or sophmore year. Why did they leave?

Cadet Reed: I know a lot of people who left for a lot of reasons. The major reason is that some people find the Academy's just not for them. They don't adjust to the military lifestyle. Others leave for religious reasons. One person in my squadron was really sharp--an excellent cadet. But, he didn't think the military coincided with his religious beliefs.

Cadet Forsyth: Some people I know came because of parental pressure. You probably heard that in your briefings yesterday. Some of these people come and they think, yes, I'm coming for myself, but once they get here and all the pressure is on them, they realize that it was their parents' pressure that convinced them to come here. During the first summer you're here, during basic cadet training, a lot of cadets want to get out, by saying, "Well, my Mom made me do it."

Question: I have a boy in the neighborhood who's in high school and he would like to go to the Air Force Academy when he graduates next year. What advice would you give that young man to prepare himself for an Academy career?

Cadet Forsyth: I would say that he should be involved in a lot of extra activities outside of school, especially in sports, because sports are a really big part of our education here. Also, he should take all the English, math, and science courses he can. Also, he should push himself as hard as he can in high school, and don't take it easy, because that's the way it's going to be once he gets to the Academy.

Cadet Reed: Contact someone who has been a fourth-classman here, a freshman. Some people don't realize what they're getting into basically. I would encourage him to find out as much about this place as he could before he came here.

Following the question/answer session, Mr. Klinefelter and Lt Col Schaeffer thanked Cadets Forsyth and Reed for their willingness to share their thoughts and experiences with the group.

During the afternoon, three workshop seminars--**"Microcomputers for Libraries," "Organizational Communication in Libraries,"** and **"Communication Briefing Techniques,"** were given. The conference attendees were assigned to one of three groups which rotated from one session to the next.

Microcomputers in Libraries

Maj Jonathan L. Stevens
Director of Education and Research
Computer Center
Assistant Professor of Computer Science
United States Air Force Academy

M.S., University of Texas (Computer
Science)
B.S., United States Air Force Academy
(Computer Science)

Without a doubt, microcomputer technology will change our lives. It will change the way we do business, the library services we offer our users, and the way we solve problems. This paper will discuss ways a microcomputer can improve your library and improve the way you manage your library's resources.

Why a Microcomputer?

Microcomputers offer several features that make them excellent computing tools. First, they are economical. The present Air Force/Navy microcomputer contract offers a Zenith Z-100 for under $2,000. Other IBM PC compatibles retail for under $2,000. Many good printers cost less than a good IBM typewriter, and integrated software can be purchased for under $100. Secondly, the microcomputer is exceptionally flexible. It can perform a wide range of applications. Unlike a dedicated word processing system, a general microcomputer can support your budgeting, word processing, data management, and even deliver instructions. Even if you purchase a microcomputer for a specific purpose and later the need no longer exists, the micro can be used for another purpose by purchasing a new set of software. The micro can be easily moved from desk to desk or to public areas. It does not require special power or environment. Finally, the microcomputer and its software are exceptionally easy to use. Hardware extensions, such as memory expansions, can be installed by the user. Millions of these systems have been sold for home and business use for people with no computer training. More importantly, the microcomputer vendor has targeted his marketing to the individual consumer, not to the professional ADPE manager. The only way the vendor will be successful is to make the system easy for the individual to use, and the vendors have been successful. The library staff will undoubtedly find the microcomputer to be economical, flexible, easy to move around and easy to use.

Another compelling reason for the library to consider using microcomputer technology is the need to offer the library staff and the patron the opportunity to increase their computer literacy. Much has been said about microcomputers in our school systems today. They can be found at all levels of education. Several universities are requiring their freshmen to purchase one as an educational tool, including the Air Force Academy starting in 1986. With such emphasis at all levels of our educational system, it is reasonable to offer this technology in our libraries. In addition to providing general computer literacy, microcomputers are also becoming an integral part of the information network in our society today. As information specialists, librarians really

cannot afford to be microcomputer illiterate. Thus, having microcomputers in your library will allow the staff and patrons to become more computer literate and take advantage of the information explosion available today.

Given the positive features of the microcomputer, this paper will now examine some practical applications—applications for the library patron, technical applications supporting the library's information and administrative processes, and finally applications supporting the librarian as a manager. Suggestions on how to get started are also offered.

Library Applications—User Services

Public Access.

For the library that can afford it, having microcomputers available for public access can provide a practical and well-used service. Users can take advantage of the micro's word processing capabilities. Basic computer-aided instruction (CAI) programs are plentiful and varied. For example, several good "how to type" computer programs can be used to teach complete novices how to type. This, along with other valuable skills, can be learned by running the computer software with no instructor interaction at all. Another public access application that patrons can take advantage of is database management capabilities. Databases such as personal lists, bowling scores, or other sports statistics can be saved on the patron's own personal floppies and updated on the library's micro. Finally, the satisfaction of learning computer programming, how to use a spreadsheet, or explore different operating systems can be a great joy and service the library can offer. Even if the library cannot afford the capital investment of purchasing microcomputers, there are vendors who will provide coin-operated micros such as the Micro Timesharing Co. (20 Carmel Ave., P.O. Box 4658, Salinas CA 93912, phone 408-424-0596). Another company, Maxwell Library Systems (271 Great Rd., Suite 27, Acton MA 01720, phone 617-263-2277) uses a type of credit card that will allow users to have their microcomputer charges billed on the card rather than having to push coins into the machine. The Air Force Academy has been fortunate to have public access microcomputers for about one year. The experience has been very good. No serious vandalism or maintenance problems have occurred. All software is checked out by the user from the circulation desk. Only occasional problems with lost software have occurred. The five systems have had a lot of use, primarily supporting word processing. A fairly extensive and diversified set of software is also available for check-out. For example, several copies of the more popular software packages can be checked out, thus allowing patrons to try these packages before purchasing them for their department's personal use.

Local Databases

Small databases are good candidates for microcomputers, particularly those with short records. Information that the library updates frequently is also a good candidate for being put on a microcomputer. Some ideas are community bulletin boards, calendars of events, small "how-to's" for using library services, and answers to frequently asked questions. Other ideas include putting special collection catalogs on the micro such as catalogs of musical scores or albums. Even the information on journal holdings could be put on the micro. The idea is to have a microcomputer located in a public and convenient place with an appropriate menu that the user could use to find the desired information. The micro provides a convenient tool for the library staff and a simple way of updating the information being presented.

Remote Database Searching

The microcomputer can and will revolutionize the service of remote database and literature searches. The current scenario is a library with several searching services, most requiring specialized terminals or a unique terminal that the service leases. If the library has three services and they want to provide the capability for five people to use any service at one time, 15 terminals are needed. A microcomputer has the capability of "emulating" any of these specialized terminals. Most of the major searching services are now providing this emulator software to run on the more popular microcomputers. Given the same scenario, you can now use the same microcomputer you are performing other tasks with to perform the task of remote database searching by running the appropriate emulator. You would need less than 15 terminals since the same one micro could support any of the other three database searches.

In addition to terminal emulation, the micro can provide extended capabilities to the entire process of remote database searching. One such capability is log-on assistance. The phone number, log-on sequence, usercode and password, and any other preparatory commands can be stored in the micro's storage. Then, with a single command from the micro, the database service can be phoned and logged-on. Another capability is the ability to upload and download data between the micro and the database service. Uploading means sending the service a string of information, much like the log-on information. Frequently used search commands can be saved and sent with a single command. A series of search strategies can be developed and edited on the micro before logging-on to the database service. Money can be saved by doing this time-consuming activity while being "off-line" and not being charged connect time costs. Presently, when the result of the search is returned, it is printed on a printer associated with the specialized terminal. By having a micro, the search results can be "downloaded" to the micro. With the results in the computer, they can be edited, taking out unnecessary data. The results can be printed for the user in a different order than they were received, or additional records can be added to the results. Finally, the results can be saved, merged with other inquiries, or added to your own database for local searching from your own defined database.

An example of this upload and download process being integrated with remote database searching is the "MEDIT" system at Texas A & M University. The University of Michigan and the National Agriculture Library are also doing work in this area. Finally, System Development Corporation (2500 Colorado Ave., Santa Monica CA 90406, phone 213-820-4111) has a product called ORBIT Search-Master. This software, written for the Burroughs B-20, has the capability to perform auto log-on, off-line search strategy creation, upload the request, download the results of the search, and finally use a word processing package to edit the results.

The most aggressive microcomputer application is using the micro as a front-end processor to the remote database service. As such, the user is prompted with questions as to what they are looking for. The micro software then develops the search command in the language recognized by the database service. A user would no longer need to know the database search language. The University of Illinois is presently doing research into this area having developed the TSW (The Searcher's Workbench). Soon the user will be able to describe what he/she wants, and the micro will generate a search command for the database service the user wants to use.

18

Library Applications--Technical Services

The microcomputer cannot compete with the large, dedicated library computer systems such as OCLC, GEAC, Phase IV, etc. Of course, since these systems cost anywhere from $80,000 to $500,000, the microcomputer certainly can compete from the price standpoint. The micro can be used in small libraries or for small collections. For instance, circulation services can be supported for libraries with 82,000 circ records and 32,000 patrons by Futura Computer Productions (3028 Aquadale Ln, Cincinnati OH 45211, phone 513-661-2266) for a cost of $30,000. CTI Library Systems (1120 E. 300 N, Provo UT 84061, phone 801-373-0344) offers a system consisting of an Apple II, capable of supporting 50,000 circ records and 10,000 patrons for $15,000. Finally, one of the most affordable microcomputer software firms is Richmond Micro Software (Box 94088, Richmond, BC, Canada VGY 2A2, phone 604-596-8853). They offer a circulation package (software only) for $500 that will support 65,000 circ records and 3,000 patrons. This software runs an Apple II computer system.

Acquisition control packages are also available. Most of these automate just part of the acquisition process such as bibliographic information or ordering information. These are also targeted at streamlining the paper work portion of acquisitions. One vendor, Innovative Interfaces, Inc. (2131 University Ave., #334, Berkeley CA 94704, phone 415-540-0880) offers a turnkey system supporting acquisition for $46,500. Richmond also offers a software package for the Apple II for $125. Again, these systems primarily support the paper work process such as codes for vendors and addresses.

Few good packages exist for serials control. The biggest problem is the unpredictable nature of managing serials. Thus, publication frequency differences prevent complete automation. However, some packages are available for routing and binding control. For example, if your library is receiving a large number of serials that must be distributed to different organizations, the use of a microcomputer to handle labels and update the distribution list could be very helpful. Also, binding information can be kept on the micro to help with suspenses. Finally, other administrative processing supporting the technical needs of the library can be improved using a microcomputer. There are packages that will print catalog cards, help the users with menus, and fill-in-the-blank screens that output catalog cards with all information and data lined up properly.

In summary, there are many packages available supporting the technical needs of the library. Few of them can handle on-line card catalog services like the larger, more expensive systems; but they certainly can support circulation, acquisition, serials control and special administrative and word processing needs.

Library Applications for the Librarian

The microcomputer is an excellent manager's tool. The job of manager as a librarian lends itself to the flexibility and independence of a microcomputer. A librarian generally finds himself having a large amount of responsibility requiring a varied number of skills and generally has a small administrative support staff. Thus, to do a good job of both the administrative and the people-oriented tasks, the manager must be efficient and have access to good tools. Here are some ideas as to how a microcomputer on your desk can be used to support your job as a manager.

Word Processing. The significant amount of paper work all managers have to do is greatly enhanced by using a micro. Performance reports are more professionally done and can be enhanced easier. Before the word processor, I remember the reaction I received when I gave my secretary a performance report to be reaccomplished for the fifth time due to some minor "improvements." The ability to send a "personal" letter to many special users is very expensive if each letter must be individually typed. Mailings are easy when you have a database and can put addresses on gum labels. Finally, depending on your typing skills, drafts for reports can be generated quicker with the word processing software on a micro. I am sold on the micro as a management tool, particularly for word processing. I believe it is not only more convenient but it allows us to really do our best work. I say this because whenever you do any writing, whether it is a performance report or a paper justifying more resources, you generally don't have any more than three opportunities to get it right--the first and second drafts and the final. This is because of the significant expense to retype the entire report. With word processing, any minor improvement that enhances the work can be included. You have the opportunity to iteratively improve your work. This is absolutely necessary for any creativity or growth. So, for the opportunity to do your best work without being restricted because of administrative typing, put a microcomputer on your desk or your secretary's desk.

Fiscal Control. Most librarians have fiscal responsibility and must answer for the money budgeted and spent. The spreadsheet is a simple electronic ledger. It takes the work out of adding up the rows and columns and allows the manager more time to spend managing and asking those "what if" questions such as the impact of a cutback or what you would do with extra funds. Spreadsheets can be used for budgeting, keeping inventory of many things like supplies, different pots of money, employee time and any other activity that involves counting.

Maintenance of Files. Simple organization and maintenance information can be very time consuming. Most managers don't spend the time organizing and keeping track of all the information they have. Thus, they frequently are not able to find the information they need at the time they need it. Microcomputers can help with this process. Database management systems are popular and inexpensive. They can be easily updated, records added and deleted, and most importantly, reports generated. The same information can be output in the order most desired. The simple manner of being able to output information in many orders adds information to the original data. For example, most listings are output in alphabetical order. Outputting a list of patrons in order of home address zip code will give you the opportunity of analyzing groupings of your patrons. Larger libraries can consider doing the same thing for their employees. Keeping lists for mailing or membership lists are easy with the micro. Updating your own personnel rosters is easier, since the list can be listed in the new alpha order quickly. Even work schedules can be improved with the micro, particularly if you have part-time employees working many different shifts.

Project Management. Probably the most convenient and most-used micro application for managers is project management. How many times have you caught yourself asking "where did the summer go" or wonder on Friday what you did all week? The micro gives you the opportunity of having a "to-do" management package. This is really a simple database application that you can input your tasks to the program. These tasks are displayed and act as your "to-do" list that you are probably currently doing with scraps of paper on your desk. When a task is completed, you scratch the task off your "to do" list. The disadvantage

of doing this on paper is that the information about the task just completed is lost. With the computer, the date the task was started, the date it was finished, and the task itself is saved. Now, on Friday, you can see what you did all week because the list of completed tasks can be displayed. The same is true for a project management program. The only difference is that you would have a data item that would identify the OPR (office of primary responsibility). Think of the help this information would give you at performance reporting time or when you have to justify your budget. Even reorganization time can be improved when you have the data on what offices accomplished what tasks. Any reader interested in such software may find it easy to develop with any general purpose database management system (DBase II or Condor). I have developed a dedicated system written in Pascal that I would be glad to send to you. It will execute on a Z-100 microcomputer running Z-DOS or a VAX running VMS.

Getting Started. A lot of information has been presented including applications for user services such as public access micros; local and remote database searching; technical services such as circulation, acquisition support and serials management; and ways to use the micro to improve your performance as a manager. With all of this motivation, how can the new microcomputer user get started? The first subject to tackle is the problem with technology intimidation. You may not be intimidated by the computer, but members of your staff or patrons may be. Why are they intimidated? One reason is because they don't know how to run computers or they don't know what to use them for. You certainly can combat that problem by having a good introductory course and specific goals and tasks to be met by the micro. Other folks are intimidated because they don't want to appear silly or because they don't know how to type. Again, this can be combatted by obtaining the software that helps the user develop his typing skills. A recognition and understanding of these intimidating factors can help ensure that the microcomputers are productive and a welcome tool rather than a negative experience.

I feel the easiest way to become comfortable with a micro is to spend some time alone with the machine. There is little fear of being intimidated when there is no one around to feel silly in front of. It is really a joy discovering how to accomplish many of the tasks you can do on the computer. Many computer stores allow customers to borrow systems and take them home for the weekend. Whatever means you have to get hold of a micro, spend some private time with it. Play some of the games. This helps get comfortable with the keyboard and learn basic system commands. Having spent some time with the system, the next step is to increase your knowledge and experience. Appendix III contains specific references to several information sources--conferences and literature, users' groups, bulletin boards, and use of public domain software. Each of these will be discussed briefly.

Conference/Literature. Most of today's library conferences have several sessions on microcomputers. Vendors are usually present who can demonstrate their products. Local organizations such as ACM and DPMA (Data Processors' Management Association) offer local seminars and short classes. These are inexpensive ways to get hands-on experience and excellent instruction. The number of computer-related periodicals is amazing. Certainly, a library should be able to get copies of these. Besides the more popular computer periodicals, business periodicals are excellent and probably a better source of information on microcomputers for the library's applications than the computer periodicals.

21

Users' Groups. You will find a number of users' groups listed in the Appendix. These are excellent sources of information, particularly those directly supporting the library's applications. There may also be several local users' groups in your community. These groups are usually dedicated to a particular type of system rather than a specific application, i.e., Apple II users' group or the IBM users' group. Information on these groups may be found in the community section of your local paper. The users' group meetings usually discuss software, how to get used computers, and can serve as a source for inexpensive consulting help. There are a number of real computer enthusiasts who probably know their machines better than the sales personnel. A simple problem that may take you a long time to solve may be something a member of the users' group can solve immediately.

Bulletin Boards. Although I do not feel this is a great means of learning how to solve your microcomputer problems, the many bulletin boards available today have a lot of interesting information. There are many free bulletin boards frequently managed by a users' group. These you can put questions on or broadcast information that would have local interest. There are also several commercial bulletin boards whose popularity will increase as micros continue to be purchased. These allow you to get to a vast amount of information just like the remote database literature searching. A strong selling point to try these bulletin boards is that it teaches you the basics of telecommunications with computers. The process of using a modem, calling a remote computer and communicating with it gives you the experience you'll need for future electronic communications such as electronic mail, remote personal shopping and interactive television. Bulletin boards can be fun, enlightening, and very educational.

Public Domain Software. It is hard to believe, but a massive amount of excellent software is available and free for the asking. Any software project that is funded by the Federal government becomes public property or "public domain." There are commercial firms that collect these programs and for the small price of making the disk, anyone can get the software. The Attachment contains several sources that will send you a listing of thousands of programs that you can get for as little as $5 a disk. This is the price for the disk, not for each program. The disk may contain over a hundred programs. The only disadvantage of the public domain software is that there is no software maintenance. If there are errors in the program, no one is available to fix them. So before you use a public domain program for anything other than your personal use, you must test it thoroughly.

As a final word on getting started, each Federal agency has a staff of qualified computer scientists whose mission is to support you. Use them; demand they help you. There are several Federal contracts for microcomputers that make it easy for you to use your 3400 Funds (O&M) to purchase hardware, software and peripherals. There are base-level training classes on these small computers as well as many free Federal government-conducted classes that you can attend if you have TDY funds. There is no reason to venture out without consulting these fine people and giving them an opportunity to do their job. Good luck on your adventure.
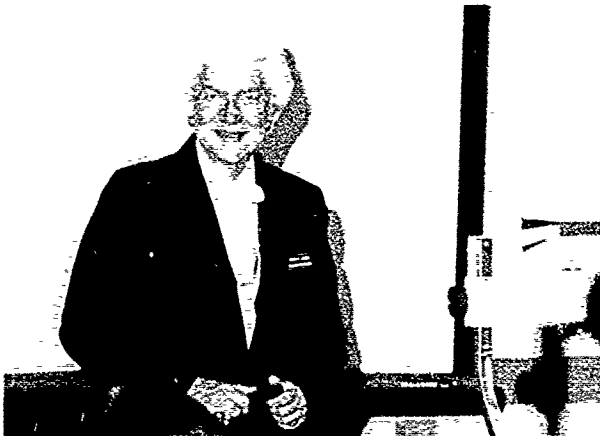
References

Issues of <u>Small Computers in Libraries</u>, Meckler Publishing, Westport CT,
Jan, May, Jun 85.

Woods, Lawrence A. and Nolan F. Pope, <u>The Librarian's Guide to
Microcomputer Technology and Application</u>. White Plains, NY:
Knowledge Industry Publications, Inc., 1983.

Questions for the Speaker

Organizational Communication in Libraries

Dr. Barbara Schindler Jones
Consultant and Trainer
Former Associate Professor of
   Communication

Ph.D., University of Colorado
M.A., University of Colorado
B.A., University of California

Introduction

Dr. Schindler Jones told us that most people problems can be traced in part or full to poor communication, a "breakdown" in communication, or no communication at all. All human interaction, including the work of our libraries, succeeds or fails as a direct function of our ability to communicate.

Part I: Interpersonal Communication

To share meanings, to be clear, to understand and be understood are goals of interpersonal communication. Listening, as the most important and the most difficult interpersonal skill, deserves greater analysis and effort to improve than most of us give it. With practice, we can learn how to really tune in to the patron, the colleague, and the boss with dramatic results.

Any situation in which there are opposing or blocked goals calls for negotiation. Are unclear or disputed roles causing interpersonal conflict? Are library units vying for the same scarce resources? Learning new negotiating strategies is the answer.

Part II: Small Group Communication

Meetings of all kinds are essential to effective libraries. Whether they are looked forward to or suffered through depends upon the group's understanding of crucial group forces and the complexities of leadership.

Although many of us have been taught to ignore or avoid conflict, as an unnecessary evil, ignoring or avoiding conflict shortchanges our libraries. Conflict is the best means of stimulating provocative ideas, creative solutions, and zestful exchanges. We can learn to welcome and successfully resolve those conflicts that prevent small group productivity.

