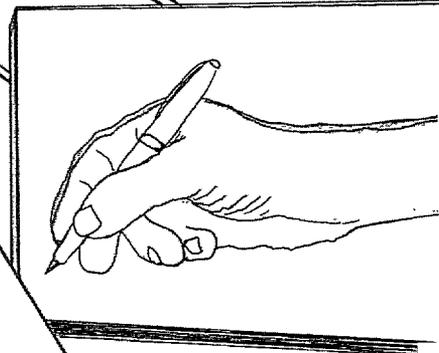
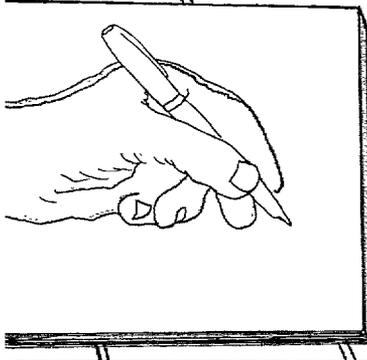
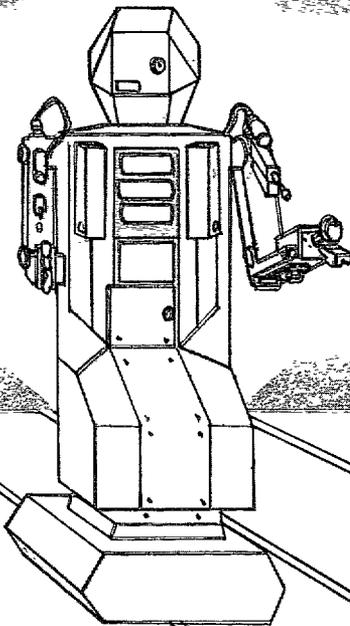


The GAO



Spring 198

REVIEW



Vocational Education and the Robotics Revolution



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Volume 18 ■ Issue 2

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OOPSS!! – We Goofed

Much to our chagrin, the last *GAO Review* contained some *obvious* mistakes. Inadvertent placement of several titles and paragraphs, combined with typographical errors and missing pages in certain copies, made the winter 1983 issue one of our "liveliest" to date. Because of these goofs—described below—many of our readers responded with excellent constructive criticism (i.e., proofreading help). In fact, our embarrassment had a positive result. We learned that many people read the *Review* closely as soon as they receive their copies!

Apologies All Around

The worst-offending errors are on page 53, where Dexter Peach's title as director of the Resources, Community and Economic Development Division was replaced with that of Assistant Comptroller General, and page 61, where Bob Hanlon, regional manager in Denver, and several staff members were shown as moved to Detroit. Next in line was

page 52, where paragraphs describing top-level staff changes are printed twice, followed closely (actually preceded) by page 50 where the Far East Branch is mistakenly listed as assisting Paul Math in his article on shadowing. Add to these errors a liberal, if not ironic, sprinkling of typos, especially in Tom Pastore's article (pp. 24-27) on the advantage of having basic typing skills.

The Editor Responds

When informed of the errors, Editor John Heller (recently retired from GAO) said, "Good grief!" He added, however, "I always knew *GAO Review* readers could respond to a challenge. I am especially pleased to see that, in my absence, the *Review* has taken some steps to test its audience. Thanks to each of you who alerted our editorial staff about this issue's goofs."

Heller then described his perception of the major errors from his vantage point on the 5th floor of the Metro

Building, overlooking GAO. "From where I sit, listing Dexter Peach as Assistant CG may be the publishing coup of the year. He certainly has the qualifications to fill the job! If wisdom prevails, perhaps he may have that chance. In fact, our readers can say they saw it first in the *GAO Review*!"

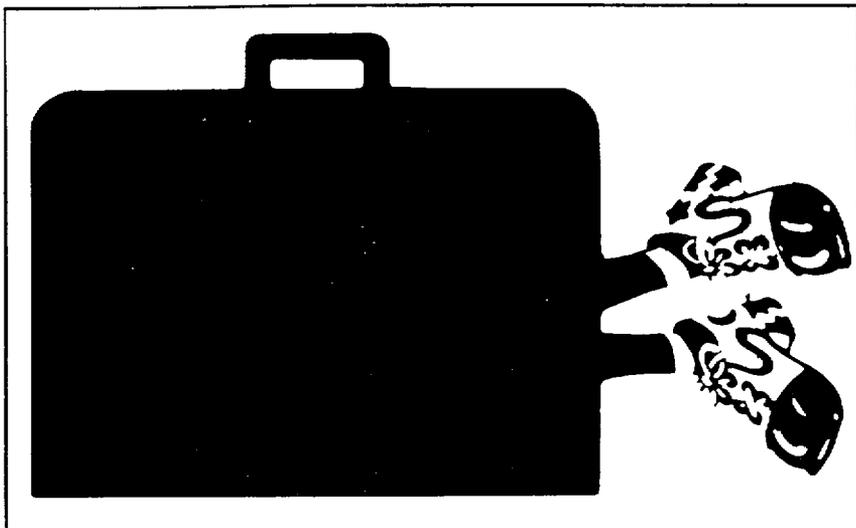
"My sources report that Dexter and the others affected by the mistakes accepted our apologies with good humor. I certainly hope so, because our rotating Bob Hanlon to Detroit was probably not in his plans!"