Part III: Organizational Communication

Most library managers know that no organizational structure works merely because it is well-designed and looks good on paper. They know form experience that the organizational system works well only if the people represented by the little boxes give their best efforts, have faith in the system, and understand how organizational communication wo~'~.

Everyone in an organization needs information in order to make intelligent decisions, solve problems, and do their jobs. The library that provides essential communication where and when it is needed also provides the staff with the best environment for production and satisfaction.

Finally, organizational communication doesn't just happen; it needs to be planned for, designed, executed, and evaluated. The library manager who believes that communication will automatically "trickle down" to where it is needed, is abdicating a major managerial responsibility.

Very Interesting Presentations

Communication Briefing Techniques

Dr. Freeman Rader
Instructor of Communication
University of Colorado

Ph.D., University of Colorado
    (Communication)
M.A., University of Colorado
    (Environmental Design)
B.A., University of Colorado
    (Communication)

According to Dr. Rader, librarians, as keepers of the "storehouse of knowledge", have the ongoing task of familiarizing users and potential users with how to gain access to the storehouse. If librarians themselves cannot effectively present information of this nature, then an important "key" is missing. Not only will the vast resources of the library be underutilized, but the job of a librarian is made more difficult whenever he or she has to take time out to repeatedly help unfamiliar users find what they are looking for or begin to inform them of what is available. Therefore, librarians need to know how to communicate effectively and present information in person to groups of potential users not only as a key to "unlocking the storehouse of knowledge" for others, but also as a key to making their own jobs much easier.

The workshop on Communication Briefing Techniques provided librarians with a simple formula or "recipe" for how to prepare quick and easy presentations by using the right "utensils", "ingredients" and "procedures". Techniques were presented which enable persons to (1) organize thoughts and information effectively, (2) present information easily without the need for notes and memorization, and (3) make the information relevant and retainable by the audience. By following the techniques taught, not only is much of the anxiety eliminated from having to prepare any type of presentation, but the whole process actually can become one which is easy and . arding and guaranteed to produce effective results.

"Recipe" For Preparing a Quick and Easy Library Presentation

UTENSILS NEEDED

3" x 5"
NOTE PAD
& PENCIL
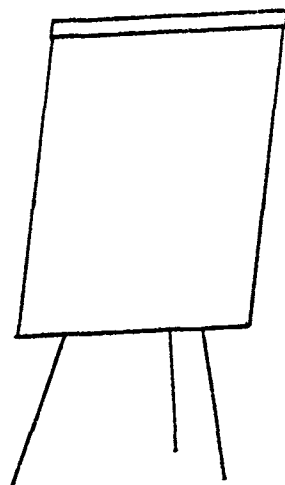
FELT TIP
MARKERS

(Water
based)

POINTER

PAPER CHART
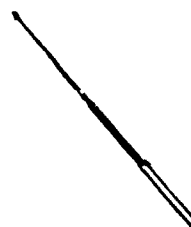
INGREDIENTS

INTRODUCTION	BODY	CONCLUSION
(name & topic)		
- RELEVANCE	- "CATEGORIES" OF INFO	- SUMMARY
- PURPOSE	- MAIN POINTS	- PURPOSE
- PREVIEW	- SUPPORTING INFO	- RELEVANCE

PROCESS

Step 1: SITUATION ANALYSIS (audience, facilities, occasion)
Step 2: ATTITUDE BUILDUP (psych yourself up)
Step 3: TOPIC AND FOCUS SELECTION
Step 4: SELECTING APPROPRIATE "CATEGORIES OF INFORMATION"
Step 5: INTROSPECTION/RESEARCH
Step 6: "FILL IN" OF BODY, INTRO, AND CONCLUSION
Step 7: PREPARATION OF VISUAL AIDS
Step 8: PRACTICE (at least 5 times)
Step 9: GO EARLY AND SIT UP FRONT

THIRD GENERAL SESSION

Motivation and Leadership in Libraries

Major William H. Clover
Tenure Associate Professor of
Behavioral Sciences and Leadership

Ph.D., Bowling Green State
   University (Industrial Psychology)
M.A., St. Mary's University
   (Psychology)
B.A., Southern Illinois
   University (Psychology)

Aristotle is reported to have said (Harris, 1982) that the truth is like a barn door. If you aim at it you will hit it, but you will only hit part of it. The purpose of these remarks is to suggest some truth about the issue of leadership. I don't pretend to have all the answers, but I do think the theories I will discuss have hit the "barn door" in one or more spots. My comments are intended to accomplish several goals. First, I would like to clarify the meaning of transformational and transactional leadership. Second, I would like to convince all of the readers that leadership of both sorts has the potential of taking place in every military library in the world. Third, I would like to note a few examples of the use of language as a factor among transformational leaders.

The idea of transformational vs. transactional leadership came from James MacGregor Burns in his book, Leadership (1978). Obviously, there were earlier intellectual roots. MacGregor Burns talks about charisma and he talks about the ability of transformational leaders to elevate a person's "need" level which directly ties to Abraham Maslow and his concept of a hierarchy of psychological needs ranging from physiological needs to self-actualization. MacGregor Burns said that transformational leaders were those individuals who motivated followers toward transcendental goals. They aroused subordinates to strive to fulfill higher level goals that went beyond self interest. As an example, you might think of John F. Kennedy's "ask not what your country can do for you, but ask what you can do for your country."

On the other hand, Burns says transactional "leaders approach followers with an eye to exchanging one thing for another: jobs for votes, or subsidies for campaign contributions. Such transactions comprise the bulk of the relationships among leaders and followers, especially in groups, legislatures and parties" (Burns, p.4). They motivate followers by exchanging with them rewards for services rendered. Perhaps the classic example on the political scene in recent years has been Lyndon Johnson. It has been said that no one could "work the system" better than Johnson when it came to making things happen in Congress. It is important that we don't take a totally dim view of transactional leadership. In a utilitarian society like ours, it is no small skill to be able to accomplish these types of transactions. It is also no small skill to know and understand what subordinates or followers want in any given transaction. Transactional leaders must possess a great deal of insight into people and situations.

MacGregor Burns' work creates a dilemma. On the positive side, he gives a new way to conceptualize leadership. On the negative side, all of his examples are of world class political leaders. Implicitly, therefore, MacGregor Burns' work seems to rule out anyone below the level of a world-class leader. Fortunately for us, Bernard Bass took exception to that idea. In his book, Leadership and Performance Beyond Expectations (1985), he accomplishes two significant feats. First, he operationalizes MacGregor Burns' key concepts of transformational and transactional leadership. Second, and equally important, he presents a convincing case from experimental data that we all can be transformational and transactional leaders.

In operationalizing the terms "transformational leadership" and "transactional leadership", Bass breaks both of these terms into measurable components. With regard to transactional leadership, he says that it consists of three sub-approaches to leadership. These are contingent reward (a type of carrot and stick approach), management by exception (probably best summed up by the phrase "if it ain't broke, don't fix it), and laissez faire (a laid back approach exemplified by Mad magazine's "What, me worry?"). These three approaches summarize the transactional leadership style for Bass. Transformational leaders, on the other hand, seem to possess four characteristics. These are the abilities to appear charismatic, the ability to inspire, the ability to provide individualized consideration for subordinates, and the ability to intellectually stimulate subordinates.

The second point that Bass makes is that transformational leadership can occur at the small-group level and not just at the world-class level. This is a very important point. It asserts that individuals don't have to be world-class leaders to have a transformational impact on other people. Most leadership models developed today seem to concentrate on transactional types of leadership situations as opposed to transformational ones. This is unfortunate. It is important that we think about leadership in global terms, so that we don't arbitrarily rule out significant areas of a leader's effect. Since human beings are both rational and emotional, it may be useful to think of transactional leadership as touching the rational side of humans and transformational leadership touching the emotional side. When we review leadership models we see that most of them have a bent toward rational approaches. However, Bass points out that these models can't account for all the behaviors exhibited by followers. Therefore, the transformational, or emotional, effects should be considered also.

My conceptualization begins with a rational model of leadership and then tries to show key points in the rational model where transformational leaders have an impact. The rational model that I like is Victor Vroom's expectancy theory. Expectancy theory offers a very systematic approach to thinking about people at work. It is a very rational model, and, in essence, allows you to understand the transactions that must take place if you want to get people to work hard for you. In general, expectancy theory asks you to assess four questions. They are:

    a. What are the outcomes people expect to get by working for you or your organization? Realize there are both intrinsic (sense of accomplishment, feeling of job well done, etc.) and extrinsic (money, promotion, etc.) outcomes.

    b. How much do people value these outcomes or how important are these outcomes to them?

c. Do people believe that their performance will lead to these outcomes? That is, what is the probability of belief that I will get a sense of satisfaction if I do this task or any task? What is the probability that I will get promoted if I work hard?

d. What is the probability that if I put out the effort it will actually lead to high performance? Note that questions "c" and "d" are very different. In essence, question "c" asks about the "system" which you control (i.e., your library) and the other (question "d") asks about the self or an individual's self-esteem (Lawler, 1973).

These four questions allow you to construct a very rational motivational picture of your organization. They are very valuable questions to ask. For example, they may cause you to find out that people don't value the things that the organization offers as a reward. They may reveal that people believe that there is a very low probability that high performance will lead to the outcomes they value. Upon further analysis you may find that the cause of these beliefs resides in organizational practices or policies. You can fix these things and, therefore, have an impact on the motivational level of the overall organization.

I think that expectancy theory and its many variants (see House, 1971) can provide very helpful guidance for enhancing your understanding of your library staff. On the other hand, it doesn't provide all of the answers. In particular, as I try to understand both MacGregor Burns' transformational leadership at the political level and Bernard Bass's re-conceptualization of it at the small-unit level, I find that transformational leadership helps me understand how I can "flesh out" expectancy theory to a greater degree. That is, the concept of transformational leadership helps me understand questions "a" and "d" in the expectancy theory formulation. What causes people to believe that their effort will lead to success? What causes people to "value" or find an outcome important to them. Here, I believe the concept of transformational leadership is very helpful.

David McClelland (1984) cites research by his student David Winter which indicates that people literally felt empowered after listening to a speech by John F. Kennedy. Additionally, Bennis & Nanus (1985) say that visionary leaders empower others to translate intention into reality and sustain it. Research like this supports James MacGregor Burns' assertion that transformational leaders elevate the psychological-need level of subordinates. Yet, the important point of this paper is that not only world-class leaders have this transformational impact on other people. Helen Hayes (quoted in Readers Digest, March 1985, p.131) once said, "We relish news of our heroes, forgetting that we are extraordinary to somebody too." When I ask people to think about questions like the following (from Bernard Bass):

a. Think about someone who has caused you to do more than you expected you would do.

b. Think about someone who has caused you to do more than you expected you could do.

c. Think about someone who has given you reasons to change the way you think about problems.

I inevitably listen to stories of teachers we had in school, librarians we used to work for, counselors "who took us under their wing," parents who expected our

best effort but who still loved us when we failed, etc. In general, the responses I get never include a world-class leader. Or, as one young high school student told me, "Sir, my list is filled with just everyday people." That is the point in a nutshell. Everyday, supervisors and heads of our libraries throughout the world are finding ways to be extraordinarily important to someone. To be sure, it is not easy. In general, if you want to be a leader you must think about what the term means. I have tried to say that MacGregor Burns' and Bernard Bass's treatment of leadership shows how we can be both transactional and transformational.

Finally, I would like to say that transformational leadership (changing someone's self-esteem or what they value or find important) can be aided by your use of language. First, you must have the big picture and, second, you must be always looking for the opportunity to communicate it.

Let me end with two stories. Both stories, I think, exemplify the power of language to have a timely, and possible transformational, impact on subordinates, followers, colleagues. The first comes from Readers Digest (date unknown):

> As a fellow policeman and I were eating lunch in a cafe, we heard a woman nearby say loudly, "Jimmie, if you don't eat all your peas, I'll have those policemen come over and talk to you." My friend promptly walked over to the five-year-old who was being scolded. "Jimmie," he said, just as loudly, "I'm six-foot-two and weigh 200 pounds. And I never ate a pea in my life."
>
> As we left, the other patrons were laughing, Jimmie's mother was absolutely silent, and a smiling Jimmie was no longer afraid of policemen.
>
> Contributed by Donald A. Norenberg

The second story comes from a speech given at a junior high school dinner to honor a principal who was leaving after many years of service. The speech was given by Mr. Ross MacAskill, Assistant Principal at the Air Academy Junior High.

> Thanks for giving us tonight, Dom (the departing principal).
>
> But before we say goodbye, I would also ask that we take a glimpse at our future...Next year will not be easy. Not only do we have our regular task, which is so very difficult, but we are called upon to prepare for middle school, and choose a school at which to teach the following year. This will involve making new friends and saying goodbye to old colleagues and a way of life in which we have grown confident (or at least as confident as one can get in junior high school). Next year will bring change, uncertainty, and anxiety.
>
> But we'll do fine next year, Dom--because of you. Because we know that people who work hard, who like kids, who like teaching, and who respect and love each other, cannot fail. And that's what your gift of the future will mean.

A teacher cannot be content with teaching knowledge of the present. He or she must teach with the hope that it will make a difference in the future, when he or she is no longer there. What you have given us will sustain us. We shall succeed next year and beyond. We won't do it _for_ you, but because you have taught us how important it is to encourage each other, to support each other, to care for each other.

Some of us will work with you again, Dom, but whether or not we do, your gifts have been given and they will last for as long as we do what we do.

These two examples show how language can be used to be transformational. First, the policeman's story tells us that we have to have "the big picture." We have to have a vision of what we are about. Second, we have to be ready when the opportunity exists. Pasteur is quoted as saying that "chance favors the prepared mind." This doesn't just apply to scientists. It implies that we all have to know our business and know it well. Third, we have to seize opportunities to express our vision of what our organization means or how it fits, or express where it is going with leadership. The policeman wasn't just being funny, he was communicating a much larger perspective concerning society's view of law enforcement officials. He wasn't the chief of police but the Chief of Police could not have communicated the message better.

The second story reminds me of a comment from Harry Levinson (1975) when he says (slightly paraphrased) that a leader is a builder of men and women who are bigger than they are and better than they dreamed. Among many things, this speech reminds me that we all have many opportunities to use language to communicate transformational ideas to those around us. Additionally, it should remind us that we don't have to be world-class leaders to make an impact on other people.

Language is only one example as to how you can have a transformational effect on subordinates. There are others. The important point to remember is that transformational leaders somehow provide a vision that touches what subordinates value and how they see themselves. That is, it touches questions "b" and "d" in the expectancy theory formulation. This is where I see the intersection of both transformation (emotional) and transactional (rational) models of leadership.

Your challenge is to communicate that vision to your subordinates (both full and part-time) and your patrons. After all, where else does vision come from but the shelves of stored experience that remain waiting to provide direction to the many people who both use and work in your libraries.

References

Bass, Bernard. _Leadership and Performance Beyond Expectations_. New York: Free Press, 1985.

Bennis, Warren and Burt Nanus. _Leaders: The Strategies of Taking Charge_. New York: Harper & Row, 1985.

Burns, James MacGregor. _Leadership_. New York: Harper & Row, 1978.

Harris, Sydney J. _Pieces of Eight_. Boston: Houghton-Mifflin Co., 1982.

House, Robert J. "A path-goal theory of leader effectiveness." _Administrative Science Quarterly_. 16, (1971), 321-338.

Lawler, Edward E. _Motivation in Work Organizations_. Monterey, CA: Brooks/Cole Publishing Co., 1973.

Levinson, Harry. _Executive Stress_. New York: Mentor Books, 1975.

McClelland, David. "The two faces of power." In Kolb, David A., M. Rubin Irwin, and James M. McIntyre. _Organizational Psychology: Readings on Human Behavior_, 4th ed. New York: Prentice-Hall, 1984, pp. 59-72.

Vroom, Victor. _Work and Motivation_. New York: John Wiley, 1964.

ANNUAL SERVICE UPDATES

and CAREER PROGRAMS

CANADA

Dr. Keith Crouch
Massey Library
Royal Military College of Canada

What I have to say will be a wrap-up, I suppose, covering both military colleges, staff colleges, the national library and their effects on us, and communication. The key thing that's now beginning to link us is the existence of the Envoy 100 electronic mail system run by Bell Telephone in Canada which links the National Library of Canada, Canadian Institute of Scientific and Technical Information, NDHQ Library, Defense Research Establishment across the country, the Canadian Military Colleges, and Canadian Forces College, so that now we can begin to network in an effective way. You all have and are familiar with OCLC. The closest Canadian equivalent to OCLC is UTLAS, University of Toronto Library Automated Systems, which provides catalog support services, reference and interlibrary loan support, and now an acquisitions system which allows direct electronic communication to suppliers. Again, many of our libraries are actively using these services. NDHQ library is using the catalog support in reference. Defense Establishment in the Atlantic Region is now linking up with our catalog and reference, and interlibrary loan services. Canadian Forces College in Toronto is using all three including the first two I've mentioned, plus the acquisitions system. Central to our purposes in network activity is the National Library of Canada which maintains a centralized union catalog service which (1) gets reference locations when you are concerned with locating documents which you don't have, and (2) gets catalog copies relatively inexpensively.

In the Canadian Military College area, work which commenced about 1979 is now bearing fruit and it has come about in this way. The colleges computer systems were becoming quite antiquated compared with other universities in the country and so it became important for the Department of National Defense to re-equip the colleges. This results in all three colleges, Royal Roads Military College in Victoria, College Militaire Royal in St. Jean, Quebec, and RMC in Kingston now having spanking new Honeywell computers with CP6 operating systems. The great good fortune of this was that the whole project came in under budget so there was money left over to deal with the automation requirements of the libraries of the colleges. It happened that Canadian University in Ottawa also

has a Honeywell CP6 and have been developing over the last four to five years a catalog system which they call CATSUP, an online catalog which is designated CUBE for Carleton Union Bibliographic Enquiry. Thus, immediate negotiations commenced to see what might be done to acquire these for the colleges. We developed specifications of what we required, submitted these to our masters in Ottawa, who in turn passed them over to Carleton. One of the key things which created some difficulty was the necessity to be able to carry out subject searches in both French and English. This might not seem like it's important, until you start to try it. How do you program? The problem has been solved. The software does provide for this now. RMC presently is the guinea pig library in which it's being installed. The system was just put up after Labor Day. Staff training got underway in the next couple of weeks; we put the first record in the operating mode on 20 September, though we did have something like 75 records prior to that for test and trial. When I left we were up to something like 500 records in the system and things are beginning to check out. But this will be part of the unified system which Carleton's developing and will include a circulation system. Canadian Forces College has been making a bit of an impact on their organization. While they have been using the UTLAS at the same time, the college itself has been developing a statement of requirements for our new computer system, and I'm told that Cathy Murphy, who's over here representing them, was the one who in fact took the problem in hand, and was the key person in developing that requirement for the college. DSIS has, of course, been somewhat ahead of the rest of us. I understand they're snapping at the heels of your organization, Paul. The colleges and staff college libraries, are now beginning to come together. It wasn't possible before. And it looks as though we are well into the 20th Century.

FEDERAL LIBRARY AND INFORMATION CENTER COMMITTEE

Mr. James P. Riley
Executive Director, FEDLINK
Library of Congress

The Federal Library and Information Center Committee (FLICC) had a recent reorganization, announced in October 1984 Federal Register. One of the main activities in the past year has been an education subcommittee, and we're going back to regional workshops. Announcements dealing with regional workshops, where they'll be held, and the type of program we'll have, will appear in the Federal Library Information Center Committee Newsletter and the FEDLINK Technical Notes Calendar which is usually on pages 2 and 3. If you don't get those items, please let me know and we'll see that you're on the mailing list. The FLICC also has established a procurement subcommittee, at the request of members, to prepare an FLC manual or guideline that deals with procurement. But this procurement manual will be addressed to procurement and contract officers. The subcommittee will be composed of both librarians and contracting officers and plans to produce a guideline this fiscal year.

The binding contract that the GPO has is with Ruzicka. We've been getting a lot of information from our members in Washington regarding that contract. I was on the telephone this morning and found out that GPO is going to withdraw them for non-performance and that was one of the things we've been working at. The real credit should go to Barbara Parett from International Trade Commission who has been very instrumental in gathering a lot of data. WERTZ is the one that apparently got the new award.

If you've read the FEDLINK Technical Notes, you found that the June-August issue lists 42 data base service contracts on the front page. We now have 51, and we're still increasing them at the request of members who want us to subscribe to different data base services we don't presently have contracts for. Look carefully at this year's CFE packages, because attached to them are the interagency agreement letters. We're trying to put it in one package so you can get everything done at one time. This change is at the request of most of our members, and the Executive Advisory Council at FEDLINK approved it. Now, users have to sign the agreements and send them to FEDLINK. We will review them, the Library of Congress will sign them, and users will get a copy of the signed copy. If you have any questions about the packets, call the office and we'll instruct you what needs to be done.

We do have a serials subscription service contract with FAXON, EBSCO, and Southwest. If you have any questions regarding the contracts with those three subscription service agencies, call. The contact people representing the three services that we contract with are also listed. If you have any questions and need to deal with them directly, you may do so.

Retrospective conversion contracts are still in the process of being evaluated. Technical evaluations have been completed, and cost analyses and comparisons are presently being done. We expect to have the awards made by 19 October 1985. The present tape processing contractors have been extended through the end of October. Bids for the new contract closed 9 October, and we're doing the evaluations now.

On the question about OPM and the librarian standards, we have had a change at OPM. Dr. DeVine is gone. Miss Horner from OMB has been named the Director, and she has in her office a number of re-classifications or reviews or revisions or tentative standards, approximately 30 of them that were left. She has released six of them so far, but not ours, and the word is that she doesn't intend to release any that are having a conflict between the profession and OPM. Suggestions have been made internally in OPM that these go back again to the profession for review. I was told that ours is among them because we do have quite a bit of conflict.

I'm glad I had the opportunity to meet with a lot of you. If any of you wish to see me after the meeting, I'll be glad to answer your questions and help in any way I can.

Speakers Awaiting Their Turns

DEFENSE TECHNICAL INFORMATION CENTER

Mr. Paul Klinefelter
Defense Technical Information Center

I want to skim pretty quickly through those things that I see as affecting us in terms of the DOD and events within it. It seems to me that perhaps the biggest change involving the Defense Technical Information Center, the most apparent one, is the evolution of the DOD Scientific and Technical Information System as a distributed network. We are moving farther and faster toward this network of which you all are integral parts. Our goal is centralized data files with multiple independent nodes around the country, so that there is universal knowledge of where holdings are (at DTIC or wherever) and what the release conditions are. Libraries, information analysis centers, etc., meaning you, will increasingly be equipped or need to be equipped and function as little DTICs. New developments which affect this are in various developmental stages, such as the local automation model project--LAM--with mini and micro computer aspects. LAM is experimenting in two directions. One direction, using a mini computer, DNA (Defense Nuclear Agency) is sponsoring and the other, for generally smaller library operations, using a micro, TRADOC's TRALINET is taking as an action project. These application packages will be extremely useful, though they're not here yet. We're putting them in the hands of users who know exactly what to do in testing their worth. This process involves a gradual evolution toward things like down-loading files from DTIC to the local nodes so that they have on-site everything we have (in their fields of interest) and can enrich it and add local resources to it. They are, in effect, little DTICs.

One of the most important new techniques is Gateway. This one-pass reference capability, or pass-through, means you can ask a question anywhere in the network and it will go to DTIC as usual if you have an online access mode. But with Gateway it will pass through DTIC to all cooperating sources of information elsewhere so that you don't have to put the answer together from several sources. You get it from a single request through the system center. Gateway has a relatively easy-to-use access procedure and involves data analyses, merging by processing, and graphic presentation at your local site once you get the mix of information back. The work is currently being done on a test basis by the Lawrence Livermore Laboratory in California. It is an interagency

project and the Department of Energy is very interested. DNA has had a formative part in this as well. These things are going to affect all of us. We will need your cooperation at DTIC in developing new techniques for the DOD.

Developmental events within the Defense Technical Information Center will change the way we do things. We're designing a new data input system for both technical report descriptive information and for management data--that is work in progress and planning summaries, etc., which will include a Gateway capability. We are also working on the shared bibliographic input network. Fifty-four sites are already putting descriptive records and tech reports into the system under this shared bibliographic input concept!

Computer Assisted Instruction (CAI) online for training in online access is getting closer and closer. We now have a support contract to work with, and CAI looks promising. An electronic documents system that has a digital imaging and printing system will revolutionize the way we do things and will be a model that any organization of any size among you could use.

The so-called CENDI (Commerce, Energy, NASA and Defense Information) Group is sponsoring more and more joint projects to develop techniques that will work interdepartmentally as well as within the Defense Department.

Within our chain of command, there are some changes. I suppose the one closest to us is the retirement of Hugh Sauter as administrator. He was both a librarian and an engineer. Kurt Molholm has succeeded Mr. Sauter as administrator. He's an ADP specialist. This will bring a new capability into that very important aspect of our lives. He has degrees from the University of Oregon, from George Washington, and is a graduate of ICAF. He's a charger.

There's something that affects many of you--a new certification process to establish U.S. government contractors' eligibility to have access to controlled but unclassified technical data. A new limitation statement has been added. It's complex and will take a to set up. It creates a new category of release.

There seems to be increasing interest from the Inspesctor General in incomplete input of in technical reports to the central file, and management data as well. This is the fourth year the IG hasemphasized this. This is a very great concern of ours and, of course, it's going to seep down to all of you.

Other significant personnel changes: Dr. Hicks is the new Undersecretary of Defense Researching and Engineering; Col Carter has replaced Dr. Edith Martin temporarily; but Dr. Leo Young is still Director of Research and Lab Management.

AIR FORCE

Ms. Dorothy A. Gohlke
Assistant Air Force Librarian

Air Force has followed its recruiting motto this year--"Aim High." I'll give you a quick recap of what's going on among personnel, library issues, training, and automation, and contracting out in the Air Force, and I'll try to hit the highlights. Tony is an excellent writer and I'll see how well I abbreviate.

We have seen a changing work force in Air Force. We have had two more major changes of command this year to follow on the four major changes we have had in the last year and a half. Virginia Eckel retired as the Director of the Air Force Institute of Technology and was succeeded by James Helling. Alice Roy has taken over TAC Command because Marge Rambo retired just a few months ago. However, we have done something in the Air Force to solve this problem. We have finally followed our sister service, the Army, and we now have an intern program. We're very fortunate that this is being funded centrally through what we call OCPO and we have eight young interns. (Annette introduces the interns to the group.)

In Air Force we have a program called "Program Excellence." We are setting up very strong standards; they change annually to get our libraries to again "Aim High" in reaching for excellence. This year, 52 percent of our libraries managed to earn the Certificate of Excellence. We're thinking up new standards for next year. We want our people to continue to strive.

In libraries, on 1 October, Headquarters Air Force District of Washington was activated at Bolling AFB as a direct unit. One library, a base library, was affected. It left MAC and is now its own operating unit.

We had a first in Air Force facilities this year that was quite exciting. At Langley AFB, Virginia, David Smith managed to have the first porta structure. We now have one in the Bethel Manor Housing area, and we're in the process of having four more put up overseas in the PACAF region. We find this is a marvelous new option for getting around congressional lack of support for new construction. We buy porta structures as equipment items since they are

pre-engineered and portable buildings. In that way, we have managed to solve a terrible problem in the Air Force in building new libraries. However, we have gone forward and there were approximately 20 major renovation projects in the Air Force this year. As you know, management personnel, facilities, and resources continue to be a problem, and we are finding solutions to that.

Training has become a major issue in Air Force (as I think it is with all our government agencies), and finding enough money and time to get people trained faster and more efficiently is an ongoing problem. This year we were fortunate to have our fifth annual ALA-connected Air Force workshop, and over 130 librarians attended. We're formulating plans to hold an Air Force workshop at SLA, since about 50 percent of our librarians belong to SLA, and we have another 50 percent that are what we call management-directed---they head over 160 libraries.

Besides our eight intern programs, we also have five slots centrally funded by OCPO to the American Management Association, the so-called mini-MBA course. Five people from the Air Force libraries, two at base level, two at MAJCOM level, and myself were very fortunate to be selected to go. It's an outstanding course. If any of you are looking for an excellent training course to see how our fellow members operate at the corporate level in private enterprise, this is it. I found out they don't operate any differently than we do, except for the bottom line profit margin. It's an outstanding course and you should look at some of the AMA courses if you have not already taken advantage of them.

We also do a great deal of training at the MAJCOM level. This year we had a USAFA conference which I was fortunate enough to attend. We have had one in TAC and are encouraging all of our commands to have workshops, every year if possible, if not every two years, to have their librarians get down to what we call the nitty-gritty.

Automation has not passed the Air Force by. Air University has just signed a contract with Geac, and as you saw at the Air Force Academy Library, they already have it in operation. So we're very pleased to have our two largest institutions well on their way to full automation. Europe is tacking onto the Army system and will be on Geac within the next few years. They'll be bringing most of their libraries on line starting, of course, with Germany. We have several commands that are trying to automate command-wide for our base libraries. We're looking at an automated procurement system since we have central procurement. We have a very large central procurement with money that we fund out of our office, and we want to get an online automated system going for our 160 libraries. We are also doing a great deal of work with the IBM PC.

Contracting Out: Aside from two changes, contractors at Arnold AFS, Tennessee, and Vandenberg AFB, California, Air Force libraries have been spared both cost comparison studies and contracting out. However, we recognize that both are a distinct possibility, and we encourage our librarians to get smart to do their own cost and management analyses before they are directed to do so. I would like to mention one contracted library that we have. If anyone wants to apply for this, they may do so: it's in Thule, Greenland. I would like to point out that Judy Hawthorne, as the new Space Command Librarian, has managed to get a professional librarian position in that contract and has just brought on board a Danish professional librarian. Any of you who know how to speak Danish and would like to apply for that position at some point in time, see Judy.

That's the Air Force's "Aim High" report.

Ms. Mary B. Bonnett
Army Library Management Office

I listened to Dr. Rader yesterday and I'm trying to follow as many of his principles as possible. I only halfway followed one of them, sit up front, but I didn't get quite far enough up front.

Many of you know Dorothy Fiske is head of the Army Library Management Office (ALMO). It's not Dorothy Fiske any longer, it's Dorothy Fiske McDysen as of 7 September 1985.

I have five things I'm going to talk about today: The OPM GS-1410 Register; our involvement with the National Information Standards Organization (NISO); the Army Library Career Program Job Analyses Project; the Army Library System; and the Department of Army reorganization in the information management area, AR 370-1.

We have word from Jennifer _ker at OPM that the register is slated to be opened for applicants during February 1986. The exact dates will be published later.

On the NISO, the Army Library Management Office (ALMO) is not a DOD voting representative on the standards development organization. This group develops standards in information systems products and services, bibliography, library and publishing practices, and library equipment and standards. If these different standards come up for review and voting, we get copies in our office and circulate them to those DOD organizations which we are aware are interested in those standards. Our list is rather short, and we would not be at all unhappy to know of other organizations that are interested in reviewing the standards and what subject areas you're interested in. If you are interested and your organization will support you, just notify our office and we will get you on our list. I'm on the subcommittee that is currently revising Z39-18, the guidelines for developing and printing technical reports. We expect to have a draft out before the end of the year for comments.

We are running a job analysis for the librarian career program out of the ALMO. We have Marion Weiss from USAREUR in on a one-year training assignment to do this study. She will be interviewing many of the Army librarians to identify tasks that are performed in libraries, specifically what you do. From this, the career program appraisal documents are to be revised and brought more in line with the current practices. I think this was last done 12 years ago and we certainly know they've changed in that time. This will also be the basis of implementing the Army civilian training education and development system which will be an improved referral and training program.

I spent a good dea. of time and many of you have been involved with the development of an umbrella regulation for the Army Library System. This is scheduled to be effective 16 October 1985. This regulation includes policy and standards guidelines and also includes a management reporting system which will be the basis of an annual statistical report on what's done in Army libraries. The Army is reorganizing many of their functions to develop an information management area. This has been going on for approximately six to eight months. It's been filtering down through the staff positions. The purpose is to implement the Paperwork Reduction Act and to put a top level, highly visible information manager on the Army staff. The top, visible position is the Assistant Chief of Staff for Information Management, Lt Gen Doyle. The areas that will be covered in the AXM Assistant Chief of Staff area are policy issues related to automation, telecommunications, audiovisual policy, publication, records management, and library policy. Our office was transferred to be operationally controlled by AXM effective 1 October 1985. An Information Systems Command has been created through the merging of Computer Systems Command and the Army Communications Command. In picking up a few extraneous, related organizations, this command has operational control in functions in the automation telecommunications and audiovisual areas at this time. There is to be a review study to determine how the functional elements and resources for libraries and publications should be orderly transferred. The one question that has come up that I hadn't heard until Tuesday was, "When do libraries become part of the Information Systems Command?" As I understand it, the only libraries that will become a part of the Information Systems Command are those that are serving units within the Information Systems Command, such as the Headquarters Army Communications Command Library at Ft Huachuca. But the libraries that have been AMC or TRADOC libraries will remain with the command that they have been serving. They will receive functional direction through the channels that come down from the AXM but not the Information Systems Command. There will be more changes and, hopefully, we are going to get some definitive written guides, but, until that happens, I think the best advice is "Don't do anything until you see it in writing."

NAVY

Mr. John Vajda
Navy Department Library

First, the Navy union list of serials (that is currently in its first revision and which, despite its contractor inaccuracies, is and has proven to be a very worthwhile and valuable tool for the some 50 contributing technical, medical, and other special Navy libraries throughout the country) will be revised and updated in the very near future. The contract difficulties with the vendor of that first revision, Sigma Data, have been significantly resolved. It's not likely, however, that Sigma Data will receive the contract for the next revision. At any rate, work on the new update should be starting soon. As an aside to this, there are still in our office a number of hard copies of the union list as well as a number of microfiche copies. If anyone is interested in obtaining a copy either in hard copy or microfiche, contact Stan Kalkus.

The pilot periodical resource sharing project that includes the departmental library, as well as the libraries of the Naval Research Lab, the Naval Surface Weapons Lab, and the Naval Ship Research and Development Center Library, seems to be working out acceptably to the participating libraries. Nonetheless, any Navy libraries interested in possible future participation in this periodical resource sharing program or information can contact Stan, or Pete Imhof at NRL, or Marshall Hughes at NSWC.

Although still in an incipient stage, background materials have been collected and serious discussion begun with Stan and the personnel people within the Navy on the Navy's possible implementation of a Navy librarian career program—similar to that in place in the Air Force and Army.

One comment about contracting out in the Navy. Most Navy librarians are aware that there was a blanket exemption issued by the Office of Naval Materiel perhaps a year ago exempting laboratory libraries from the contracting out process. However, the Secretary of the Navy abolished the Office of Naval Materiel about six months ago, and I don't think anyone really knows whether the exemption is going to continue to run through some other office.

For those of you who don't already know, the Navy librarians are proud and excited that one of our own, Bonnie Davis, is the new chairperson elect of the Military Librarians Section of the Special Library Association.

SLA/MLD Business Meeting

Mr. Normand L. Varieur
U. S. Army ARDC Library

Paul Klinefelter: The Special Libraries Association has as its principal project the umbrella sponsorship of this long line of very distinguished professional conferences. SLA sponsors no more significant or more long-lasting conference than MLW. So whether you're an SLA member and a member of the Military Librarians Division, which directly sponsors these workshops, or not—this is all the same a joint effort and a matter of professional pride. Normand Varieur will conduct a business meeting on Military Librarian Division matters.

Normand Varieur: I would like to introduce the members of the Military Librarians Division Executive Board. Chair Elect is Bonnie Davis from Indian Head. Secretary-Treasurer is Yvonne Kinkaid from Andrews AFB. The immediate past Chair is Ruth Seidman. The Air Force can also boast of the fact that Ruth is the Program Chair for all of the International SLA at the Boston Conference next year. So besides everything else that she does, she must have a wonderful staff.

It has been my pleasure as Military Librarian Division Chair to name replacements for this year. The board members are nominated for four-year terms. The Army's outgoing representative is Jims Murphy who has worked long and hard—she really deserves a round of applause for all the work she has done for MLW over the years. Donna Griffiths from the Army and Air Force Surgeon General's office will be the new representative for the Army. Unfortunately, another person who has worked very hard, Betsy Fox is also resigning. So I have the pleasure of naming Barbara Everidge from the Defense Technical Information Center as the DOD representative on the MLW. The bulletin editor is also an Air Force person, Barbara Newton, from AFWL Kirtland AFB, New Mexico. The membership chair is Susan Maxey from Benet Weapons Laboratory, and the archivist remains Nancy Walsh, who is a retired Army librarian. The first issue of the bulletin is late. However, it has been mailed out. By the time you get home, you should have a copy of the bulletin.

45

I want to encourage all of you, whether you are SLA members or not, Military Library Division members or not, to attend the next conference in Boston. We have an exciting program envisioned; it's going to be called the International Defense Information Conference. It's a conference within a conference. We have already received word from the Australians that they are interested. Keith Crouch is going to be participating. We are hoping to get someone from Sandhurst. Jerry Gambro from James Publishing and Mr. Crane from Janes Publishing, New York, will also be on the program. We hope to have other publishers also to tell us of their work in the area of excellence in publishing, because the theme is "Excellence in the World of Information." For those of you who are not SLA members, I would like to encourage you to join.

We have two things that I would like to bring up right now to members of SLA; (1) We need more input on the logo; we need more input on the bulletin; and we need more input to Linda Evans on the job clearing house. (2) We also need members for a long-range planning committee. So, any of you who are interested in any of these areas, or any of you who are interested in anything, contact me--communication! I hereby adjourn this meeting.

CLOSING REMARKS

Mr. Paul Klinefelter

A few short announcements: Linda Evans from Rome Air Development Center is attempting to build up RADC's holdings of its own reports. There are huge gaps. She's just gradually finding out the magnitude. The RADC collection is incomplete by possibly as many as 1600 titles, which is a lot. Any of you who have RADC reports, please look to see what you have, and either ask her whether they are among the missing ones or simply send them to her.

It's also been mentioned that she is, in effect, the job locator for the Military Library Division. She knows of a few job openings, and for any of you who have people who are looking, she's there to match jobs and possibilities. Also, Egon Weiss from West Point reminds me that the Military Library Division has a parallel in ALA's Armed Forces Librarians Group. They had a meeting in Chicago this summer in which some of us participated and came up with a series of recommendations. Some of the recommmendations seek to give as much political influence and clout to this military group within ALA as possible. There are a number of steps they recommended be taken. Please see Louise Nyce or Egon Weiss for details. The newly elected board members of this ALA Division are Katherine Sikes, President Elect; Elizabeth Lane, Secretary; and Louise Nyce, the Army representative.

This has been a wonderful conference! I want to pay tribute to all of you. There has been so much interest and it's been a vibrant group.

(Mr. Klinefelter then recognized attendees from the U.S. Embassy in London, Panama, Hawaii, Germany, Spain, and Alaska who had gone to great pains to be present). Our scope is becoming international and nowhere more than in the Canadian group which has been so well represented.

These workshops are healthy and in good shape. This is a lively institution with a mission, a successful past and, particularly, a very promising future. We can reflect with pride on what we have done. There's a lot of continuity, and the farther we go, the more continuity is being built into it. I have been talking with some of you about attractive sites for future workshops. This thing is going to fly, continue to fly, and fly better.

The next workshop will be the 30th which, in itself, is a milestone. It will be held 14-17 Oct 86 in New Orleans, which is not to be sneezed at as a site. I've never even been to New Orleans. It's to be sponsored by the Corps of Engineers. Abbott Martin, I want you to stand as Corps of Engineers host. Be nice to him, he'll have something to say about getting you to New Orleans. His local host and a very charming lady who has had a lot to contribute during this conference is Barbara Fox.

I'll follow a little tradition that has become established. You know that when we held the 23rd Workshop in Alexandria's Old Town, the old 18th century port city of Alexandria, one thing that I used all the time to get people in and out of those narrow halls was a town crier's bell, very characteristic of that region because in the 18th century, if anything important happened the town crier went down the street and rang this thing to get people's attention. Our town crier's bell has since been passed from host to host. I want to do that now. I've looked it over closely. In the first place, it had never been shined

so the Air Force naturally shined the hell out of it. It may be lighter, but it's pretty. The second thing, looking a little closer, it turns out that a very nice fact has been engraved on it--that the Air Force Academy is our first three-time host. It's going to take a long time to catch up to them. That was a very nice gesture. They could have put "Beat Navy" on it, but they didn't. I am kind of grateful for small favors on that one. In any case, Barbara, would you come up and let me officially transmit this thing? I should mention that the following workshop is also in very good hands. The 31st will be held at the brand new (but super secret of course) Headquarters for the Defense Inte'ligence Agency at Bolling AFB in Washington. This workshop will be something like opening a new Mormon church. If you get in this time, you better go because you'll never get another chance. Herb Holtzbauer, who had wanted to do this for a long time, retired but his successor is here, Bill Crislett.

Paul Klinefelter then thanked the Air Force Academy for sponsoring the 29th MLW and pronounced the workshop closed.

A Final Word From Our Host

**Passing the Bell to
Next Year's Host**

APPENDICES

United States Air Force

U.S. AIR FORCE ACADEMY, PUBLIC AFFAIRS, USAF ACADEMY, CO 80840

(303) 472-4050

AIR FORCE ACADEMY HISTORY

The idea surfaced almost four decades ago, but did not become a reality until April 1, 1954, when President Dwight D. Eisenhower signed the bill establishing the U. S. Air Force Academy.

Many of America's pioneer airmen advocated the creation of an academy to prepare officers especially for the air service. One of them, Brigadier General William "Billy" Mitchell, tried in vain to persuade first the government and then private interests to establish such a school.

In 1948, the Air Force appointed a board of leading civilian and military educators to plan the curriculum for an Air Force academy. The idea made little progress outside the Air Force, until 1949 when Secretary of Defense James Forrestal appointed a board of military and civilian educators. The board was headed by Dwight D. Eisenhower, then president of Columbia University, and Robert L. Stearns, president of the University of Colorado, to recommend a general system of education for the Army, Navy and Air Force.

In 1950, this board found the needs of the Air Force could not be met by a desirable expansion of the older service academies. The board recommended that an Air Force Academy be established without delay and proposed that, in peacetime, not less than 40 percent of the regular officers taken into each service should be Academy graduates.

Congress authorized creation of the Air Force Academy in 1954. Harold E. Talbott, then secretary of the Air Force, appointed a commission to assist him in selecting the permanent site. After traveling 21,000 miles and considering 580 proposed sites in 45 states, the commission recommended three locations. From those, Secretary Talbott selected the site near Colorado Springs. The state of Colorado contributed $1 million toward the purchase of the property.