In a more serious tone, Heller added that the publishing checks on our last issue were obviously not up to par. We agree. The *Review* staff has developed additional quality controls and will be applying them from now on. Again, our apologies to those affected by the mistakes in the winter 1983 *Review* and thanks to our readers, article and feature writers, and unit liaisons for your support.

Errata

- Page 50** The acknowledgment of contributors to the Far East article which appears on page 50, column 3, should have preceded the article, "At Home and Abroad in Paradise GAO's Far East Branch," page 32
- Page 52** Paragraphs describing top-level staff changes are printed twice.
- Page 53** The title "GAO's Assistant Comptrollers General" should have been positioned under the pictures of Henry Eschwege and Francis X. Fee. J Dexter Peach's title is "Director, Resources, Community and Economic Development Division"
- Page 61** The heading "Detroit" printed in column 3 is misplaced. It should have appeared on page 62, preceding the name of William Laurie

From Our Briefcase



Accounting Update

GAO To Inventory Statutory Audit Requirements

GAO is undertaking a project to identify the maze of audit requirements found in the nearly 1,000 Federal programs, projects, services, and activities which provide assistance or benefits to the public. GAO studies have shown that these requirements have led to inconsistencies, gaps, and duplications in audit coverage. The project will result in a comprehensive inventory and analysis of the statutory audit provisions pertaining to Federal financial assistance programs.

The project will help GAO further develop and advance the concept of the single entity audit, which provides for a financial and compliance audit (including a comprehensive review of internal controls) of a single entity or organization rather than detailed audits for each separate program involving financial assistance. The concept provides an improved audit base for performing additional selective audits for detailed compliance issues as well as to determine economy and efficiency or program results.

Identifying Federal audit requirements will assist GAO as it considers recommending amendments

to existing legislation, including the possibility of proposing some form of "cross-cutting" single entity audit legislation for all Federal assistance programs.

New Types of Reports on Financial Statements

Opinions and disclaimers of opinion are not the only types of reports GAO issues on government corporations' financial statements. GAO now also issues reports on financial statement compilations and reviews.

In a compilation, the accountant presents information in financial statement form which represents management without undertaking to express any assurance on the statements. The accountant does not audit the statements and, accordingly, does not express an opinion or any other form of assurance on them.

In a review, the accountant performs inquiry and analytical procedures that provide a reasonable basis for expressing certain limited assurances. A review is more limited in scope than an audit, so it does not provide a basis for expression of an opinion regarding the financial statements taken as a whole. The American Institute of Certified Public Accountants (AICPA) has issued several Statements on Standards for Accounting and Review Services.

GAO has recently completed a compilation of the financial statements of the United States Railway Association (AFMD-82-69) and a review of the financial statements of the Commodity Credit Corporation (CED-81-137).

Recent Guidance Issued on Personal Financial Statements

The AICPA has issued two pronouncements on personal financial statements. "Accounting and Financial Reporting for Personal Financial Statements," AICPA Statement of Position 82-1, was issued on October 1, 1982. This statement deals with preparing and presenting financial statements of individuals or groups of related individuals (families). Personal financial statements assist individuals to formally organize and plan their financial affairs in general or may be used for specific purposes, such as obtaining credit, income tax planning, or retirement planning.

"Personal Financial Statements—Compilation, Review, and Audit," a proposed guide issued on November 1, 1982, discusses the scope of work and form of report for an audit, review, or compilation of personal financial statements.

For copies, or for further information, contact the AICPA, 1211 Avenue of the Americas, New York, NY 10036.

Governmental Accounting Standards Board Update

The Financial Accounting Foundation reached agreement in December 1982 with representatives of State and local governmental organizations and the public accounting profession regarding the establishment of a Governmental Accounting Standards Board. The proposed Board, which would establish accounting and reporting requirements for State and local government, would be under the Foundation in the same respect as the existing Financial Accounting Standards Board, which establishes ac-

counting and reporting requirements for business.