The first Academy class entered in July 1955 at temporary facilities at Lowry AFB, Denver. Construction at the permanent location also started in 1955 and was sufficiently complete for the Cadet Wing to move into its permanent home in late August 1958. Initial construction cost $142 million.

Two hundred five members of the first class were commissioned as second lieutenants in June 1959. That class graduated the fewest cadets. Five years later, President Lyndon B. Johnson signed a bill into law authorizing a student increase in the Cadet Wing from 2,529 to 4,417.

Expansion began in June 1964 when 1,002 cadets entered the Academy. To provide facilities for the increase, Air Force officials programmed $40 million during a five-year period beginning in fiscal year 1965.

Perhaps, though, the most controversial event in Academy history was the admission of women.

President Gerald R. Ford signed legislation Oct 7, 1975, permitting women to enter the nation's military academies. Women entered the Air Force Academy for the first time June 28, 1976. The first class with women graduated in May 1980.

As with any other institution, the Air Force Academy has suffered growing pains. But in its relatively short period of existence, the Air Force Academy has excelled in its quest for excellence to a degree that similar organizations achieved only after much longer periods.

The Academy's academic program showed evidence of high quality almost immediately. The Commission of Colleges and Universities of the North Central Association of Colleges and Secondary Schools accredited the Academy's degree program in 1959, an uncommon occurrence since the first class had not yet graduated.

The Academy has provided the Air Force with a corps of officers dedicated to upholding the government of the United States. The Air Force has provided a proving ground for these officers and a source for the dedicated staff members who have come to the Academy to educate and train these future leaders.

Throughout its history, one theme has been constant and persistent—a Commitment To Excellence. And, it's with that theme that the Air Force Academy looks forward to the future.

Current as of June 1985
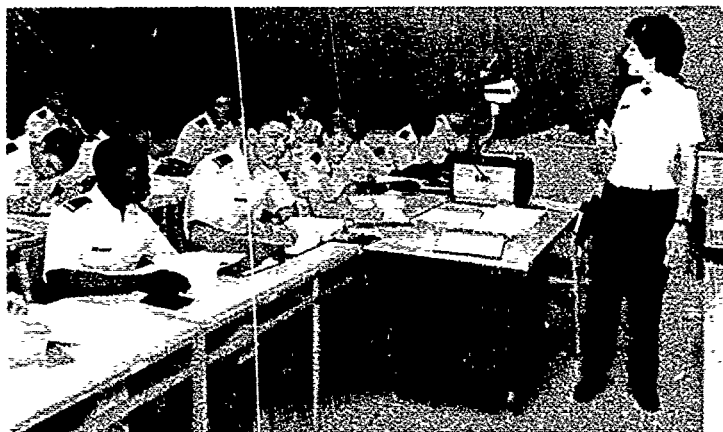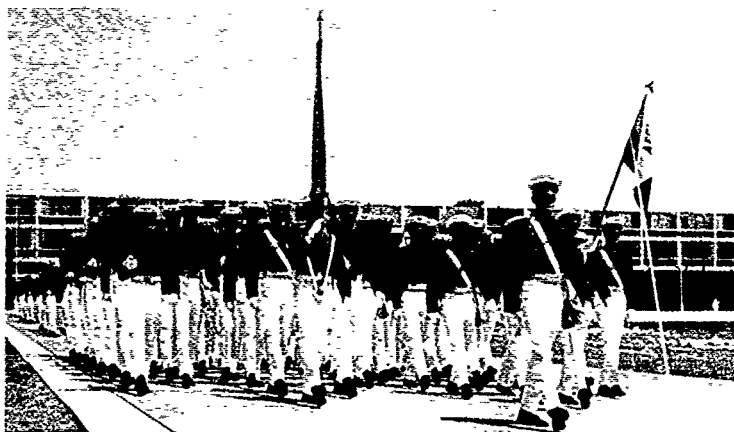
AIR FORCE ACADEMY CADET CHAPEL

Soaring 150 feet toward the Colorado sky, the Air Force Academy Chapel is an all-faith house of worship designed to meet the spiritual needs of cadets. It contains a separate chapel for each of the three major religious faiths represented in the Air Force--Protestant, Catholic and Jewish--plus an all-faiths room for members of other faiths. There are two main levels, with the Protestant nave on the upper level. The Catholic and Jewish chapels and the all-faiths room are located beneath it. Each chapel has its own entrance and services may be held simultaneously without interfering with one another.

The aluminum, glass and steel structure features 17 spires. There is no significance to this number. Original designs were too expensive, so changes were made, among them a reduction in the number of spires. The changes did not alter the basic design or the interior square footage of the chapel, however.

The chapel structure cost $3.5 million to build. Furnishings, pipe organs, liturgical fittings and adornments of the chapel were presented as gifts from private individuals and donations from Easter offerings made at Air Force bases.

Principal designer-architect of the chapel was Walter A. Netsch Jr. of Skidmore, Owings and Merrill of Chicago. Construction was by Robert E. McKee, Inc. of Santa Fe, N.M.

Protestant Chapel

The tetrahedrons form the walls and the 95-foot-high pinnacled ceiling of the Protestant Chapel. Stained glass windows form ribbons of color between the tetrahedrons. Eight basic colors graduate from cool to warm with the narthex (entrance) to the chancel (altar area). The floor is gray-white terrazzo.

The chancel is set off by a crescent-shaped, vari-colored reredos behind the altar. The 14- by 45-foot reredos represents the arms of God ready to receive anyone who goes there in prayer. Semi-precious stones from Colorado and pietra santa marble from Italy cover its 1,260 square-foot area.

A sleek marble slab 15-feet long, formed in the shape of a ship symbolizing the church, is the holy table, or altar. Four travertine marble legs support the table.

Focal point of the chancel is the cross suspended over it. Executed in aluminum, the cross is 46 feet-2 inches high, 15½ feet wide and weighs 1,200 pounds.

Surrounding the curved steps of the altar are 12 kneelers done in needlepoint by officers wives clubs throughout the Air Force. Each kneeler, except one, contains a cross seen in the historical development of representative art within the Protestant church.

The pews, which can seat 1,200, are of American walnut and African mahogany. They were sculptured so the end of each pew resembles an airplane propeller. The backs of the pews are capped by a strip of aluminum similar to the leading edge of an aircraft wing.

Perched in the choir loft above the narthex and reaching the uppermost heights of the chancel is the classical pipe organ. Designed by Walter Holtkamp of the M. P. Moller Co. of Hagerstown, Md., the organ has 79 ranks and 67 stops controlling 4,334 pipes. The largest pipe is 32-feet high and the smallest is pencil size.

Catholic Chapel

The focal point of the Catholic Chapel is the reredos behind the altar. An abstract glass mosaic mural, the reredos is composed of varying shades of blue, turquoise, rose and gray tessera to form a portrayal of the firmament. Superimposed on the mural are two 10-foot-tall marble figures, "Our Lady of the Skies" (The Blessed Mother) on the left, and on the right is the Guardian Angel. Above and between these two figures is a marble dove, symbolic of the Holy Ghost.

In front of the reredos is the altar which was dedicated by the late Francis Cardinal Spellman on Sept. 22, 1963. The altar has a large table top of polished marble mounted on a cone-shaped pedestal. Above the altar is a six-foot sculptured nickel-silver crucifix. Altar furnishings are of high gloss nickel-silver.

The side walls of the chapel from floor to ceiling, are panels of amber glass which cast soft brown colors across the chapel. Between the amber glass panels are strip windows of multi-colored cast glass set in precast reinforced concrete.

Along the side walls are the 14 stations of the cross, carved from four-inch-thick slabs of marble. The recessed backgrounds in the sculptures are multi-colored tessera.

Both the stations of the cross and the reredos were designed and completed by the late Lumen Martin Winter, who created "The Conversion of St. Paul" for the facade of the Church of St. Paul the Apostle in New York City. The Carrera marble in which the figures are done was taken from the same quarries from which Michelangelo drew his stone.

The pews, which seat 500 people, are of American walnut trimmed in satin finished stainless steel.

There is a confessional and reconciliation room at the rear of the 55½- by 95-foot nave. Off one side of the narthex is the baptistry and on the other side is the blessed sacrament room, the walls of which are marble chips and semi-precious Colorado stones.

The classical pipe organ, placed in the 100-seat choir loft, in the chapel was also designed by Walter Holtkamp and built by M. P. Moller Co. The organ features 36 ranks and 29 stops to control its 1,950 pipes.

Jewish Chapel

Architecturally, the synagogue is a circle within a square. The circular design symbolizes the global mission of the Air Force and the everlasting presence of God--there is no beginning and there is no end. The surrounding foyer is paved with 1,631 pieces of Jerusalem brownstone donated by the Israeli Defense Forces.

The walls of the foyer are purple stained glass panels alternating with green and blue stained accent windows. The circular walls of the synagogue are panels of translucent glass separated by stanchions of Israeli cypress.

The focal point of the Jewish Chapel is the Aaron Kodesh, the Holy Ark, which shelters the Scrolls of the Torah. The Eternal Light hangs to the right of the Ark. Nested in three Stars of David, it symbolizes the ever-present God within the life of the Jewish People.

The synagogue is the only one of the three cadet chapels with individual chairs for the congregants. It seats 100 people.

The All-Faiths Room

The all-faiths room is a neutral place of worship for small groups and other denominations. It is purposely devoid of religious symbols to make it acceptable to a variety of religious groups. An altar is available which can be adapted to several types of service, including Buddhist. The all-faiths room seats about 25 people.

Current as of January 1985
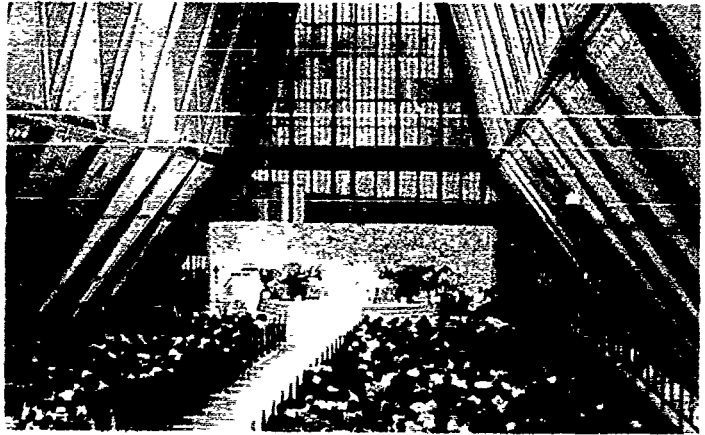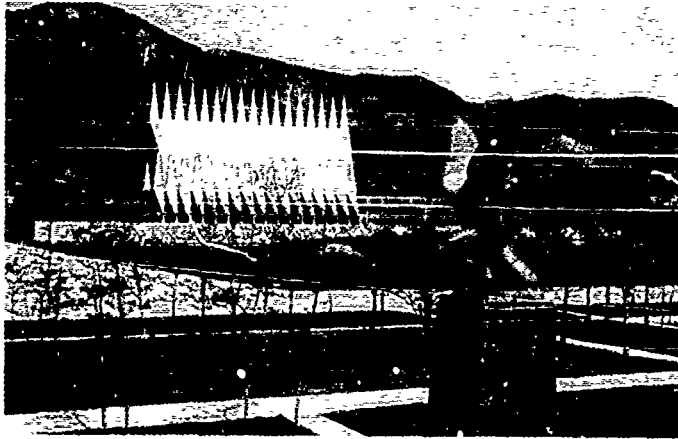
THE FALCON

Sports audiences across the country have been intrigued and delighted by the aerobatics of the falcon, flying mascot of the Air Force Academy Cadet Wing. Trained and handled by cadet falconers, the birds soar and dive around the stadium, sometimes zooming low over the heads of the spectators.

Most of these public appearances are in conjunction with football or basketball games, or other athletic contests in which cadet teams play. All Academy varsity sports teams are called the "Falcons."

History

Members of the Class of 1959, the first class to enter the Academy, chose the falcon as the mascot of the Cadet Wing Sept. 25, 1955. The first class felt the falcon best characterized the combat role of the U.S. Air Force. When the cadets selected the falcon, they did not specify any particular species. As a result, any falcon can serve as the mascot. Falcons are long-winged hawks.

Some of the characteristics of the falcon which led to its selection are:

--Speed - authorities say that falcons can attain velocities exceeding 100 miles per hour in "stoops" or dives on their prey.

--Powerful and graceful flight - with strong, deep wingbeats, the birds maneuver with ease, grace and evident enjoyment.

--Courage - fearless and aggressive, falcons fiercely defend their nest and young against intruders. They have been known to unhesitatingly attack and kill prey more than twice their size.

--Keen eyesight - about eight times sharper than that of a human.

--Alertness, regal carriage and noble tradition.

Although falcons are members of the hawk family, they differ in that falcons have long pointed wings and dark eyes. There are five types of falcons native to North America, ranging in size from two feet in height to as small as five inches. These birds are the White

Artic gyrfalcon, largest; the peregrine falcon sometimes called the duck hawk; the American merlin, or pigeon hawk; the prairie falcon; and the American kestrel, sometimes called a "windhover"or a "sparrowhawk."

Through the ages all types have been trained by falconers, usually for hunting. In medieval Europe, the gyrfalcon was reserved for kings and princes while the peregrine was flown by nobles of ducal rank. Recently many countries have enacted legislation to protect the birds whose existence has become precarious. Colorado, along with many other states, has similar laws.

Falcons At The Academy

A splendid peregrine was the first falcon presented to the Cadet Wing Oct. 5, 1955. It was named "Mach 1" indicating the speed of sound. "Mach 1" is still the official mascot name, although each bird receives an individual name from the cadet falconers.

About 10 falcons are kept in the mews north of the cadet area. The majority of the birds are prairie falcons nat e to Colorado. Cadets train both the tiercels (males) and falcons (females) to perform flying demonstrations.

In the past the Academy has been fortunate to have had a white gyrfalcon represent the Cadet Wing. Early gyrfalcon mascots were Atholl and Pegasus. The most recent and long lived white gyrfalcon, Baffin, got her name from the island in the Arctic Ocean where she was captured with the permission of the government of Canada. Captain Richard Graham presented her to the Academy Nov. 20, 1965, as a gift from the 17th Air Force. Baffin died April 7, 1978, at the age of 13. During her years as queen of the mews, Baffin appeared at all home football games, during June Week and on parents' weekend, and she was the star on several television talk shows. Artist Donald Eckelberry, renowned wildlife painter, was commissioned in 1972 by the Association of Graduates to record her likeness for posterity. Baffin has been restored to her former beauty by highly acclaimed taxidermist Don Bowman. On Aug. 8, 1979, she was presented to the Cadet Wing by David Merrifield of Wildlife World, Monument, Colo. She is now on display in Arnold Hall.

Since July 1980, the Cadet Wing once again has a white gyrfalcon mascot to show to the public. Glacier, a male gyrfalcon, was taken from the nest in the Seward Peninsula of Alaska by an Academy sponsored search team on July 3, 1980. Although the Academy received permission from Alaskan authorities to take two gyrfalcons, a white one and a less rare gray phase gyrfalcon, the search team felt it best to take only one. Glacier has already been the center of attention for many Air Force Academy official functions.

Experts said that falcons could not be trained to perform before huge audiences, that the birds would panic and flee. Since 1965, however, cadets have flown the birds at football and basketball games before thousands of spectators.

Falconry is one of the extracurricular activities offered to cadets by the commandant of cadets. The Academy Chief, Environmental Health Services serves as the officer-in-charge. There are usually 12 falconers, with four chosen from each new fourthclass (freshman) at the end of the year to replace the seniors who will graduate. The new falconers begin training in January under the leadership of experienced upperclassmen and the officer-in-charge. Without proper instruction, novices can physically harm the birds or adversely affect their training. Falconers' duties include daily checks of each bird's health and condition, daily training sessions during which the birds are fed a measured ration of meat, frequent cleaning of the mews and routine maintenance of equipment.

Training the Falcons

Under special permits issued by the U.S. Fish and Wildlife Service and the Colorado Division of Wildlife, the Academy is permitted to propagate captive prairie falcons. Since 1974, most birds used for public exhibition have been produced in the Academy breeding project and no wild birds have been taken. Due to the success of this project, birds excess to Academy needs have been transferred to agencies for use in educational programs dealing with raptors (birds of prey). When the Academy production is lower than its needs, the Peregrine Fund Project at Fort Collins, Colo., supplies the Academy with their excess prairie falcons. Annual reports on all activities of the Academy falcon program are submitted to state and federal wildlife conservation agencies.

The striking Colorado prairie falcon is the bird used by cadet falconers in flying demonstrations. The birds are flown throughout the year, weather permitting, to keep them in condition. Between May and October, when the birds are molting, the training is minimized to prevent damage to new feathers.

Young birds hatched in May or June grow rapidly and by the end of July are fully feathered and ready for training. The first step is to acquaint them with the "jess," a short leather strap fastened to each of the bird's legs. The next stage is called "manning," a procedure to let the falcons become accustomed to the presence, sounds and smell of people. Each falcon has a six-foot leash coupled to the jesses, and is carried on a falconer's gloved fist. In this manner the bird gradually loses the fear of moving among crowds of people. A leather hood is used when necessary; when it is placed over the bird's head the falcon will remain calm.

Next, a long stout string called a "creance" is used to secure the bird. One end of the creance is fastened to the base of a portable outdoor perch, and the other end is fastened to the jesses on the falcon's legs, thus giving the bird a restricted flight range. The falcon is taught to hop, then flutter, and finally fly the length of the creance to the falconer for food. This is followed by training the bird to fly to the lure, a rectangular shaped leather pouch to which meat is attached. The falconer whirls the lure in a circle on a 10-foot cord, and the bird quickly learns to strike it in mid-air,

carry it to the ground and dine on the food. When the falcon flies unhesitatingly to the lure every time, the creance is removed and the bird is permitted to fly free. A small battery powered transmitter is attached to the falcon's leg so that, should the bird not come to the lure as it has been trained, the cadet falconers will be able to follow and safely recover the falcon. As the falcon stoops toward the lure in free flight, the lure is jerked aside, causing the falcon to fly up, circle and make another pass. This procedure is repeated several times before the bird is allowed to strike the lure in mid-air.

Six weeks or more are required to properly train an "eyas" or young falcon. When a bird is in top condition, it is able to fly for more than an hour and make repeated stoops. Although falcons can be trained to perform, the birds are never totally domesticated and remain wild creatures with strong, independent spirits.

Current as of July 1985
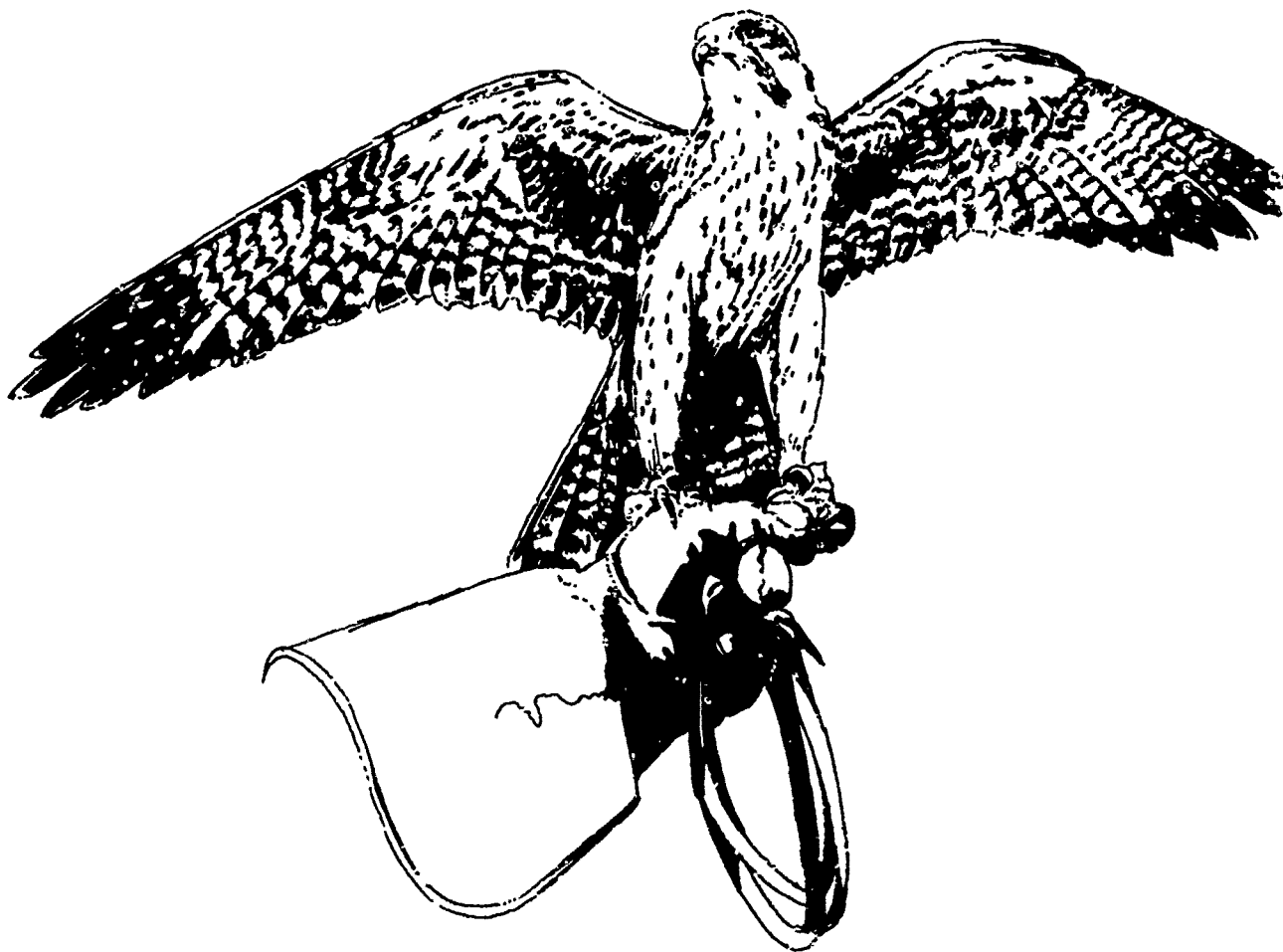
Gimbel Aeronautical History Collection

The Gimbel Library, which is housed in a secure and humidified area, comprises an amazing array of items pertaining to the history of flight. Five-thousand-year-old seals carved from semi-precious stones (used to make clay tablets) and some of the first printed allusions to flying document man's earliest dreams of flight. There are drawings, rare commemorative medals, and other books about early experiments with wings, initial balloon ascents, first parachutes, kites, pyrotechnics, historic aviation flights, imaginary voyages in space, and primitive rockets which contribute to a kaleidoscope of the history of man's aeronautical triumphs. Early flight manuals, catalogs of aircraft equipment, and other materials relating to airships, military aviation, and air accidents record the technological progress and problems of modern aeronautics. Remarkably too, several most unusual media in the Gimbel Library depict aeronautical events--chinaware artifacts, bookends, snuff boxes, bowls, clippings, fans, military insignia, model airplanes, matchboxes, playing, greeting, and post cards, children's games and toys, and even valentines!

French and English editions predominate among the approximately 7,000 books in the collection, which encompasses more than a dozen languages. Eight books are priceless incunabula (books printed before 1501) and one-fourth of the editions in the collection were printed before 1850. Many of the books, in addtion to their aeronautical significance, are bibliographic treasures because they are superb examples of fine book binding, printing, illustration, and typography.

One of many exciting and fascinating topics extensively covered in the Gimbel Collection is the idea of imaginary voyages in space. Speculations on this theme abound in numerous editions, including Roger Bacon's treatise on wonders of the world De Mirabilibus Mundi (1542), Rostand's Cyrano de Bergerac, Patlock's Peter Wilkins, and several works by Jules Verne.

Autograph enthusiasts can scrutinize with great interest the more than 250 autographs, holographs, and inscriptions in the collection. There are many important letters written by pioneers of flight: Blanchard, Bleriot, Langley, Lunardi, Montgolfier, Pilatre de Rozier, Santos-Dumont, the Wright brothers, and Count Zeppelin. There are also extremely rare handwritten manuscripts from the Siege of Paris (1870-1871).

The Gimbel Library is greatly enriched by approximately 5,000 prints, portraits, and views, and includes engravings, etchings, woodcuts, lithographs, and drawings--in black-and-white and in color. The prints are grouped in 49 portfolios, making a truly unique pictorial history of aeronautics, and containing such headings as "Blanchard and Lunardi," "Kites," "Parachutes," "War Balloons," "Japanese Prints," "Aeronautical Cartoons," "Posters and Playbills," "Sheet Music," "Moon Material," and "Currier and Ives." A superb example of fore-edge painting is a special prize.

Although Colonel Gimbel had intended the historic first flight of the Wright brothers to be the original terminal point of his aeronautical collection, he later expanded his holdings to include the post-1903 period--including the accomplishments of Lindbergh and Amelia Earhart, and also juvenile works, aeronautical fiction dealing primarily with the World War I era, and concluding with materials about the American lunar landing.

With a total of more than 20,000 items, the Gimbel Library is a comprehensive record of aeronautical history. To this collection we have added approximately 500 rare books that were already in the Academy Library collection and about 400 items donated by Richard Upjohn Light. Items are also being added by purchase and exchange. These additions contribute to the goal of making the Gimbel Library definitive in the era prior to heavier-than-air flight. A printed catalog is a goal for the future.

Colonel Richard Gimbel (1898-1970) was a grandson of the Gimbel department stores founder. He served in Europe with the Army Air Forces during World War II, and concluded his military career as Professor of Air Science at Yale University, retiring as an Air Force colonel in 1953. He subsequently was made Curator of Aeronautical Literature at Yale University Library and served in this capacity until his death.

A Gimbel family tradition of active and enthusiastic support of philanthropic and cultural activities was carried on by Colonel Gimbel throughout his life. He was also a noted bibliophile. In addition to his aeronautical history resources, he assembled major collections concerning Charles Dickens, Edgar Allan Poe, and Thomas Paine. There were other minor gatherings as well. The aeronautical collection was transferred to the Air Force Academy Library in 1971, and is being cataloged for use by faculty, cadets, and other scholars.

APPENDIX II

United States Air Force Academy
EXECUTIVE WRITING COURSE

CONTENTS

ORGANIZED WRITING

SPOKEN WRITING

CONCISE WRITING

ACTIVE WRITING

APPENDIXES

ORGANIZED WRITING

Too many writers start throwing ink before they know what to aim at. When you write, start with a clear sense of your purpose and audience, and arrange your ideas so you get to the point fast. Then write effective paragraphs and sentences.

Establish Your Purpose and Audience

You'll save time and rewrite less if you plan before you pick up a pen or start to dictate. In the planning stage, analyze your audience in light of your purpose by answering these questions:

What is my purpose?

Who are my readers?

What are their interests?

How much do they know already?

What will make it _easy_ for them to understand or act?

You'll discover ideas as you write, but you'll wander less by keeping the answers to these questions in mind.

Start Fast, Explain as Necessary, Then Stop

Timid writing creeps up on the most important information. First comes background, then discussion, and finally the so-what. With luck, the main point follows a sign such as _therefore_, _consequently_, or _due to the above_. This slow buildup isn't chaotic; it enacts the way writers inform themselves. But the pattern isn't efficient, either. From the perspective of readers, it's the clue-by-clue pattern of mystery stories.

Your writing should follow the newspaper pattern. Open with the most important information and taper off to the least important. Avoid mere chronology.

To find what to put first, think about the one sentence you'd keep if you could keep only one. Many letters and memos are simple enough to have such a key sentence, which should appear by the end of the first paragraph. The strongest letter highlights the main

point in a one-sentence paragraph at the very beginning. Put requests <u>before</u> justifications, answers <u>before</u> explanations, conclusions <u>before</u> discussions, and summaries <u>before</u> details.

Sometimes, as in a complex proposal or a reply to various questions, you may have many key points. They would overload the first paragraph if you tried to put them all there. In these cases, start with a general statement of purpose.

Here are some good beginnings:

> We inspected the Directorate of Administration on 24 January 1984.
> Its overall performance was satisfactory. Special-interest areas were
> also satisfactory. . . .

> We request authorization to hire a full-time clerk typist or reassign one
> from the word-processing center. . . .

> This memorandum summarizes how we are planning the first step toward
> your goal of reorganizing the Air Force Reserve. . . .

> Sgt Frank Martin did a superb job during our recent engine change. . . .

Delay your main point to soften bad news or to introduce a controversial proposal. But don't delay routinely. Readers, like listeners, are put off by people who take forever to get to the point. In most cases, plunge right in.

To end most letters, just stop. When writing to persuade rather than just to inform, end strongly—with a forecast, appeal, or implication that activates the reader to do something. When feelings are involved, exit gracefully—with an expression of good will. When in doubt, offer your help or the name of a contact.

Use More Headings

Any document longer than three pages probably needs headings, so that readers can follow at a glance. Even a one-page letter can benefit from headings when topics vary widely. Be informative; avoid relying on headings that use one or two vague words.

For: <u>Procedures</u>

Try: <u>How to Complete DoD Form 78</u>

For: <u>Use of Contractors</u>

Try: <u>How Much Contractors May Charge</u>

Write Effective Paragraphs

<u>Keep paragraphs short.</u> Cover one topic completely before starting another, and let a topic run for several paragraphs if necessary. But keep each paragraph down to roughly four or five sentences. Long paragraphs will divide where your thinking takes a turn.

Now and then use a one-sentence paragraph to highlight an important idea, such as the main point of a letter.

Use more lists. Look for opportunities to divide paragraphs into lists. This technique is especially important for staff papers and directives. As you can see, lists—

> Add white space for easy reading,
>
> Show levels of importance,
>
> Simplify—
>
>> Initial review,
>>
>> Later revision.

Just remember to avoid dividing a paragraph into more than the three levels shown here. If you use too many lists within lists, readers will lose sight of the overall structure.

Take advantage of topic sentences. A paragraph may need a topic sentence—a generalization explained by the rest of the paragraph. Then again, it may not. The decision to use a topic sentence is among a writer's many judgment calls. A short paragraph announcing the time, place, and agenda of a meeting might begin with, "Here are details about the meeting." Yet such a topic sentence is probably unnecessary, for readers can follow the writer's thinking without it.

But suppose you're writing a report on ways to protect a particular military facility from attack. Your ideas are complex, and the evidence needed to make them clear and convincing is considerable. So your paragraphs are likely to run longer and use more topic sentences than is the case in letters. Here's a model:

> Because so much of the complex borders the river, its waterfront is
> especially vulnerable to attack. The naval station and the shipyard
> next to it have 1.5 miles of waterfront on the river's north bank. To-
> gether they have 13 dry docks and piers. Two piers are used to load
> fuel. Most of the piers extend to within 100 yards of the center of
> the river's main ship channel, and the river itself is only 900 yards
> at its widest.

The first sentence of the sample gives the paragraph a bull's eye. Because we know early where the facts are headed, the paragraph inspires confidence. A lesser writer might have left out the topic sentence or put it elsewhere in the paragraph or claimed more than the facts support. Be alert to the advantages of topic sentences, for they help shape masses of information. Without them, some paragraphs make readers shrug and say, "So?"

Write Disciplined Sentences

So far we've talked about organizing letters and paragraphs so they call attention to important ideas. Now here are some important ways to avoid sentences that mumble: subordinate minor ideas, use more parallelism, place ideas deliberately, and try some mini-sentences.

<u>Subordinate minor ideas.</u> Besides clarifying the relationship between ideas, subordination prevents overusing <u>and</u>--the weakest of all conjunctions.

For: The base exchange at Peterson AFB uses a similar contractor
       service and saves its customers about 15 percent.

Try: By using a similar contractor service, the base exchange at Peterson
       AFB saves its customers about 15 percent.

For: The revised travel-allowance tables have been mailed to all units
       and are effective 1 October.

Try: The revised travel-allowance tables, which have been mailed
       to all units, are effective 1 October. (stresses date)

 Or: The revised travel-allowance tables, which are effective 1 October,
       have been mailed to all units. (stresses mailing)

<u>Use more parallelism.</u> Look for opportunities to arrange two or more equally important ideas so they look equal. Parallelism saves words, clarifies ideas, and provides balance. The first words of the series should use the same part of speech (verbs in the previous sentence).

For: The symposium is a forum for the dissemination of information
       and is not intended to establish standards.

Try: The symposium is a forum for <u>sharing</u> information, not for <u>setting</u>
       standards.

For: Effective 1 October, addressees will be required to utilize the
       cost accounts contained in the attachment. Addressees will cease
       reporting against cost accounts 1060, 2137, and 2340.

Try: On 1 October, <u>start</u> using the cost accounts in the attachment
       and <u>stop</u> using cost accounts 1060, 2137, and 2340.

<u>Place ideas deliberately.</u> Start and finish a sentence any way you like, but keep in mind that ideas gain emphasis when they appear at either end. To mute an idea, put it in the middle.

Maintenance time may have to <u>increase</u> if more structural problems
develop. (mutes increased time)

If more structural problems develop, maintenance time may have to
<u>increase</u>. (stresses increased time)

For: I would like to <u>congratulate</u> you on your selection as our <u>Employee</u>
       <u>of the Month</u> for June.

Try: <u>Congratulations</u> on your selection as our June <u>Employee of the</u>
       <u>Month</u>.

<u>Try some mini-sentences</u>. An occasional sentence of six words or less slows down readers and emphasizes ideas. The principle is illustrated in this next example from a general's memo to his staff.

> I can get more information from the staff if each of you gives me less.
> <u>Here's why</u>. In a week, about 110 staff actions show up in my in-box.
> I could handle these in a week if all I did was work the in-box. Yet
> about 70% of my time in the headquarters goes not to the in-box but
> to briefings. I could handle that dilemma, too—by listening to briefings
> and thinking about staff papers at the same time. <u>I don't</u>.

Look for opportunities in your own writing to use mini-sentences. They'll give it variety.

> For: I apologize for not answering your letter sooner, but an extended
> TDY kept me away from my desk for three weeks.

> Try: I should have answered your letter sooner. <u>I apologize</u>. An extended
> TDY kept me away from my desk for three weeks.

SPOKEN WRITING

Make your writing as formal or informal as the situation requires, but do so with language you might use in speaking. This isn't a call to copy every quirk of speech down to grunts and ramblings. And, granted, some people speak no better than they write. Still, because readers "hear" writing, the most readable writing sounds like people talking to people.

To make your writing more like speaking, begin by imagining your reader is sitting across from you. Then write with personal pronouns, everyday words, contractions, and short sentences. Together with questions, good tone, and concrete language, these techniques are the best of speaking.

Use Personal Pronouns

Though you needn't go out of your way to use personal pronouns, you mustn't go out of your way to avoid them. Avoiding natural references to people is false modesty. Whether you're a senior official or a subordinate, follow these principles:

1. Use we, us, our when speaking for your organization.

2. Use I, me, my when speaking for yourself.

3. Use you, stated or implied, to refer to the reader.

Multiplied across an entire letter, roundabout sentences like the next examples do severe damage. We would be laughed out of the room if we talked that way. Ordinary English is shorter, clearer, and just as official:

Not: Conceivably, funding constraints for this year will exceed in
severity the financial scarcities that have been anticipated.

But: We may have less money this year than we anticipated.

Not: The Naval Facilities Engineering Command, by reference (a),
forwarded its draft master plan for the Washington Navy Yard
to the Naval Supply Systems Command for review and comment.
The following comments apply.

But: In response to reference (a), here are our comments on your draft
master plan for the Washington Navy Yard.

Not: It is necessary that the material be received in this office by June 10.

But: We need the material by June 10.

Or: The material must reach us by June 10.

It is and this command complicate the next example. They force readers to put back the pronouns the writer took out. To make matters worse, the first it is refers to the reader, while the second refers to the sender.

Not: If it is desired that Marines be allowed to compete for positions
      on the pistol team, this command would be happy to establish
      and manage team tryouts. It is recommended that tryouts be
      conducted soon to ensure. . . .

But: If you allow Marines to compete for positions on the pistol team,
      we would be happy to establish and manage the tryouts. We recom-
      mend that tryouts start soon to ensure. . . .

Military writers can profit from an axiom of business writing known as the "you" attitude. It's a matter of showing greater concern for the reader than the writer by using you more than I or we. Better to say "the service you receive" than "the service we provide." Keep this distinction in mind, and when you have a choice, show that you see things from your reader's perspective by putting the emphasis on "you."

Can you overuse personal pronouns? In a few instances, yes. For example, you can use so many pronouns that readers lose sight of what the pronouns refer to. Besides, some subjects don't lend themselves to pronouns; the description of a plane's structure isn't likely to include people. Also, criticism hurts fewer feelings if delivered impersonally. "Nothing has been done" avoids the direct attack of "You have done nothing." Finally, if we or I opens more than two sentences in a row, the writing becomes monotonous and may suggest self-centeredness. Still, military writers have a long way to go before overuse of pronouns is a problem. Most of us will benefit from using more natural references to people.

Talk to One Reader When Writing to Many

When you're writing to many people but none of them in particular, create in your mind a typical reader. Talk to that reader by using you and your, stated or implied. Only one person reads your writing at any one time, so the most readable writing speaks directly to one reader.

Not: All addressees are requested to provide inputs of desired course
      content.

But: Please send us your recommendations for course content.

Not: It is requested that all employees planning to take leave in
      December fill in the enclosed schedule.

But: If you plan to take leave in December, fill in the enclosed
      schedule.

When you write directives, look for opportunities to talk directly to a user. Procedures, checklists, or other how-to instructions lend themselves to this cookbook approach. Imagine someone has walked up to you and asked what to do. The following example is from an instruction that repeated the duty officer dozens of times:

Not: The duty officer will verify that security responsibilities have been completed by putting his/her initials on the checklist.

But: When you complete the inspection, initial the checklist.

Rely on Everyday Words

The complexity of military work and the need for precision require some big words. But don't use big words when little ones will do. People who speak with small words often let needlessly fancy ones burden their writing. On paper help swells to assistance pay to remuneration, and visit to visitation. The list goes on, and so does the damage from word inflation.

Do you remember the dude in those old Western movies who overdressed to impress the folks at the ranch? Overdressed writing fails just as foolishly. Here are some commonly overdressed words.

Not	But
commence	start
facilitate	help
optimum	best
promulgate	issue
utilize	use

Prefer short, spoken transitions over long, bookish ones. Save long transitions for variety. By preferring short ones, you help set an ordinary tone for the rest of what you say. (And, yes, you can start sentences with conjunctions.)

Not	But
consequently	so
however	but
in addition	also
nevertheless	still

Avoid legalistic lingo. Let a regulation's number or a letter's signature carry the authority instead of trying to put that authority in your language. Write to express, not to impress.

Not	But
aforesaid	the, that
heretofore	until now
herewith is	here is
the undersigned	I

All writers try to impress readers. but the best do it through language that doesn't call attention to itself. Size of vocabulary is less important than skill in manipulating the words you already know. See Appendix A for a list of simpler words and phrases.

Use Some Contractions

Contractions link pronouns with verbs (we'd, I'll, you're) and make verbs negative (don't, can't, won't). They're appropriate for all but the most formal writing situations. Yet even when your final product will be a formal reprimand, for example, you can use contractions in drafts to help you write naturally.

The point is that if you're comfortable with contractions, your writing is likely to read easily, for you'll be speaking on paper. And because the language is clear, you're more likely to spot holes in your thinking that need to be filled.

If contractions seem out of place, you may need to deflate the rest of what you say. In the next sentence, something has to go, either the opening contraction or the inflated language that follows: "It's incumbent upon all personnel to effect energy savings." Written naturally, the sentence might read, "It's your job to save energy."

Keep Sentences Short

For variety mix long sentences and short ones, but average under twenty words. Though short sentences won't guarantee clarity, they're usually less confusing than long ones. You needn't count every word. Try the eye test: average under two typed lines. Or try the ear test: read your writing aloud and break up most of the sentences that don't end in one breath. In the next example, we first break the marathon sentence into manageable units and then make the writing sound like speaking.

> Not: It is requested that attendees be divided between the two briefing
> dates with the understanding that any necessary final adjustments
> will be made by DAA to facilitate equitable distribution. (29 words)

> Uh: It is requested that attendees be divided between the two briefing
> dates. Any necessary final adjustments will be made by DAA
> to facilitate equitable distribution. (12, 13 words)

> But: Send half your people on one day and half on the other. DAA
> will make final adjustments. (12, 5 words)

Ask More Questions

A request gains emphasis when it ends with a question mark. Do you hear how spoken a question is? Look for opportunities to reach out to your reader:

> Not: Request this headquarters be notified as to whether the conference
> has been rescheduled.

> But: Has the conference been rescheduled?

Not: In an effort to improve the cost of office copier operation, it is requested your firm complete the attached form relating to office copiers which you would propose to rent/lease.

But: Would you let us know on the accompanying form what you charge to rent and lease your copiers?

Listen to Your Tone

Speakers have gesture, voice, and movement to help them communicate. Writers have only words on paper. Recognize your disadvantage as a writer and remember to pay special attention to tone.

Tone—a writer's attitude toward the subject or readers—causes relatively few problems in routine writing. The more sensitive the reader or issue, however, the more careful we must be to promote good will. Tactlessness in writing suggests clumsiness in general. When feelings are involved, one misused word can make an enemy.

Imagine you are a reservist who has asked to stay on active duty even though you have a serious illness. How does the following answer strike you?

Because you have failed to pass the prescribed physical examination, you will be removed from active duty.

Failed? Removed? These words hint at crime and punishment. To avoid such tactlessness, the tone should be positive.

Negative	Positive
Opportunity is limited.	Competition is keen.
Stop writing badly.	Start writing well.
Don't use the small hoist.	Use the big hoist.
The cup is half empty.	The cup is half full.

The positive approach removes some of the sting from the reservist's answer. Here's a possibility:

Given the results of your physical examination, we must transfer you to the Retired Reserve.

The structure of the letter was better than the wording of the "failed" sentence. The letter opened by acknowledging the favorable endorsements that accompanied the request to stay on active duty, and it closed by thanking the reservist for his years of service. This tactful arrangement helped to soften the bad news.

Now imagine you've asked for more time to complete a correspondence course. Here's the last sentence of the letter that turns you down:

If we can be of further assistance, please do not hesitate to write.

Beware of rubber-stamp endings such as the one you just read. They don't improve good letters or save bad ones. To the reader whose request has been denied, further assistance

promises further disappointment. The closing sentence should be dropped entirely or tied to the rest of the letter with positive language:

> This setback aside, we hope you will take advantage of other correspondence courses available to you.