In addition, a governmental advisory and oversight body to be known as the Governmental Accounting Standards Advisory Council would be established under the Foundation. Approximately 20 organizations, including GAO, would be invited to nominate Council members.

GAO's Work on Tax Administration Activities During 1981

GAO has been auditing and reporting on Federal tax administration activities, particularly at IRS, for the past decade. Prior to October 1977, GAO conducted its audits as an agent of the Joint Committee on Taxation because the executive branch did not recognize GAO's authority to independently access tax records for audit purposes. In October 1977, the Congress passed Public Law 95-125, amending the Accounting and Auditing Act of 1950 to specifically give GAO independent access to tax records to audit tax administration activities.

With the expanded access, the Congress required GAO to report annually to the tax writing and Government operations committees on the results of GAO's work in the tax area. The first four annual reports were issued, with limited distribution, as letters to the House Committee on Ways and Means, the Senate Committee on Finance, the Joint Committee on Taxation, the Senate Committee on Governmental Affairs, and the House Committee on Government Operations. Due to the popularity and usefulness of past reports, the report on GAO's 1981 work was issued as a blue-cover report and was more widely distributed than in the past. The report, which consists of eight enclosures, summarizes the results of GAO's work during 1981, including the reports issued and testimonies delivered. It also summarizes the actions taken during the year on GAO's recommendations by the Congress and IRS. In addition, the report inventories open recommendations to the Congress from reports issued before 1981. (See GAO/GGD-82-82, July 22, 1982.)

Although the annual tax administration report is compiled primarily to meet the Congress' legislative mandate, it has also been useful for planning and managing GAO's work in the tax area. For example, it has facilitated following up GAO recommendations and promoting GAO's solutions for improving administration of the Federal tax laws. In this regard, the tax writing committees used the annual report in incorporating several GAO recommendations into the recently enacted Tax Equity and Fiscal Responsibility Act of 1982. For more information, contact Johnny Finch, General Government Division, (202) 275-6407.

Review Article on Silver Recovery Gets Recycled

The *GAO Review* reaches several thousand academic, business, and government readers in the United States and other countries, but we seldom receive their comments by return mail. Thus, the editorial staff was recently pleased to receive a copy of a letter to one of our authors, Everette B. Orr, a senior evaluator with the Procurement, Logistics and Readiness Division, from Dr. Philip C. Kolin, Associate Professor of English at the University of Southern Mississippi. Dr. Kolin teaches technical writing and was requesting to use Orr's article as a model of effective writing. Dr. Kolin saw the article, "A Silver Mine from Photographic Wastes," in the Winter 1982 *Review* and felt that it was a model proposal in article format. He noted, "The article contains the main parts of any good proposal—identification of a problem, analysis of costs, and final justification for adopting the methods out-

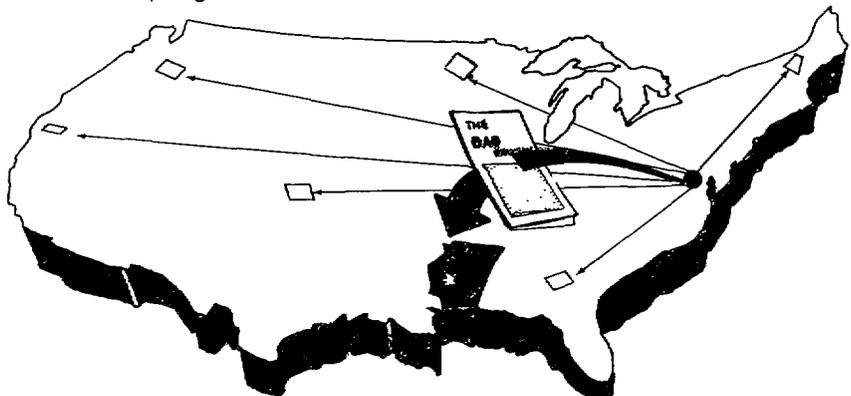
lined in the proposal." Dr. Kolin also expressed his interest in receiving any feasibility studies used in GAO.

The *Review* congratulates author Orr and notes that the GAO reports on which his article was based¹ are used as case-study material in GAO's entry-level training course. If you have additional ideas for Dr. Kolin to show his students "how to write on the job," call Orr at (202) 275-6547. If you want to begin a *GAO Review* article of your own, contact your unit liaison or any member of our editorial staff.

Joint Financial Management Improvement Program's 1982 Accomplishments

Under the Joint Financial Management Improvement Program (JFMIP), the Comptroller General, the Secretary of the Treasury, the Director of the Office of Management and Budget, and the Director of the Office of Personnel Management are charged by the Budget and Accounting Act of 1950 with improving financial management practices throughout the Federal Government. JFMIP's executive director Susumu Uyeda recently published the program's major accomplishments during fiscal year 1982 in JFMIP's *News Bulletin*. (As a contribution to paperwork reduction, JFMIP will not be issuing an annual report.)

¹"Additional Precious Metals Can Be Recovered" (LCD-77-228, Dec 28, 1977), "Civil Agencies Should Save Millions by Recovering Silver from Photographic Wastes" (PLRD 81 48, July 31, 1981)





On Location

GAO Staff Changes

In November 1982, Comptroller General Bowsher established a new Office of Quality Assurance and named the first assistant regional manager for operations. In addition, the Resources, Community and Economic Development Division (RCED) became the first GAO unit to have both a deputy director for operations and a deputy director for planning and reporting.

The Office of Quality Assurance will provide advice and guidance to the Office of the Comptroller General to help assure that GAO's work and reporting are as relevant and useful as possible. Ira Goldstein has been named director of the office. (Mr. Goldstein's picture and biography appeared in the Summer 1982 issue of the *Review*.) At GAO, Mr. Goldstein has worked with Assistant Comptroller General Harry Havens in the area of block grants and recently chaired the Reports Task Force.

See this issue's feature, "GAO Staff Changes," for more news.

Regional Office Administrative Officers Confer

Administrative officers from GAO's 15 regional offices met in Washington, D.C., in November 1982. Their goal was to identify and work out administrative problems that are common to all the regional offices and to achieve greater effectiveness in carrying out the administrative function.

The AOs' first meeting, held in San Francisco in 1975, was arranged by Walter H. Henson, then deputy director for Field Operations Division and currently regional manager in Seattle. Since that time, the AOs have met in Washington, D.C., so that various GAO staff offices, such as Personnel and General Services and Controller, could attend. Their participation is especially important, according to conference coordinator LaDonna Rodock, because it not only helps to solve administrative problems in the

regional offices but also allows the AOs to be brought up to date on new GAO policies and procedures affecting administrative operations.

The AOs faced a full agenda and a rigorous schedule at the their November meeting. One of the most important topics was the effect of "EWS"—electronic workstations—on the regional administrative staffs. The AOs shared ideas on improving the quality of EWS training provided to users and making the most effective use of the equipment. Ms. Rodock said a wealth of information was shared, and she noted that, after these conferences, everyone returns home exhausted, but reinforced and prepared to perform more effectively.

Administrative officers attending included Eloise L. Robinson, Atlanta; Kathleen M. Sheehan, Boston; Lela M. Mitchell, Chicago; Carole L. Roby, Cincinnati; Christine M. Nicoloff, Dallas; James L. Pendell, Denver; Adrian V. Tokay, Detroit; Loren D. Silvey, Kansas City; Helen M. Figlio, Los Angeles; Helen Kaiatt, New York; Selmer W. Garland, Norfolk; Marilyn R. Fisher, Philadelphia; Teresita C. Nolasco, San Francisco; Vickye J. Bell, Seattle; Elizabeth S. Chaszar, Washington; LaDonna A. Rodock and Patricia C. Graves, Office of the Assistant Comptroller General for Operations.

Comptroller General Returns from International Tour

In early November 1982, Comptroller General Bowsher and International Division (ID) director Frank Conahan returned from a 10-day tour of ID's European Branch, meetings with the Comptroller General's English and German counterparts, and firsthand observations of many activities reviewed by ID staff overseas. Mr. Bowsher participated in a number of briefings and social events at GAO's Frankfurt office, including the branch's awards ceremony. He also received briefings from GAO staff working in London and Germany.



During his tour of Europe, Comptroller General Bowsher visited GAO's European Branch and made presentations for the branch's awards ceremony. Here, budget and travel assistant Louise Markray receives a Certificate of Merit from International Division director Frank Conahan (l) and Mr. Bowsher.

In London, Mr. Bowsher met with Gordon Downey, Auditor General and Comptroller of the United Kingdom, as well as with other officials. In Frankfurt, the Comptroller General met with Karl Wittrock, President of the German Federal Court of Audit. Mr. Bowsher also visited sites of U.S. military operations in Germany and briefings on State Department operations in the U.S. embassies in London and Bonn.

Mr. Bowsher concluded his visit to Europe with a speech before a joint meeting of the Association of Government Accountants (AGA) and the American Society of Military Comptrollers, on the challenges facing Government financial managers.