In all fairness to the writer, the letter did explain the denial in enough detail to avoid any hint of a brush-off. Most no answers need some explanation. Yes answers need little explanation because readers get what they want.

Be Concrete

Without generalizations and abstractions, lots of them, we would drown in detail. We sum up vast amounts of experience when we speak of dedication, programs, hardware, and lines of authority. But such abstract language isn't likely to evoke in a reader's mind the same experiences it evokes in a writer's. Lazy writing overuses such vague terms. Often it weakens them further by substituting adjectives for examples: immense dedication, enhanced programs, viable hardware, and responsive lines of authority.

If you write, "The solution to low morale and poor discipline is good leadership," your readers may feel warm all over. But until you point out some specific behavior meant by low morale, poor discipline, and good leadership, neither you nor your readers can tackle the problem. Similarly, don't use a general word if the context allows for a specific one. Be as definite as the situation permits.

For	Try
aircraft	plane
plane	F-16
improved costs	lower costs
enhanced method	faster method? cheaper method?

Vague, high-sounding language also weakens job descriptions. Someone is said to "assist and advise in the organization management aspects of manpower management." Another "serves as a system proponent to transition from current capabilities to architectural projections." But what do these people really do? After all, a person who "serves as a direct interface with interstate commerce" may be only a highway flag holder.

Performance evaluations suffer when writers make extravagant, unsupported claims. Someone actually wrote this next example, and someone else has it ticking in his files.

> Engaged in an assignment of a highly complex and technical nature, Sgt Anderson has molded on-the-job experience, diligence, and persever- ance to a point where his seniors and supervisors can inevitably afford credence to his work and the conclusions he derives therefrom.

An effective evaluation shows what a person did and how well he or she did it. It's concrete enough to inspire confidence in the writer's judgment about the ratee's performance and potential.

CONCISE WRITING

Concise writing includes only those ideas that readers need, and it gives those ideas no more words than they deserve. Careful audience analysis and a willingness to be hard on yourself are essential for conciseness. Have you included too much background? Do excessive details bury your point? Are you keeping an irrelevant idea just because it sounds ever so fine?

You can say too little, of course, and not persuade your readers that a certain problem is serious or that your solution is worthwhile. Sometimes simple courtesy requires bulk; a one-sentence letter of praise is just too abrupt. But the point remains: the best writing, like the best machinery, has no unnecessary parts.

Don't be overly concerned about conciseness when you are getting your ideas on paper. If you try to create and edit at the same time, you may bog down in detail and lose sight of your point. When you polish your writing, though, look for wordiness everywhere. Question the need for every paragraph, every sentence, every word. The longer you take to say things, the weaker you come across and the more you risk blurring important ideas. In the war against wordiness, the best weapon is a writer's ruthlessness. Now here are some common forms of wordiness that are easy to spot and avoid:

Avoid "it is" and "there is"

No two words hurt military writing more than it is. They stretch sentences, delay meaning hide responsibility, and encourage passive verbs. Unless it refers to something mentioned earlier, avoid it is. Spare only spoken expressions such as "it is time to . . ." or "it is hard to . . ." and an occasional pointing expression such as "it is your job to . . ." (not someone else's).

Not	But
it is requested	we request, please
it is my intention	I intend
it is necessary that you	you need to, you must
it is apparent that	clearly
it is the recommendation of this office that	we recommend

Not: It is mandatory that all personnel receive flu vaccinations.

But: All personnel must receive flu vaccinations.

Not: It is requested that all badges be surrendered upon departure of your group from the restricted area.

But: Return all badges when your group leaves the restricted area.

Like it is constructions, forms of there is make sentences start slowly. Don't write these delayers without first trying to avoid them.

Not: There will be a meeting of the Human Relations Council at 1000 on 26 July in the main conference room.

But: The Human Relations Council will meet at 1000 on 26 July in the main conference room.

Not: There are two alternatives offered in the report.

But: The report offers two alternatives.

Prune Wordy Expressions

Wordy expressions don't give writing impressive bulk; they clutter it by getting in the way of the words that carry the meaning. In order to and in accordance with, for example, are minor ideas that don't deserve three words. Here are some repeat offenders.

Not	But
for the purpose of	for, to
in accordance with	by, following, under
in order to	to
in the event that	if
in the near future	shortly, soon
be advised	–
in the process of	–
is responsible for	–
the provisions of	–
the use of	–

Wordy expressions dilute the next examples. Extended across a letter or report, the savings from cutting such bloated language are considerable.

Not: In accordance with the new regulation, you may pay the claim with a check in the amount of $300.

But: Under the new regulation, you may pay the claim with a check for $300.

Not: In the event that this offer is satisfactory, be advised your written acceptance must reach us before May 11.

But: If this offer is satisfactory, your written acceptance must reach us before May 11.

Not: We are in the process of revising our form letters in order to make them more readable.

But: We are revising our form letters to make them more readable.

Free Smothered Verbs

Make your verbs do more work. The most important word in a sentence is the verb, the action word, the only word that can do something. Weak writing relies on general verbs, which take extra words to complete their meaning. When you write a general verb such as make or give, check to see whether you can turn a nearby word into a specific verb.

Not: This directive is applicable to everyone who makes use of the system.

But: This directive applies to everyone who uses the system.

Not: The committee held a meeting to give consideration to the proposal.

But: The committee met to consider the proposal.

Not: We will conduct an investigation into the incident before making a decision.

But: We will investigate the incident before deciding.

To be deserves special attention. It's the most common verb in English and the weakest. Though we need it often, often we don't. Cut down on your use of to be in any of its forms: am, is, are, was, were, be, being, been.

Shun "the -ion of" and "the -ment of"

Words ending in -ion and -ment are verbs turned into nouns. Whenever the context permits, change these nouns to verb forms. By favoring verb forms, your sentences will be shorter and livelier.

Not: Use that format for the preparation of your command history.

But: Use that format to prepare your command history.

Not: The settlement of travel claims involves the examination of orders.

But: Settling travel claims involves examining orders.

Or: To settle travel claims, we examine orders.

Cut Doublings

As the writer, you may see some differences between advise and assist, interest and concern, or thanks and gratitude. But your readers won't. Repeating a general idea can't make it any more precise. Simple subtraction will overcome doublings such as these:

Not: We must comply with the standards and criteria for controlling and reducing environmental pollution.

But: We must comply with the standards for reducing environmental pollution.

Not: The Department of Defense has developed plans for an orderly and integrated system of executive and management advancement.

But: The Department of Defense has developed plans for a system of executive advancement.

Prevent Hut-2-3-4 Phrases

Though you should cut needless words, sometimes you can go too far. Avoid hut-2-3-4 phrases—long clots of nouns and modifiers. Readers can't tell how the parts fit together or where they all will end. We must live with some established hut-2-3-4 phrases such as Air Traffic Control Radar Beacon System, but you can keep them out of whatever you originate by adding some words or rewriting entirely.

Not: the Board of Inspection and Survey service acceptance trials requirements

But: requirements by the Board of Inspection and Survey for service acceptance trials

Not: training needs planning summary survey

But: survey of training needs for the planning summary

Avoid Excessive Abbreviating

Excessive abbreviating is another common form of false economy. Use abbreviations no more than you must with insiders, and avoid them entirely with outsiders. Spell out an unfamiliar abbreviation the first time it appears, like this:

Training and Doctrine Command (TRADOC)

If an abbreviation would appear only twice or infrequently, spell out the term every time and avoid the abbreviation entirely. Put clarity before economy.

Passive writing is wordy, roundabout, and sometimes downright confusing. To avoid this infectious disease, learn how to spot passive verbs and make them active. Most of your sentences should use a who-does-what order. By leading with the doer, you automatically will avoid a passive verb.

Doctor: When did you first notice your use of verbs in the passive
          voice?

Patient: The utilization was first noticed by me shortly after the
          military was entered. A civilian agency has been joined
          by my brother. The same condition has been remarked on
          by him.

Doctor: Did you know that most of the verbs we speak with are active?
          So are most of the verbs in newspapers and magazines, the
          kinds of writing we like to read.

Patient: Well, it is believed by me that many verbs are made passive
          by military writers. In the letters and directives that have
          been prepared by this speaker, passive verbs have been utilized
          extensively. Are problems caused?

If you heard the unnatural sound of the patient's passives and know how to lead with doers, you needn't read on. But the following technical discussion may be helpful.

Learn the Symptoms of Passive Voice

A verb in the passive voice uses any form of <u>to be</u> plus the past participle of a main verb:

<u>am</u>   <u>is</u>   <u>are</u>   <u>was</u>   <u>were</u>   <u>be</u>   <u>being</u>   <u>been</u>

PLUS

a main verb usually ending in <u>-en</u> or <u>-ed</u>

Unlike sentences with active verbs, sentences with passives don't need to show who or what has done the verb's action. If a doer appears at all, it follows the verb. But most passives in military writing just imply the doer, a severe problem when the doer isn't clear from the context. Passive verbs look like the following underlined words:

Ex: As a result of what has been learned, it is desired that additional
      equipment testing be made.

      (Be made is passive. The past participle of to make is irregular.)

Ex: Two units of blood were ordered for an emergency patient whose
      hematocrit had fallen below 20 percent.

      (Had fallen is active. Had isn't a form of to be. Besides, what
      did the falling? Hematocrit, which appears before the verb.)

Know the Three Cures

Put a doer before the verb:

Not: The part must have been broken by the handlers.

But: The handlers must have broken the part.

Not: The requests must be approved. (By whom?)

But: The supervisor must approve the requests.

Not: Complete uniforms must be worn by all personnel.

But: All personnel must wear complete uniforms.

 Or: Wear complete uniforms.

Drop part of the verb:

Not: The results are listed in the attachment.

But: The results are in the attachment.

Not: Then she was transferred to Maxwell AFB.

But: Then she transferred to Maxwell AFB.

Change the verb:

Not: Letter formats are shown in the correspondence manual.

But: Letter formats appear in the correspondence manual.

Not: The replacement has not been received yet.

But: The replacement has not arrived yet.

Write Passively only for Good Reason

Now and then, write passively if you have good reason to avoid saying who or what has done the verb's action. This situation may occur if the doer is unknown, unimportant, obvious, or better left unsaid:

Presidents are elected every four years. (doer obvious)

The part was shipped on 1 June. (doer unimportant, perhaps)

Christmas has been scheduled as a work day. (doer better left unsaid)

Now and then, you may want to write a passive sentence that names the doer. The situation may occur when you need a transition from one topic to another. The following sentence would shift a discussion from individual habit to group inertia:

Writing improvement is doubly difficult when individual habit is reinforced by group inertia.

Now and then, a passive sentence that names the doer is appropriate if the rest of the paragraph is about the receiver of the verb's action. The following sentence might work in a paragraph about a general.

Then the general was hit by a falling limb.

Finally, for variety or stateliness, you may want the slow procession of a passive sentence such as this one on a monument at the Air Force Academy:

Man's flight through life is sustained by the power of his knowledge.

When in doubt, write actively, even though the doer may seem obvious or whatever. You will write livelier sentences (not, livelier sentences will be written by you).

Practice on These Examples

The following paragraph comes from a letter that proposes to expand a Scheduled Airline Ticket Office (SATO). Find the passives and try to make them active. Then check yourself against the revision.

During that time period, a total of $644,000 was expended in the issuance of government transportation requests (GTRs) for air travel. It is estimated by SATO that an additional $10,000 per month would be generated through casual travel. A summary of the GTR revenue by month is provided in attachment 1.

Here is a sentence-by-sentence revision of the passive paragraph:

During that time period, a total of $644,000 was expended in the issuance of government transportation requests (GTRs) for air travel.

We can cut 19 percent from the passive sentence above just by shortening during that time period to during that time and by omitting a total of. No writer has any excuse for not performing such simple subtraction. To avoid the passive was expended, we don't have to know who or what did the spending. The core idea is this: "During that time, government transportation requests (GTRs) for air travel totaled $644,000." Now the verb carries more of the meaning, $644,000 appears in a stronger place, and the sentence is slimmer by 43 percent.

> It is estimated by SATO that an additional $10,000 per month would
> be generated through casual travel.

This sentence is easy to improve because doers follow both passive verbs. "SATO estimates that casual travel would generate an additional $10,000 per month." Though active now, the sentence still needs work. We can shorten generate to add, an additional to another, and per to a. For clarity, casual travel can become off-duty travel. These small improvements add up: "SATO estimates that off-duty travel would add $10,000 a month."

> A summary of the GTR revenue by month is provided in attachment 1.

Though the sentence would be shorter if we simply dropped provided, the weak is would remain. Better to reshape the sentence: "Attachment 1 provides a summary of the GTR revenue by month." But provides a summary is a smothered verb for summarizes. So the best improvement is this: "Attachment 1 summarizes the GTR revenue by month." Here is the passive original again, followed by the active version:

> Passive: During that time period, a total of $644,000 was expended
>   in the issuance of government transportation requests (GTRs)
>   for air travel. It is estimated by SATO that an additional
> $10,000 per month would be generated through casual travel.
>   A summary of the GTR revenue by month is provided in
>   attachment 1. (50 words)

> Active: During that time, government transportation requests (GTRs)
>   for air travel totaled $644,000. SATO estimates that off-
>   duty travel would add $10,000 a month. Attachment 1 summar-
>   izes the GTR revenue by month. (31 words)

The following letter, from an inspector general, suffers from epidemic passives and other problems. On a separate sheet of paper, rewrite the letter to make it organized, spoken, concise, and active.

> Attachment 1 is forwarded for review and comment as to concurrence
> or noncurrence with the recommendations of the subject inspection.
> Only those recommendations requiring action are forwarded. Comments
> are requested by 7 June in order that approval and implementing can
> be taken. Recommendations will stand as written if concurrence is
> not provided by the above date.

> Status reports or comments concerning actions completed or in progress
> are not to be submitted at this time. Guidance on status reporting
> will be provided at a later date. (85 words)

Here's our version (you may have come up with a better one).

> Please concur or nonconcur with the inspection recommendations in attachment 1. To consider changes to these recommendations, we must have your comments by 7 June.
>
> Don't send status reports about actions completed or in progress. Guidance on these will reach you later. (40 words)

The second sentence of the original is unnecessary. Elsewhere in the original the writing is swollen: <u>provided</u> and <u>submitted</u> for <u>sent</u>, <u>in order that</u> for <u>so</u>, and <u>at a later date</u> for <u>later</u>. But the worst damage comes from the seven untouched-by-human-hands passives. They force readers to pause and figure out just who is supposed to do what. The revision avoids the passives by talking directly to a typical reader. Note the personal pronouns, contractions, and <u>please</u>.

<u>Please</u>, the first word of the active version, is a convention of modern writing (and speaking) that helps avoid many roundabout constructions. "Please send us two blivets" is far more efficient than "it <u>is requested</u> that two blivets <u>be sent</u> to this command." Real men—and women—do say "please."

Executive Writing, a half-day presentation, is available to
Department of Defense units that provide audiences of at
least 100 officers and civilian equivalents. For details,
write or phone—

        Department of English
        U. S. Air Force Academy
        Colorado Springs CO 80840-5871

        AUTOVON 259-3930
        Commercial (303) 472-3930

SIMPLER WORDS AND PHRASES

Instead of	Try	Instead of	Try
accompany	go with	do not	don't
accomplish	carry out, do	due to the fact that	due to, since
accomplish (a form)	fill out		
accordingly	so	echelons	levels
accrue	add, gain	effect	make
accurate	correct, exact, right	elect	choose, pick
achieve	do, make	eliminate	cut, drop, end
actual	real	employ	use
additional	added, more, other	encounter	meet
adjacent to	next to	encourage	urge
advantageous	helpful	endeavor	try
advise	recommend, tell	ensure	make sure
affix	put, stick	enumerate	count
afford an opportunity	allow, let	equitable	fair
aircraft	plane	equivalent	equal
anticipate	expect	establish	set up, prove, show
a number of	some	evaluate	check, rate, test
apparent	clear, plain	evidenced	showed
appear	seem	evident	clear
appreciable	many	examine	check, look at
appropriate	proper, right	exhibit	show
approximately	about	expedite	hurry, rush, speed up
as a means of	to	expeditious	fast, quick
ascertain	find out, learn	expend	pay out, spend
as prescribed by	under	expense	cost, fee, price
assist, assistance	aid, help	explain	show, tell
attached herewith is	here's		
attempt	try	facilitate	ease, help
at the present time	now	factor	reason, cause
		failed to	didn't
benefit	help	fatuous numbskull	jerk
by means of	by, with	feasible	can be done, workable
		females	women
cannot	can't	final	last
capability	ability	finalize	complete, finish
category	class, group	for example	such as
close proximity	near	forfeit	give up, lose
combined	joint	for the purpose of	for, to
comply	follow	forward	send
component	part	function	act, role, work
comprise	form, include, make up	fundamental	basic
concerning	about, on	furnish	give, send
conclude	close, end		
concur	agree	has the capability	can
confront	face, meet	herein	here
consequently	so	however	but
consolidate	combine, join, merge		
constitutes	is, forms, makes up	identical	same
construct	build	identify	find, name, show
contains	has	immediately	at once
continue	keep on	impacted	affected, changed, hit
contribute	give	implement	carry out, do, follow
cooperate	help	in accordance with	by, under
currently	(leave out)	in addition	also, besides, too
		in an effort to	to
deem	think	inasmuch as	since
delete	cut, drop	inception	start
demonstrate	prove, show	in conjunction with	with
depart	leave	incorporate	blend, join, merge
designate	appoint, choose, name, pick	incumbent upon	must
desire	wish	indicate	show, write down
determine	decide, figure, find	indication	sign
develop	grow, make, take place	initial	first
disclose	show	initiate	start
discontinue	drop, stop	in lieu of	instead of
disseminate	issue, send out	in order that	for, so

Instead of	Try	Instead of	Try
in order to	to	reason	why
in regard to	about, concerning, on	recapitulate	sum up
interpose no objection	don't object	reduce	cut
in the amount of	for	reflect	say, show
in the course of	during, in	regarding	about, of, on
in the event that	if	relating to	about, on
in the near future	soon	relocation	move
in view of	since	remain	stay
in view of the above	so	remainder	rest
it is	(leave out)	remuneration	pay, payment
it is essential	must	render	give, make
it is recommended	I, we recommend	request	ask
it is requested	please	require	must, need
		requirement	need
justify	prove	retain	keep
		return	go back
legislation	law	review	check, go over
limited number	few		
limitations	limits	selection	choice
locate	find	similar	like
location	place, scene, site	solicit	ask for
		state	say
magnitude	size	subject	the, this, your
maintain	keep, support	submit	give, send
majority	greatest, longest, most	subsequent	later, next
minimize	decrease, lessen, reduce	subsequently	after, later, then
modify	change	substantial	large, real, strong
monitor	check, watch	sufficient	enough
nebulous	vague	take appropriate measures	please
necessitate	cause, need	terminate	end, stop
notify	let know, tell	that	(leave out)
numerous	many, most	therefore	so
		there are	(leave out)
objective	aim, goal	there is	(leave out)
obligate	bind, compel	thereof	its, their
observe	see	this office	us, we
obtain	get	time period	(either one)
operate	run, work	transmit	send
operational	working	transpire	happen, occur
optimum	best, greatest, most	-type	(leave out)
option	choice, way		
		until such time as	until
participate	take part	(the) use of	(leave out)
perform	do	utilize, utilization	use
permit	let		
personnel	people, staff	validate	confirm
pertaining to	about, of, on	value	cost, worth
place	put	verbatim	word for word, exact
portion	part	via	in, on, through
position	place	viable	workable
possess	have, own		
preclude	prevent	warrant	call for, permit
prepared	ready	whenever	when
previous	earlier, past	whereas	since
previously	before	with reference to	about
prioritize	rank	with the exception of	except for
prior to	before	witnessed	saw
probability	chance		
procedures	rules, ways	/	and, or
proceed	do, go on, try		
proficiency	skill		
programmed	planned		
promulgate	announce, issue		
provide	give, say, supply		
provided that	if		
provides guidance for	guides		
(the) provisions of	(leave out)		
purchase	buy		

Appendix B

COMPLETED STAFF WORK

Here are two testimonials on how to write for a busy boss. The first comes from an anonymous university administrator. The second is part of a memo by Army General Donn A. Starry to his staff. Together the statements argue for thorough legwork and compact paperwork.

Completed staff work consists of studying a problem and presenting its solution in such a way that the President need only indicate his approval or disapproval of the completed action. The words completed action are emphasized because the more difficult a problem is, the more the tendency is to present the problem to the President in piecemeal fashion. It is a staff member's duty to work out details, no matter how perplexing they may be.

It is so easy to ask the President what to do, and it appears so easy for him to answer. Resist that impulse. You will succumb to it only if you do not know your job. It is your job to tell the President what he ought to do, not to ask him what you ought to do. HE NEEDS ANSWERS, NOT QUESTIONS. Your job is to study, write, restudy and rewrite until you have evolved a single proposed action--the best one of all you have considered. The President merely approves or disapproves. Alternate courses of action are desirable in many cases and should be presented. But you should say which alternative you think is best.

Do you worry the President with long explanations and memoranda? Writing a memorandum to the President does not constitute completed staff work, but writing a memorandum for the President to send to so meone else does. Your views should be placed before him in finished form so that he can make them his views simply by signing his name. The statement should be submitted with supporting documents, as appropriate. If you have reached the proper result, the President will usually recognize it at once. If he wants comment or explanation, he will ask for it.