Ed. note: A related speech by Mr. Bowsher to the AGA Professional Development Conference in Denver in June 1982 entitled "Wanted: Commitment and Leadership—The Challenge of the Eighties" as well as a question-and-answer period, is now available on videotape from the AGA National Office, (703) 684-6931.

GAO Reports Task Force Issues Recommendations

The Reports Task Force's report on the quality, timeliness, and communication of GAO's work was released in November 1982, with "striving for excellence" as its overall theme. Comptroller General Bowsher established the task force in April 1982 to find ways to compress the time between completing an audit and sending the report draft to final processing. He later asked the task force to expand its work to examine report timeliness and the related issues of product quality, content, and productivity. The November report includes four recurring themes:

Product quality should be exemplary. GAO is doing many things well, in the view of both internal and external sources. Too little of GAO's work, however, is exemplary, and too large a proportion fails to meet GAO's standards for acceptability. GAO should strive to be much more than acceptable.

Highly skilled staff members are required to produce excellent products. In the 1980's, evaluating Government programs requires staff to have a set of basic quantitative, design, and analytic skills, as well as a familiarity with ADP and minimum skills in writing and basic GAO audit techniques. GAO's staff needs the right mixture if GAO is to produce excellent results.

Management must provide the tools and incentives. The emphasis should be on procedures which build-in the assurance of quality products rather than trying to identify and resolve problems after the fact. Management must provide the training, guidance, and incentives that will foster excellence.

We must communicate well. The results of GAO's work must be presented in an excellent manner if they are to realize their full potential.

Separate chapters of the task force's report focus on quality, timeliness, and communications and identify shortcomings, diagnose underlying causes, and recommend corrective actions. A final chapter

force noted report writing problems in almost half the jobs reviewed. report drafts identified problems, but not causes. staff had to stop drafting and perform additional audit work to produce a convincing first draft, and sometimes staff at the associate director level and above had extensive problems with the content of drafts, indicating they were surprised by the messages of the report. The task force noted, as shown on figure 16 that whatever the reason cited for overruns, the slippage of calendar dates always most seriously affected timeliness at milestones 5-10. The Report Writing and Review stages. The task force wondered whether this means that whenever a problem occurs, the report becomes more difficult to write? Or perhaps staff is reluctant to report that early milestones are not met. (The latter would indicate an I can make up the difference philosophy which is not borne out later in the job by actual performance.)

Authorized Time Understates Time Job Could Be Expected to Take
Given the complexity of some assignments we reviewed, the staff who planned some jobs seemed unrealistic

about the time needed to complete them, particularly when they had to review many agencies and visit multiple locations. In one instance a division estimated it would take 2 weeks to go from audit work completed to first product delivered another 2 weeks to get the report sent to final processing. 2 more to get the report issued and 2 to get the assignment completed. Audit work completed to first product delivered actually took 18 weeks and it took an additional 6 months to get the report issued.

Understaffing By Regions and Other Staff Problems
The inability to assign sufficient regional office personnel to a job promptly and the loss of key personnel to a job for various reasons frequently led to job overruns. In more than a third of the jobs reviewed the task force saw assignments where unavailability of staff caused regional offices to delay beginning the assignment (or to understaff it) and instances where key staff members on the assignment became ill, were promoted into another division, or left the agency. The latter problems while

certainly not predictable on a case by case basis are common but generally undisciplined occurrences

Unforeseeable Increases in Work Scope
Almost a third of the jobs reviewed were affected by unforeseen increases in work scope. Sometimes this occurred when the requestor of the review desired additional information. In other instances an increase in scope was needed when late developments affected or almost completed review of report

Multiple Organization Involvement
In over a quarter of the jobs reviewed the involvement of more than one region, division, or agency caused time delays. We saw several instances where GAO staff had difficulty pulling together summaries from several regional offices and/or coordinating work among several GAO divisions. A regression analysis performed by the task force showed that an average of 9 days would be added to report processing for each region involved and 17.3 days if two or more divisions were involved.

Problems Obtaining Data From Agencies

GAO had problems obtaining data from agencies in nearly 20 percent of the jobs reviewed. Although these delays were generally not outright denials of access to records, they did delay assignments. Thus, one agency required us to supply our questions in written form to which it provided written responses, another withheld information (temporarily) due to business confidentiality and one military service refused to cooperate with GAO until the Office of the Secretary of Defense required cooperation. In some instances demand letters from the Acting Comptroller General were required to obtain the data.

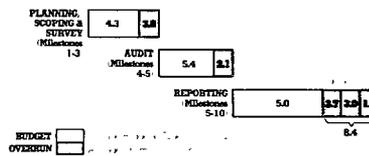
Insufficient Front End Planning
Insufficient front end planning was a problem frequently identified by the task force. About one in seven of the long jobs we reviewed had planning deficiencies which ultimately affected job timeliness. Seven of nine division directors and most regional managers said this was a problem.