The theory of completed staff work does not preclude the rough draft, but the rough draft must not be a half-baked idea. It must be complete in every respect, except that it lacks the required number of copies and may not be neat. Do not use a rough draft as an excuse for shifting to the President your burden of formulating the action.

The completed staff work theory may result in more work for the staff member, but it results in more freedom for the President. This is as it should be. Further, it accomplishes two things:

   The President is protected from half-baked ideas, voluminous memoranda and immature oral presentations.

   The staff member who has an idea to sell can find a market more readily.

II-25

When you have finished your staff work, the final test is this: if you were the President, would you sign the paper you have prepared and stake your professional reputation on its being right? If the answer is no, take it back and work it over, because it is not yet completed staff work.

* * *

I can get more information from the staff if each of you gives me less. Here's why. In a week, about 110 staff actions show up in my in-box. I could handle these in a week if all I did was work the in-box. Yet about 70% of my time in the headquarters goes not to the in-box but to briefings. I could handle that dilemma, too—by listening to briefings and thinking about staff papers at the same time. I don't. Most of the information I need is in the field. Much of my time must go there. In February, for example, I was here six days.

Within those six days, add 15-20 office calls, a dozen or so visitors, seven social engagements, two or three ceremonies, and 32 telephone calls. These are the realities.

To work the problems of the central battle within the restrictions of the realities, I need less information. But every piece of the less has to be pure. Every piece must go through that old filter of need to know, good to know, nice to know. I need the need part, not the rest. You need to synthesize, condense, strip out, boil down, distill, abstract— like a good newspaper editor.

Here's your challenge: reduce six months of work to a 10-page package, or a package to a page, or a page to a paragraph, or a paragraph to a sentence, or a sentence to a few words, or a few words to a model or diagram. I need concepts, bottom lines, central themes, summaries, abstracts. Any action officer who can condense accurately is worth ten who run out poopsheets by the pound. My measure of completed staff work is less paper, not more.

BOOKS ABOUT OFFICIAL WRITING

Contemporary Business Writing by Michael Adelstein. Random House, 1971. A thorough
college text that offers excellent instruction for the working writer.

Effective Writing: A Workshop Course by Internal Revenue Service. Government
Printing Office, 1975. (Stock No. 048-004-01288-0/Catalog No. T22.19/2: .V
93/3). Excellent advice on how to write official letters that are complete,
correct, clear, concise and appropriate in tone.

The Elements of Style, 3rd edition, by William Strunk, Jr., and E. B. White. Macmillan,
1979. These tips on style are sure to improve anyone's writing.

English 3200: A Programed Course in Grammar and Usage, 2nd edition, by Joseph
Blumenthal. Harcourt Brace Jovanovich, 1972. Readers learn grammar, punctua-
tion, and sentence structure by progressing through a series of questions and
answers.

Handbook of Technical Writing by Charles T. Brusaw, Gerald J. Alred, and Walter
E. Oliu. St Martin's Press, 1976. Besides covering the elements of technical
reports, this reference text answers hundreds of questions, some of them fussy,
on grammar and punctuation.

Harbrace College Handbook, 8th edition, by John C. Hodges and Mary E. Whitten.
Harcourt Brace Jovanovich, 1977. A popular reference on grammar and punctua-
tion. Thorough and sensible.

Plain English for Lawyers by Richard C. Wydick. Carolina Academic Press, 1979.
A lively, practical book for all who care to write the law in readable English.
Includes exercises and answers.

Revising Business Prose by Richard A. Lanham. Charles Scribner's Sons, 1981. Called
"a quick self-teaching method of revision for people who want to translate bureau-
cratic prose, their own or someone else's, into plain English."

Rudolph Flesch on Business Communication by, you guessed it, Rudolph Flesch. Barnes
& Noble, 1974. A short, practical book by the leading advocate of spoken writing.

The Tongue and Quill: Communicating to Manage in Tomorrow's Air Force, Air Force
Pamphlet 13-2. Available in spring 1985 through base Publications Distribution
Offices. This replacement to Guide for Air Force Writing offers lively instruction
on speaking and writing. Sections on fundamentals and Air Force formats.

The Word: An Associated Press Guide to Good News Writing by Rene J. Cappon.
Associated Press, 1982. How to write news stories that are clear, precise,
and appealing. Worthwhile for anyone who cares about the attractive use of
language.

APPENDIX III

Sources of Information on Microcomputers in Libraries

Conferences

Library Software and Computer
  Conference, May 86, Wash D.C.

American Library Association
  Annual Conferences

Local Data Processing Management
  Association seminars (DPMA)

Publications

SMALL COMPUTERS IN LIBRARIES
  (monthly, $24.00)

LIBRARY SOFTWARE REVIEW
  (bimonthly, $69.50)

MICRO SOFTWARE REPORT
  (library edition, $97.50)

Above publications available from:
Meckler Publishing
11 Ferry Lane West
Westport CT 06880
(203) 226-6967

MICROCOMPUTERS FOR LIBRARIES
(quarterly product review and
  procurement guide)
James E. Rush Assoc.
2223 Carriage Road
Powell OH 43065
(614) 881-5949

User Groups

IBM PC Library Users' Group
Randy Godihian
Butler Library
State Univ College
1300 Elmwood Ave.
Buffalo NY 14222

Apple Library Users' Group Newsletter
Monica Ertel
Apple Computer Corp.
Doc. 26B
20650 Valley Green Dr.
Cupertino CA 95014
(406) 973-2552
(newsletter free)

Bulletin Board Services

National Bureau of Standards
BB Services
(301) 948-5718

Bulletin Board Services
J. P. Emards
11 Ferry Lane West
Westport CT 06880
($26/yr, newsletter devoted to
supply and info on BBS)
(203) 226-6967

Public Domain (free) Software

A catalog of 6,000 public domain
programs ($15/diskette):
Folklife Terminal Club
Box 555-8B, Co-op City Station
Bronx NY 10475

Free library software if you review it:
Editor, SCIL
42 Grandview Dr.
Mt Kisco NY 10549
(914) 666-4099

Apple II
Computer Learning Center (CLC)
P. O. Box 110876
Tacoma WA 98411

Remote Database Search

OCLC - (modem and printer provided
free, runs on IBM PC, XT, M300)
1-800-848-5800

A free demonstration of remote DB
  searching:
Informatics General Corp.
Betty Davis (demo info)
1-800-638-6595

APPENDIX IV

Past Sponsors of the Military Librarians' Workshop

1st - 1957 Air University
Maxwell AFB, AL

2nd - 1958 Army Artillery and
Missile Center
Fort Sill, OK

3rd - 1959 Naval Postgraduate School
Monterey, CA

4th - 1960 Armed Services Technical
Information Agency
Washington, DC

5th - 1961 U.S. Air Force Academy
Colorado Springs, CO

6th - 1962 White Sands Missile Range
White Sands, NM

7th - 1963 Naval Ordnance Laboratory
Silver Spring, MD

8th - 1964 Air Force Weapons Laboratory
Albuquerque, NM

9th - 1965 U.S. Military Academy
West Point, NY

10th - 1966 Naval Electronics Laboratory
San Diego, CA

11th - 1967 Air Force Institute
of Technology
Wright-Patterson AFB, OH

12th - 1968 U.S. Army War College
Carlisle Barracks, PA

13th - 1969 Naval War College
Newport, RI

14th - 1970 Industrial College of
the Armed Forces
Washington, DC

15th - 1971 Headquarters
United States Air Force
San Antonio, TX

16th - 1972 Redstone Scientific
Information Center
Redstone Arsenal, AL

17th - 1973 Naval Research Laboratory
Washington, DC

18th - 1974 Headquarters
Fort Huachuca, AZ

19th - 1975 U. S. Air Force Academy
Colorado Springs, CO

20th - 1976 U. S. Naval Academy
Annapolis, MD

21st - 1977 U. S. Army War College
U. S. Army Military
History Institute
Carlisle Barracks, PA

22nd - 1978 Air Force Weapons Laboratory
Albuquerque, NM

23rd - 1979 Defense Documentation Center
Alexandria, VA

24th - 1980 Naval Post Graduate School
Monterey, CA

25th - 1981 Air University
Maxwell AFB, AL

26th - 1982 U. S. Military Academy
West Point, NY

27th - 1983 Defense Nuclear Agency
Washington, DC

28th - 1984 Naval Coastal Systems Center
Panama City Beach, FL

NEXT HOST

U. S. Army Corps of Engineers,
New Orleans District Office
New Orleans LA

APPENDIX V

List of Speakers

Bonnett, Ms. Mary B.	Army Library Management Office
Clover, Maj William H.	Department of Behavioral Sciences and Leadership, United States Air Force Academy
Crouch, Dr. Keith	Massey Library, Royal Military College of Canada
Doyle, Lt Col Bruford L.	Director of Audio-Visual Services, United States Air Force Academy
Eller, Maj Jonathan R.	Department of English, United States Air Force Academy
Forsyth, C1C Michael T.	Cadet Wing, United States Air Force Academy
Gohlke, Ms. Dorothy A.	Assistant Air Force Librarian
Klinefelter, Mr. Paul	Defense Technical Information Center
May, Col John T.	Vice-Dean of the Faculty, United States Air Force Academy
McCann, Lt Col Thomas E.	Director of Research, United States Air Force Academy
McCarron, Lt Col William E.	Department of English, United States Air Force Academy
Pizzi, Lt Col Robert E.	Department of Management, United States Air Force Academy
Rader, Dr. Freeman	Department of Communication, University of Colorado
Reed, C1C Carolyn M.	Cadet Wing, United States Air Force Academy
Riley, Mr. James F.	Executive Director of FEDLINK, Library of Congress
Schaeffer, Lt Col Reiner H.	Director of Libraries, United States Air Force Academy
Schindler Jones, Dr. Barbara	Communications Consultant
Stevens, Maj Jonathan L.	Director of the Education Research Computer Center, United States Air Force Academy
Vajda, Mr. John	Navy Department Library
Varieur, Mr. Normand L.	U.S. Army ARDC Library

Ms Marcia Davidoff
Naval Technical Equipment Center
Technical Information Center - Code TIC
Bldg 2068
Orlando FL 32813-7100
(305) 646-5637 // AV 791-5637

Ms Bonnie D. Davis
Naval Explosive Ordnance Disposal Technology Center
Technical Library - Code 604
Indian Head MD 20640-5070
(301) 743-4738/9 // AV 364-4738/9

Ms Alice E. Doige
Pacific Missile Test Center
Technical Library - Code 1018
Point Mugu CA 93042
(805)982-8192/56// AV 351-8192/56

Mr Steven R. Dorr
Director of Programs/Conferences
DIA/DIC-R
Defense Intelligence College
Washington DC 20301-6111
(202) 373-3341 // AV 243-3341

Mr James C. Dorsey
U. S. Army Engr. Dist., Savanna
P. O. Box 889
Savanna GA 31402-0889

Mr Kenneth E. Dowlin
Director
Pikes Peak Library District
20 N. Cascade Avenue
Colorado Springs CO 80901
(303) 473-2080

Ms Frances M. Doyle
HQ TRADOC Technical Library
Bldg. 133
Fort Monroe VA 23651-5124
(804) 727-2821/2075 // AV 680-2821

Ms Anna B. Dumas
Ballistics Missile Defense System Command
Technical Library
P. O. Box 1500
Huntsville AL 35807
(202) 895-3877 // AV 742-3877

Ms Doris Egge
Post Library, USAG
Fort Detrick MD 21701-5000
(301) 663-2807 // AV 343-2807

Ms Barbara A. Eller
Morale Support Activities Division
ATTN: AFZA-PA-M
Fort Bragg NC 28307-5000
(919) 396-6919 // AV 236-6919

Ms Linda Evans
Rome Air Development Center Library
RADC/DOXT
Griffiss AFB NY 13441-5700

Prof Richard A. Evans
U. S. Naval Academy
Nimitiz Library
Annapolis MD 21402-5029
(301) 267-2194 // AV 281-2194

Ms Barbara Everidge
Office of Information Systems & Technology
Defense Technical Information Center
Cameron Station, Bldg 5
Alexandria VA 22304-6145
(202) 274-5367 // AV 284-5367

Ms Holly Beth Ewan
Air Unversity Library
Maxwell AFB AL 36112
(205) 293-2237 // AV 875-2237

Mr Donley D. Eyolfson
3420 TCHTG/TTMNL
Lowry AFB CO 80230-5001
(303) 370-5351 // AV 926-5351

Ms Valerie D. Fashion
U. S. Army Transportation Technical Information
      & Research Center
ATTN: ATSPQ-SEF-L
Fort Eustis VA 23604-5450
(804) 878-4126/5563 // AV 927-4126

Ms Mary Finlay
Mobile Command Headquarters
St-Hubert, Quebec, Canada
J3Y 5T5
(514) 443-7242 // AV 621-7242

Ms Barbara Fox
U. S. Army Engr. Dist., New Orleans
P.O. Box 60267
New Orleans LA 70160-0267
(504) 862-2558

Mr Thomas A. Gallant
Morale Support Activities (Panama)
Drawer 940
APO Miami 34004
(517) 87-3361(Pan.)/AV313-287-3361

Ms Lynn Gera
Library, Walter Reed Army Institute of Research
Walter Reed Army Medical Center
Washington DC 20307-5100
(202) 576-3314 // AV 291-3314/3416

Ms E. M. Gildersleeve
Library
AFGL/SULL
Hanscom AFB MA 78235-5000
(617) 861-4895 // AV 478-4895

Ms Patricia H. Gipe
Library Director
Defense Systems Management College
Fort Belvoir VA 22060-5426
(703) 664-2732 // AV 354-2732

Ms Esther Ruth Godbey
Base Librarian
475 ABW/SSL
APO San Francisco 96328-5000
(0425) 52-2511 x5-7490(Jpn) AV 225-

Ms Gay D. Goethert
Supervisor, Technical Library
AEDC/DOS, Mail Stop 100
Arnold AFS TN 37389-9998
(615) 454-4429 // AV 340-4429

Ms Dorothy A. Gohlke
Asst. Air Force Librarian
HQ AFMPC/MPCSOL
Randolph AFB TX 78150-6001
(512) 652-3037 // AV 487-3037/4589

Ms Helen L. Helton
AFIT Library (AFIT/LDC)
Bldg. 640, Area B
Wright-Patterson AFB OH 45433-6583
(515) 255-4191 // AV 785-5894

Ms Suse Goodman
Air University Library
(AUL/LSS)
Maxwell AFB AL 36112-5564
(205) 293-2504 // AV 875-2504

Ms Ruth E. Hodge
Chief Technical Services Branch
U. S. Army Military History Institute
Carlisle Barracks PA 17013-5008
(717) 245-3632 // AV 242-3632

Ms Donna K. Griffitts
Joint Medical Library
Offices of the Surgeons General, USA/USAF
Pentagon, Room 1B-473
Washington DC 20310-2300
(202) 695-5752 // AV 225-5752

Ms Jean Hort
Base Library
317 CSG/SSL
Pope AFB NC 28308-5225
(919) 394-2791 // AV 486-2791/2195

Ms Marina Griner
U. S. Army Soldier Support Center
Post Library, Bldg 31
Fort Ben Harrison IN 46216-5100
(317) 542-4958 // AV 699-4958

Dr Marshal J. Hughes
Naval Surface Weapons Center
Technical Library - Code E23
Dahlgren Laboratory
Dahlgren VA 22448
(703) 663-8994 // AV 249-8994

Ms Louise L. Hall
Space and Warfare Command, United States Navy
Library - Code 7053
Washington DC 20363-5100
(202) 692-8771/2 / AV 442-8771/1482

Ms Mary E. Hunter
Cdr, U. S. Army Missile Command
ATTN: AMSMI-YDL (Ms Hunter)
Redstone Arsenal AL 35898-5500
(205) 876-5305 // AV 746-5305

Mr David R. Hanna
Naval Underwater Systems Center
Technical Library - Code 0213
New London Laboratory
New London CT 06320
(203) 447-4276 // AV 636-4276

Mr Peter Imhof
Naval Research Laboratory
Ruth H. Hooker Technical Library
Code 2620
Washington DC 20375-5000
(202) 768-2357--AV 297-2357

Ms Marilyn Harned
Technical Library
Naval Air System Command
AIR 723
Washington DC 20361
(202) 692-9006// AV 222-9006

Ms Joan E. Ingersoll
Naval Ocean Systems Center
Technical Libraries Branch
Code 964
San Diego CA 92152-5000
(619) 225-6623 // AV 933-6623

Ms Janice Hatt
NDHQ Library
101 Colonel By Drive
Ottawa, Canada
K1A OK2
(613) 995-0831 // AV 676-0831

Mr Duane A. Johnson
Command Librarian
HQ ATC/DPSOL
Randolph AFB TX 78150-5001
(512) 652-3410 // AV 487-3410/2573

Mr Terry L. Hawkins
Chief, Authority Library
Air University Library (AUL/LD)
Maxwell AFB AL 36112-5564
(205) 293-2291 // AV 875-2291

Ms Ida Johnson
U. S. Army Ballistic Research Laboratory
ATTN: AMXBR-OD-ST
Bldg 305
Aberdeen Proving Ground MD 21005-5066
AV 298-2125

Ms Judy A. Hawthorne
Command Librarian
HQ SPACECMD/MPSL
Peterson AFB CO 80914-5001
(303) 554-5671 // AV 692-5671

Ms JoAnn K. Johnson
USAF FWS/COAL
Nellis AFB NV 89191-5000
(702) 643-4970 // AV 682-4970

Ms Karen Hayward
Fort Dix General Library
Bldg 5601 Pennsylvania Ave.
Fort Dix NJ 08640
(609) 562-4858 // AV 944-4858

Ms Sharon Johnson
Fitzsimons Army Medical Center
Medical Library
Aurora CO 80045-5000
(303) 361-3378 // AV 943-3378

Mr Ismail Haznedari
CDR, U. S. Army ARDC
ATTN: SMCAR-TSS (Mr Hazendari)
Bldg 59
Dover NJ 07801-5001
(201) 724-3316 // AV 880-724-3316

Ms Yvonne A. Kinkaid
Chief, Technical Information
HQ AFSC/MPSLT
Andrews AFB DC 20334-5000
(301) 981-2019 // AV 858-2019

Mr Paul Klinefelter
ATTN: DTIC-V
Cameron Station
Alexandria VA 22314
(202) 274-6434 // AV 284-6434

Ms Theresa J. Knasiak
Defense Institute of Security Assistance Management/DAL
Building 125
Area B
Wright-Patterson AFB OH 45433
(513) 255-5567 // AV 785-5567

Ms Gail Knudtson
Command Librarian
HQ MAC/DPSRL
Scott AFB IL 62225-5001
(618) 256-3228 // AV 576-3228

Mr Bohdan I. Kohutiak
U. S. Army War College
ATTN: AWCSL
Carlisle Barracks PA 17013-5050
(717) 245-3660 // AV 242-3660

Ms Betty Kraft
DoD OCHAMPUS Library
Fitzsimmons Army Medical Center
Aurora CO 80045-6900

Ms Lynda Kuntz
U. S. Army Concepts Analysis Agency
Technical Library
8120 Woodmont Ave
Bethesda MD 20814-2797
(301) 295-1531 // AV

Mr Robert B. Lane
Director
Air University Library (AUL/LD)
Maxwell AFB AL 36112-5564
(205) 293-2606 // AV 875-2606

Mr Ernest P. Laseter
Librarian
AFLMC/XRL
Bldg. 205
Gunter AFS AL 36114-6693
(205) 279-4830 // AV 446-4830

Ms Nancy L. Lomen
Base Library
366 CSG/SSL, Bldg. 2427
Mt Home AFB ID 83648-5000
(208) 828-2111 ext 2544 // AV 857-

Dr Arlene Luster
Command Librarian
HQ PACAF/DPSRL
Hickam AFB HI 96853-5001
(808) 449-9831 // AV -9831

Ms Jean E. Malach
Canadian Land Forces Command and Staff College
Fort Frontenac Library
Kingston, Ontario, Canada
K7K 2X8
(613) 545-5813 // AV 270-5813

Mr Robert M. Malone
Naval Air Propulsion Center Technical Library
P.O. Box 7176
Trenton NJ 08628-0176
(609) 896-5609 // AV 443-7609

Ms Kathryn E. Marshall
AWS Technical Library
USAFETAC/LD
Scott AFB IL 62225-5001
(618) 256-2625 // AV 576-2625

Mr Abbott W. Martin
Command Librarian
HQUSACE ATTN: DAEN-ASZ-S
Washington DC 20314-1000
(202) 272-0665 // AV 285-0665

Ms Margaret Martinez
Library Director
Defense Communications Agency - Code H396
Washington DC 20305-2000
(202) 692-2468 // AV 222-2468

Ms Christel G. Marton
CDR, USAADAC & Fort Bliss
Morale Support Division Center Library
Bldg 21
Fort Bliss TX 79916-5137
(915) 568-7705 // AV 978-7705/6736

Ms Regina A. Mayton
Air University Library
(AUL/LS), Bldg 1405
Maxwell AFB AL 36112-5564
(205) 293-2474 // AV 875-2474

Ms Helen C. McClaughry
Base Library
3415th AB Group/SSL
Lowry AFB CO 80230-5000
(303) 370-3093 // AV 926-3093/3836