Lack of Guidelines and Control
In speaking with division directors and other GAO personnel we concluded that the lack of GAO wide guidelines about how long jobs should take hampers efforts to control timeliness. In addition two systems with great potential for controlling timeliness - AMPS and PPMVA - are not well integrated. They have other problems as well.

AMPS does not track multiple products within an assignment, so it is not possible to tell whether each product of a multiple product assignment is meeting its milestones. In addition, some jobs with multiple products appear to take inordinate amounts of time when in fact each product was completed within a reasonable timeframe.

AMPS also cannot adequately track assignments in a manner that permits comparisons among divisions because of ambiguities in the definitions for milestone 5. Audit Work Completed

AVERAGE BUDGETED TIME AND OVERRUNS OF SAMPLE OF 70 LONG REPORTS BY PRINCIPAL PHASE



and milestone 5: First Product Delivered.

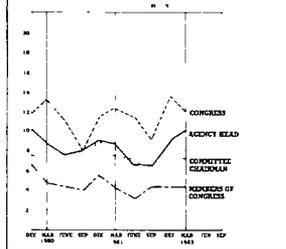
Under the AMPS User's Manual definition, audit work completed is the date when in the judgment of the audit manager or team leader, the predominant effort ceases to be detailed audit work and becomes external report preparation. In most cases, this would be when the last participating organization submits its draft product.

There are three possibilities listed in the Manual for dating this first product delivered: the date the product is received or is expected to be delivered

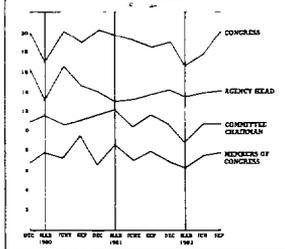
to the responsible manager in Washington, if a field office is drafting the report, the date the report is delivered to the Washington manager who would normally receive draft reports from the field; if the Washington staff prepares the report or when the Project Manager delivers the draft report to the next level of review.

The ambiguities in milestones 5 and 6 become more important when one considers setting guidelines for milestones. Unless clarified they can make it very difficult to establish acceptable timeframes for milestones

TRENDS IN BUDGETED JOB TIMES



TRENDS IN ACTUAL JOB TIMES



REASONS WHY LONG JOBS OVERRAN

REASONS	PERCENT OF JOBS WHERE CITED AS A REASON
1. Washington staff overload/staff put on higher priority work	53
2. Report writing problems	48
3. Authorized time understates time job could be expected to take	39
4. Understaffing By Regions and Other Staff Problems	36
5. Unforeseeable increase in work scope	31
6. Multiple organization involvement	27
7. Problems obtaining data from agencies	19
8. Insufficient front end planning	14

A two page spread taken from the GAO Task Force Report.

on productivity proposes that GAO look at its productivity in terms of efficiency (the traditional input/output measure), quality, and timeliness. After a comment period, the report and staff comments will be transmitted to Mr. Bowsher for his consideration and action.

The task force decided to try out several of its own recommendations about communicating better, including making writer/editors and graphic designers integral members of the report preparation team. The report itself features a simple cover, a three-column typeset format, and the extensive use of graphics.

We hope to feature a more detailed article on the task force's work in a future issue of the *Review*. In the interim, readers who have comments or suggestions on the task force report may contact task force director Ira Goldstein on (202) 275-4022.

Office of Foreign Visitors Hosts Many International Guests

Many GAO employees are un-

aware of the services provided by the Office of Foreign Visitor and International Audit Organization Liaison (OFVIAOL). During fiscal year 1982, the staff hosted nearly 260 visitors from approximately 35 different countries, including Canada, Australia, Japan, People's Republic of China, Sri Lanka, Nigeria, and Sweden. Visitors may contact GAO through their embassies or United Nations-sponsored educational programs to plan their visit.

The guests range from graduate students at foreign universities to high-ranking audit officials, members of parliaments, or even foreign ambassadors to this country. They all have in common an interest in GAO's work and how it may apply to theirs.

The OFVIAOL coordinates with GAO divisions, offices, and regional offices to contact knowledgeable people to brief visitors on their areas of interest. GAO staff members in financial management, budgeting, program results auditing, personnel, and military or fraud issue areas are often called upon to discuss their work.

The office is also responsible for developing the *International Journal of Government Auditing* and the *GAO Review*, and for coordinating input on the *GAO Annual Report*. To complement GAO's international auditing role, OFVIAOL runs the annual 3-month International Auditor Fellowship Program to train audit executives from other countries in many of GAO's procedures for efficiency, economy, and effectiveness work. OFVIAOL director Elaine Orr and Assistant Comptroller General for Policy John Heller represent GAO in several international organizations. The most prominent of these is the International Organization of Supreme Audit Institutions, whose triennial conference is being held in Manila in April 1983. If you would like to become more involved with hosting international guests, call Alberta Tropf, OFVIAOL administrative assistant, at (202) 275-4707. Without division and office assistance, this work cannot be accomplished effectively.

Manager's Corner

This issue of "Manager's Corner" addresses the introduction of new technology to the workplace. The subject is especially timely, since electronic workstations are now being introduced at GAO and will cause changes in how we organize and do our work.

Members of the Senior Executive Service have summarized several of the articles in the bibliography on new technology. Their comments follow. Also included in this issue is a bibliography of general interest to managers.

Please call Kathy Karlson at (202) 272-3475 if you have any question about or suggestions for "Manager's Corner."

Ed. Note: The Winter 1983 issue of the Review featured a description of GAO's electronic workstation technology in its "On Location" feature.

"The Mechanization of Office Work." By Vincent E. Giuliano. Reviewed by Morton A. Myers, Director, PAD.

As GAO continues to introduce electronic workstations and increase word processing capabilities during the 1980's, we need to be aware of the implications involved in shifting from paper to electronics. In this article, author Vincent Giuliano discusses change in the nature of office work, in the uses of information and communications, and in the meaning of the office as a particular place occupied during certain hours—all in the context of stages of office development.

Giuliano contends that the workplace has evolved in three stages, each characterized by its level of technology, personnel practices, and worker-client relationships. The preindustrial stage developed in the mid-19th century still exists in many small business organizations where handling large or complex transactions is not required. The industrial stage introduced the production-line concept, in which tasks were standardized. In this stage, problems developed as workload in-

creased, and employee morale suffered. The information-age stage (marked by the advent of the micro-computer) incorporates the best aspects of earlier stages while increasing the workload and efficiency, and sustaining employee interest.

The graphics accompanying Giuliano's article are illuminating as well as attractive. Several detailed illustrations show how changing workflow patterns can increase the productivity of an office, and projections are given of what the workplace may be like in the not-too-distant future. This article is worthwhile reading for GAO management and administrative personnel.

Ed. Note: We considered the following article especially pertinent to GAO staff in view of the agency's recent acquisition of automated office equipment for its professional and managerial staff around the country. Noteworthy is the fact that the same ingredients deemed so necessary (in the article) to the successful introduction of automated office tools are now present at GAO and are guiding its use of those tools. A Steering Committee on Automated Management Systems has been set up to direct the development of a new internal administrative management system and the introduction of electronic workstations to the professional and managerial staff. The committee advises divisions and offices on the acquisition of new equipment and on training staff. Also, it has emphasized the need for top management to be involved and committed to the new technology. To date, new administrative equipment has been introduced in all the GAO regional offices and in nearly all of its Washington divisions. The administrative staff has been trained to use the new equipment and can increase its proficiency by using equipment in a practice room in the Pension Building. An extensive users' manual for identifying the most appropriate use of the equipment is being developed, as well.

"Managerial/Professional Productivity." By Harvey L. Poppel. Reviewed by Francis X. Fee, Assistant Comptroller General, Operations.

In this article, Harvey Poppel, senior vice president of Booz-Allen and director of the firm's Worldwide Systems Practice, summarizes the results of a major survey done by the firm on the productivity of the managerial and professional staff in private- and public-sector organizations. The study examined the productivity of 300 typical managers and professionals, analyzing how they spent their time and identifying the productivity improvements that were available through the use of newer, automated technologies.

Mr. Poppel maintains that significant productivity improvement can be made at the managerial and professional levels through office automation. He also identifies several actions that an organization can take to realize those productivity gains. The results of the study are summarized below.

Most of the office productivity improvement efforts that had been undertaken to date have focused on increasing the output of clerical and support staff. However, with mounting demands on the time of managers and professionals, much more needs to be done to identify ways to use the skills and capabilities that they bring to an organization. Until very recently, managers and professionals, despite their mounting information needs, have had to rely on the same information resources—pen, paper, typewriter—used in previous generations. The Booz-Allen study showed that from 15 to 40 percent of a manager's or professional's time was spent on activities they considered underproductive. This category includes such activities as searching for information or people, copying, scheduling, and traveling to or from meetings that could be avoided if more accurate and timely information was available.