Ms Barbara McLaughlin
U. S. Army Harry Diamond Laboratories
ATTN: DELHD-TA-L
2800 Powder Mill Road
Adelphi MD 20783
AV 290-2536

Ms Lee R. McLaughlin
Academy Libraries
HQ USAFA/DFSEL
U. S. Air Force Academy
Colorado Springs CO 80840-5721
(303) 472-4654 // AV 259-4654

Mr Gregg Melton
AFGL/SULL
Hanscom AFB MA 01731-5000
(617) 861-4895 // AV 478-4895

Mr Frank Mercugliano
Supervisor of Shipbuilding Conversion and Repair, USN
Technical Library - Code 245
495 Summer St.
Boston MA 02145-2181
(617) 451-4695 // AV 955-4695

Mr Roger Miller
Chief Library Branch, MSA
ATTN: AFZC-PM
Fort Carson CO 80913-5000
(303) 579-2842 // AV 697-2842

Ms Clara Miller
Marine Corps Technical Library
Headquarters Marine Corps (Code LMA-1)
Washington DC 20380-0001
(202) 694-1997 // AV 224-1997/2047

Ms Dorothy A. Gohlke
Asst. Air Force Librarian
HQ AFMPC/MPCSOL
Randolph AFB TX 78150-6001
(512) 652-3037 // AV 487-3037/4589

Ms Helen L. Helton
AFIT Library (AFIT/LDC)
Bldg. 640, Area B
Wright-Patterson AFB OH 45433-6583
(515) 255-4191 // AV 785-5894

Ms Suse Goodman
Air University Library
(AUL/LSS)
Maxwell AFB AL 36112-5564
(205) 293-2504 // AV 875-2504

Ms Ruth E. Hodge
Chief Technical Services Branch
U. S. Army Military History Institute
Carlisle Barracks PA 17013-5008
(717) 245-3632 // AV 242-3632

Ms Donna K. Griffitts
Joint Medical Library
Offices of the Surgeons General, USA/USAF
Pentagon, Room 1B-473
Washington DC 20310-2300
(202) 695-5752 // Av 225-5752

Ms Jean Hort
Base Library
317 CSG/SSL
Pope AFB NC 28308-5225
(919) 394-2791 // AV 486-2791/2195

Ms Marina Griner
U. S. Army Soldier Support Center
Post Library, Bldg 31
Fort Ben Harrison IN 46216-5100
(317) 542-4958 // AV 699-4958

Dr Marshal J. Hughes
Naval Surface Weapons Center
Technical Library - Code E23
Dahlgren Laboratory
Dahlgren VA 22448
(703) 663-8994 // AV 249-8994

Ms Louise L. Hall
Space and Warfare Command, United States Navy
Library - Code 7053
Washington DC 20363-5100
(202) 692-8771/2 / AV 442-8771/1482

Ms Mary E. Hunter
Cdr, U. S. Army Missile Command
ATTN: AMSMI-YDL (Ms Hunter)
Redstone Arsenal AL 35898-5500
(205) 876-5305 // AV 746-5305

Mr David R. Hanna
Naval Underwater Systems Center
Technical Library - Code 0213
New London Laboratory
New London CT 06320
(203) 447-4276 // AV 636-4276

Mr Peter Imhof
Naval Research Laboratory
Ruth H. Hooker Technical Library
Code 2620
Washington DC 20375-5000
(202) 768-2357--AV 297-2357

Ms Marilyn Harned
Technical Library
Naval Air System Command
AIR 723
Washington DC 20361
(202) 692-9006// AV 222-9006

Ms Joan E. Ingersoll
Naval Ocean Systems Center
Technical Libraries Branch
Code 964
San Diego CA 92152-5000
(619) 225-6623 // AV 933-6623

Ms Janice Hatt
NDHQ Library
101 Colonel By Drive
Ottawa, Canada
K1A OK2
(613) 996-0831 // AV 676-0831

Mr Duane A. Johnson
Command Librarian
HQ ATC/DPSOL
Randolph AFB TX 78150-5001
(512) 652-3410 // AV 487-3410/2573

Mr Terry L. Hawkins
Chief, Authority Library
Air University Library (AUL/LD)
Maxwell AFB AL 36112-5564
(205) 293-2291 // AV 875-2291

Ms Ida Johnson
U. S. Army Ballistic Research Laboratory
ATTN: AMXBR-OD-ST
Bldg 305
Aberdeen Proving Ground MD 21005-5066
AV 298-2125

Ms Judy A. Hawthorne
Command Librarian
HQ SPACECMD/MPSL
Peterson AFB CO 80914-5001
(303) 554-5671 // AV 692-5671

Ms JoAnn K. Johnson
USAF FWS/COAL
Nellis AFB NV 89191-5000
(702) 643-4970 // AV 682-4970

Ms Karen Hayward
Fort Dix General Library
Bldg 5601 Pennsylvania Ave.
Fort Dix NJ 08640
(609) 562-4858 // AV 944-4858

Ms Sharon Johnson
Fitzsimons Army Medical Center
Medical Library
Aurora CO 80045-5000
(303) 361-3378 // AV 943-3378

Mr Ismail Haznedari
CDR, U. S. Army ARDC
ATTN: SMCAR-TSS (Mr Hazendari)
Bldg 59
Dover NJ 07801-5001
(201) 724-3316 // AV 880-724-3316

Ms Yvonne A. Kinkaid
Chief, Technical Information
HQ AFSC/MPSLT
Andrews AFB DC 20334-5000
(301) 981-2019 // AV 858-2019

Mr Paul Klinefelter
ATTN: DTIC-V
Cameron Station
Alexandria VA 22314
(202) 274-6434 // AV 284-6434

Ms Kathryn E. Marsnall
AWS Technical Library
USAFETAC/LD
Scott AFB IL 62225-5001
(618) 256-2625 // AV 576-2625

Ms Theresa J. Knasiak
Defense Institute of Security Assistance Management/DAL
Building 125
Area 8
Wright-Patterson AFB OH 45433
(513) 255-5567 // AV 785-5567

Mr Abbott W. Martin
Command Librarian
HQUSACE ATTN: DAEN-ASZ-S
Washington DC 20314-1000
(202) 272-0665 // AV 285-0665

Ms Gail Knudtson
Command Librarian
HQ MAC/DPSRL
Scott AFB IL 62225-5001
(618) 256-3228 // AV 576-3228

Ms Margaret Martinez
Library Director
Defense Communications Agency - Code H396
Washington DC 20305-2000
(202) 692-2468 // AV 222-2468

Mr Bohdan I. Kohutiak
U. S. Army War College
ATTN: AWCSL
Carlisle Barracks PA 17013-5050
(717) 245-3660 // AV 242-3660

Ms Christel G. Marton
CDR, USAADAC & Fort Bliss
Morale Support Division Center Library
Bldg 21
Fort Bliss TX 79916-5137
(915) 568-7705 // AV 978-7705/6736

Ms Betty Kraft
DoD OCHAMPUS Library
Fitzsimmons Army Medical Center
Aurora CO 80045-6900

Ms Regina A. Mayton
Air University Library
(AUL/LS), Bldg 1405
Maxwell AFB AL 36112-5564
(205) 293-2474 // AV 875-2474

Ms Lynda Kuntz
U. S. Army Conce s Analysis Agency
Technical Library
8120 Woodmont Ave
Bethesda MD 20814-2797
(301) 295-1531 // AV

Ms Helen C. McClaughry
Base Library
3415th AB Group/SSL
Lowry AFB CO 80230-5000
(303) 370-3093 // AV 926-3093/3836

Mr Robert B. Lane
Director
Air University Library (AUL/LD)
Maxwell AFB AL 36112-5564
(205) 293-2606 // AV 875-2606

Ms Barbara McLaughlin
U. S. Army Harry Diamond Laboratories
ATTN: DELHD-TA-L
2800 Powder Mill Road
Adelphi MD 20783
AV 290-2536

Mr Ernest P. Laseter
Librarian
AFLMC/XRL
Bldg. 205
Gunter AFS AL 36114-6693
(205) 279-4830 // AV 446-4830

Ms Lee R. McLaughlin
Academy Libraries
HQ USAFA/DFSEL
U. S. Air Force Academy
Colorado Springs CO 80840-5721
(303) 472-4654 // AV 259-4654

Ms Nancy L. Lomen
Base Library
366 CSG/SSL, Bldg. 2427
Mt Home AFB ID 83648-5000
(208) 828-2111 ext 2544 // AV 857-

Mr Gregg Melton
AFGL/SULL
Hanscom AFB MA 01731-5000
(617) 861-4895 // AV 478-4895

Dr Arlene Luster
Command Librarian
HQ PACAF/DPSRL
Hickam AFB HI 96853-5001
(808) 449-9831 // AV   -9831

Mr Frank Mercugliano
Supervisor of Shipbuilding Conversion and Repair, USN
Technical Library - Code 245
495 Summer St.
Boston MA 02145-2181
(617) 451-4695 // AV 955-4695

Ms Jean E. Malach
Canadian Land Forces Command and Staff College
Fort Frontenac Library
Kingston, Ontario, Canada
K7K 2X8
(613) 545-5813 // AV 270-5813

Mr Roger Miller
Chief Library Branch, MSA
ATTN: AFZC-PM
Fort Carson CO 80913-5000
(303) 579-2842 // AV 697-2842

Mr Robert M. Malone
Naval Air Propulsion Center Technical Library
P.O. Box 7176
Trenton NJ 08628-0176
(609) 896-5609 // AV 443-7609

Ms Clara Miller
Marine Corps Technical Library
Headquarters Marine Corps (Code LMA-1)
Washington DC 20380-0001
(202) 694-1997 // AV 224-1997/2047

Mr Andrew Minjiras
Post Librarian
ATTN: AFZON-MSA-Library
Presidio of San Francisco CA 94129-5000
(415) 561-3448 // AV 586-3448

Mr Lee Missavage
Base Library
314 CSG/SSL
Little Rock AFB AR 72099-5000
(501) 988-6979 // AV 731-6979

Ms Marcia Mohn
Post Library
ATTN: AFZC-PM (Library Branch)
Fort Carson CO 80913-5000
(303) 579-2350 // AV 691-2350/2842

Ms Mary Jane Mongeon
AFGL Research Library
AFGL/SULLA
Hanscom AFB MA 01731-5000
(617) 861-4768 // AV 787-4768

Mr David J. Monroe
Chief, Technical Library
ATTN: AMCDMA-ML, Rm 7S36
5001 Eisennower Avenue
Alexandria VA 22333-0001
(202) 274-8152 // AV 284-8152

Ms Evelyn J. Monroe
Technical Library, Blag 1275
FCDSSA, Dam Neck
Virginia Beach VA 23461-5300
(804) 433-7648 // AV 433-7648

Ms Donna Mott
Librarian, ONR/London
Box 14 - EOARN-CI
FPO New York NY 09510
01-409-4511 (Eng) // AV 235-4511

Ms Theresa G. Munson
Morale Support Division, Post Library
Bldg 46
Carlisle Barracks PA 17013-5002
(717) 245-3718 // AV 242-3718

Ms C. E. Murphy
Canadian Forces College Library
215 Yonge Blvd
Toronto, Canada
M5M 3H9
(416) 484-5742

Ms Margaret M. Murphy
U S Army Materials & Mechanics Research Center
Technical Library
Watertown MA 02172-0001
(617) 923-5460 // AV 955-5460

Ms Gail Nicula
Armed Forces Staff College
ATTN: Library
Norfolk, VA   23511
(804) 444-5321 // AV 564-5321/5155

Ms Louise Nyce
Library Program Director
ATTN: AFPR-CFA
Fort McPherson GA 30330-6000
(404) 362-3100 // AV 797-3100

Ms Phyllis Ortutay
HQ, Army Materiel Command
ATTN AMCIM-RF
5001 Eisenhower Avenue
Alexandria VA 22333-0001
(202) 274-8087 // AV 234-8087

Ms Jeanne Ower
Plains and Peaks Library System
Broadmarket Square, Suite B2
1761 South 8th Street
Colorado Springs CO 80906
(303) 473-3417

Ms Carolyn Pate
CDR, USAFAC & Fort Sill
Morale Support Division, Nye Library
1640 Randolph Road
Fort Sill OK 73503-5100
(405) 351-5111 // AV 639-5111/3150

Ms Ornella L. Pensyl
U. S. Army Intelligence School, Ft Devons
ATTN ATSI-ETD-L
Fort Devens MA 01433-6301
(617) 796-3413/67 // AV 256-3413/67

Ms Patricia M. Pepin
Chief, Library Branch
Wood Technical Library
Aberdeen Proving Ground MD 21010-5425
(301) 671-4135 // AV 584-4135

Ms Marlow Peters
Chief Librarian
HQ USAFE/DPSLC
APO New York 09012
0631-536-6752 (W Ger) / AV 489-6752

Ms Darlene Price
HQ MAC/DPSL
Scott AFB IL 62225-5001

Mr Lawrence E. Randall
U. S. Military Academy
West Point NY 10996-5000
(914) 938-3833 // AV 688-3833/2209

Ms Caroline Ray
AFWAL/GLISL
Bldg 22
Wright-Patterson AFB OH 45433
(513) 255-3630 // AV 785-3630

Ms Aja Markel Razumny
HQ PACAF/DPSOL
Hickam AFB HI 96852-5001
(808) 449-2831 // AV

Ms Myrtle J. Rhodes
Naval Coastal Systems Center
Technical Information Services Branch - Code 6120
Panama City FL 32407
(904) 234-4321 // AV 436-4321

Ms Donna Richardson
Defence Research Establishment Atlantic
P. O. Box 1012
Dartmouth, Nova Scotia, Canada
B2Y 3Z7
(902) 426-3100

Mr James P. Riley
Executive Director, FEDLINK
G-171, Main Building
Library of Congress
Washington DC 20540
(202) 287-6055/6//6454/5

Capt James A. Robb
Academy Libraries
HQ USAFA/DFSEL
U. S. Air Force Academy
Colorado Springs CO 80840-5721
(303) 472-2590 // AV 259-2590

Ms Pearl O. Robinson
Naval Ships Systems Engineering Station
Technical Library - Code 012F
Bldg 619
Philadelphia PA 19112-5083
(215) 952-7078/7816 // AV 444-7078

Ms Ruth Rogers
Naval Aerospace Medical Institute Library - Code 012
Bldg 1953
Pensocola FL 32508-5600
(904) 452-2256 // AV 922-2256

Ms Alice Roy
HQ TAC/DPSRL
Langley AFB VA 23665
(804) 764-3584 // AV 432-3584/3403

Ms Maria Ruckman
Fleet Combat Direction Systems Support Activity
Dam Neck Technical Library - Code 42
Building 127 South
Virginia Beach VA 23461-5300
(804)433-6502/6374//AV433-6374/7648

Mr J. Thomas Russell
Library Director
National Defense University
Fort Leslie J. McNair
Washington DC 20319-6000
(202) 475-1905 // AV 225-1905

Ms Suzanne M. Ryder
Naval Air Station
Naval Air Test Center Central Library - Code 62
Patuxent River MD 20670
(301) 863-1930 // AV 356-1930

Ms Mary Lou Sauer
Comand Librarian
HQ SAC/DPSOL
Offutt AFB NE 68113-5001
(402) 294-2223 // AV 271-2223/2367

Ms Laurel B. Saunders
US Army White Sands Missile Range
ATTN: STEWS-TE-TL
White Sands Missile Range NM 88002-5029
(505) 678-1317 // AV 258-1317

Lt Col Reiner H. Schaeffer
Academy Libraries
HQ USAFA/DFSEL
U. S. Air Force Academy
Colorardo Springs CO 80840-5721
(303) 472-2590 // AV 259-2590

Prof Earl R. Schwass
Naval War College
Library - Code E
Newport RI 02841
(401) 841-2641 // AV 948-2641

Ms Amelia K. Sefton
Morale Support Activities
Post Library, Bldg 404
Fort Hamilton
Brooklyn NY 11252-5155
(718) 630-1975 // AV 232-4375

Ms Leslie Seidel
USA MEDDAC
Medical Library
Fort Devens MA 01433-6401

Ms Ruth K. Seidman
Air Force Geophysics Lab
Research Library, AFGL/SULL
Hanscom AFB MA 01731-5000
(617) 661 4895 // AV 478-4895

Ms Vickie Sharp
U. S. Army Engr. Div., Southwestern
1114 Commerce St, Federal Building
Dallas TX 75242-0216
(214) 767-2325

Mr Al Sherlock
Director, Technical Information Center
U. S. Army Engr. Waterways Exp. Sta.
P.O. Box 631
Vicksburg MS 39180-0631
(601) 634-2533 / FTS (601) 542-2533

Ms Regina M. Sieben
Chief, Technical Library
ATTN. AMSEL-ME-PSL
Fort Monmouth NJ 07703 5007
(201) 532-1298 // AV 992-1298

Ms Dorothy E Siegfried
Information Services Group
AFWAL/GLIS
Wright-Patterson AFB OH 45433-6523
(515) 255-7454 // AV 285-7454

Ms Beth E. Smith
Walter Reed Army Medical Center
Medical Library
Washington DC 20307-5001
(202) 576-1238 // AV 291-1238

Ms JoAn I. Stolley
U. S. Army Command & General Staff College
Combined Arms Research Library
ATTN: ATZL-SWS-L
Fort Leavenworth KS 66027-6900
(913) 684-4035 // AV 552-4035

Mr James W. Tancock
Chief, Library Branch
Defense Mapping Agency
Aerospace Center
St Louis AFS MO 63118
(314) 263-4841 // AV 693-4841

Ms Deborah Thompson
PACAF Library Service Center
Hickum AFB HI 96853-5001
(808) 449-2209/2110 // AV

Mr Fred Todd
Technical Services Division
USAFSAM/TSK
Brooks AFB TX 78235-5000
(512) 536-3725 // AV 240-3725

Ms Dorothy C. Tompkins
Commander, USAG
DPCA - Library Division
Fort Huachuca AZ 85613-6000
(602) 538-6305 // AV 879-6305

Ms Paula K. Turley
WSMC/PMET
Vandenberg AFB CA 93437-6021
(805) 866-9745 // AV 276-9745

Ms Wynne A. Tysdal
Base Librarian
401 CSG/SSL
APO New York 09283
011-34-1-205-7702(Spn) AV 314-723-

Mr John E. Vajda
Navy Dept Library
Building 44
Washington Navy Yard
Washington DC 20374-0571
(202) 433-4132 // AV 288-4132

Mr Normand L. Varieur
Library
U S Army ARDC
ATTN: SMCAR-TSS, Bldg 59
Dover NJ 07801-5001
(201) 724-2914 // AV 880-291.

Ms Mary B. Vick
Technical and Automated Services Branch
Pentagon Library
Room 1A518, Pentagon
Washington DC 20310-6060
(202) 697-1951 // AV 227-1951

Ms Alreeta Viehdorfer
Librarian
AFAFC Library/FL 7040
Denver CO 80279-5000
(303) 370-7566 // AV 926-7566

Ms Katharine B Wallace
Naval Oceanographic Office
Naval Library - Code 4601
NSTL Station
Bay St. Louis MS 39522-5001
(601) 688-5714 // AV 485-4017

Mr Gary Walter
Defense Language Institute
Academic Library, Bldg 618
Presidio of Monterey CA 93944-5007
AV 929-8572

Ms Joyce C. Watlington
US Army Human Engineering Laboratory
ATTN: Library, Bldg 459
Aberdeen Proving Ground MD 21005-5001
(301) 278-5899 // AV 298-5899

Ms Sylvia J. Webber
U. S. Army Intelligence Center & School
Library, ATSI-TD-SFL
Fort Huachuca AZ 85613-7000
(602) 538-7786 // AV 879-7786

Mr Egon A. Weiss
U. S. Military Academy
West Point NY 10996-5000
(914) 938-2209 // AV 688-2209/3833

Mr Albert G. West
Technical Program Manger
Technical Information Directorate
Defense Nuclear Agency
Washington DC 22305-1000
(202) 325-7780 // AV 221-7780

Mr Elwood L. White
Air University Library
Maxwell AFB AL 36112
(205) 293-2606 // AV 875-2606

Mr Clyde W. Whitted Jr
Naval Mine Warfare Engineering Activity
Technical Library & Micrographics Division
Yorktown VA 23691-5076
(804) 887-4671/2 // AV 953-4671/2

Ms Connie J. Wiley
AFGL Research Library
AFGL/SULLA
Hanscom AFB MA 01731-5000
(617) 861-4739 // AV 478-4739

Ms Stephanie V. Williams
Naval Intelligence Support Center
Information Service Division - Code 63
4301 Suitland Road
Washington DC 20390-5140
(202) 763-1478 // AV 293-1478

Ms Orrira L. Woinowsk
Admin Librarian
AFHRL/TSRL
Brooks AFB TX 78235-5601
(512) 536-2651 // AV 240-2651

Ms Carol Wong
Mare Island Naval Shipyard
Technical Library - Code 202.13
STOP T-4/483
Vallejo CA 94592-5100
(707) 646-2532 // AV 253-2532

Ms Mary H. Wooten
Post Library, Bldg 38
Fort Campbell KY 42223-5000
AV 635-5729

Ms Barbara Wrinkle
Chief, Base Library Management Branch
HQ USAFE/DPSL
APO New York 09012
W. Ger 6371-57111 // AV 480-6895

Ms Sandra S. Young
Librarian, Technical Information Directorate
Defense Nuclear Agency
Washington DC 20305-1000
(202) 325-7389 // AV 221-7389