These timewasters were among the most vulnerable professional activities that could be attacked with

the introduction of advanced technology. Booz-Allen found that managers and professionals could save approximately 15 percent of their time by introducing more advanced technologies. Further, by providing such workers with more advanced technologies and equipment, the quality of life of managers and professionals increased significantly.

Use of office automation resulted in improved quality of work output in terms of substance, content, thoughtfulness, timeliness, and accuracy; expanded the quantity of work output in that the manager and professional provided broader scope and coverage with a higher yield and absorption rate; and reduced the input time required to produce information needed for sound decisions.

The article identifies several ingredients required to take advantage of the productivity gains that were available through using more advanced technologies.

User receptivity to new technology is not a major obstacle. Most senior executives interviewed by Booz-Allen have expressed a positive "gut feel" for the potential of the new, automated, office-support tools. However, they have been skeptical about how to translate the potential benefits into a tangible return on investment. Booz-Allen found, however, that the average annual return on office automation investments was well over 50 percent. The major obstacle, rather, seems to be the magnitude of financial and people resources needed to achieve widespread use. Some of the steps that must be taken to assure the success of new office technologies involve adequate planning, prior small-scale testing; and the commitment from senior management to the success of the program. The program can be administered by establishing a top-level steering committee responsible for demonstrating the new equipment and introducing it to the workplace. Often a lower level steering committee or a task force is established to introduce and manage the actual demonstrations themselves.

"Impact of New Electronic Technology." By Richard W. Riche. Reviewed by Richard L. Brown, Director, GS&C.

Technological change is key-punching its way into nearly every corner of our daily lives, from the food we eat, the clothes we wear, cars we buy, even the job we do in GAO. Richard W. Riche, in his article entitled "Impact of New Electronic Technology," discusses the effect of four major technological changes on the U.S. work force. The changes are

- microprocessors and microcomputers,
- industrial robots,
- telecommunications, and
- office automation.

Mr. Riche contends that increased use of technology generally means improved productivity, although its impact is felt in varying degrees in different industries. This is particularly true in industries where electronic technology can either replace employees doing routine clerical or blue-collar tasks or make their jobs more efficient. When it comes to a professional's use of electronic technology (such as might be the case in GAO), productivity gains become less clear. Rather than streamlining jobs or reducing workloads, modern technology seems to provide professionals with new information and the ability to perform tasks they have been unable to do before. In fact, the number of clerical workers in the United States has grown by more than 9 million since 1960 and represents an additional 4 percent of the total work force. This increase is largely due to the fact that the computer has enabled managers and other professionals to get reports and do analyses they could never do before. This phenomenon has created a need for more clerical workers to support increasing demands for information.

In summary, the development of electronic technology has created more jobs, although those jobs require a different set of skills and

disciplines than they did 20 years ago. In the next few years, for example, we can certainly expect to see significant change in the skills needed by GAO auditors as a result of changing electronic technology. The work challenge facing us today is to develop a work force capable of supporting rapid technological changes in U.S. industries.

"Why Employment Relationships Are Changing, and What You Can Do About Them." By Frank T. Wydra. Reviewed by Johnny Finch, Associate Director, GGD.

If you want to remember today's jobs, you'd better examine them quickly. Frank Wydra, Vice President of Human Resources for Harper Grace Hospitals in Detroit, says that the computer boom soon will make these jobs obsolete or at least excitingly different.

Current strides in electronic technology are changing many aspects of the work world. With so much happening so fast, it is sometimes difficult to understand what implications these changes have for the way we live and work. In this regard, Wydra's article provides some good insight on what we can expect from the computer revolution.

As a basis for comparison, he asserts that the traditional employment relationship has certain characteristics. The relationship becomes fixed in that both work and job continuity are assumed, with higher pay traded sometimes for increased job security. Overall, the relationship is one that attempts to reduce risk for both the individual and the organization. Within this relationship, organizations that reduce risk, that can generate work for employees, and that can succeed indefinitely are viewed as good employers. Employees who are loyal and cause few disruptions are viewed as good employees. The prevailing norm is one of stability.

Wydra points out, however, that the traditional relationship is beginning to change. The matrix organization, for example, has introduced us

to a shifting organizational structure where a worker has multiple bosses. Jobsharing, flextime, and other work scheduling practices are also providing alternatives to the "nine-to-five" routine. With these changes have come new forms of organization, compensation, and communication; different kinds of training; and new approaches to administration of benefits.

The effect of these changes, small though they presently are, warrants our examination to determine if the trend will continue. Wydra says that the changes have been made possible by advances in electronic technology—the computer and its ability to process and sort huge volumes of information. He also predicts that the trend will continue because the increased efficiency in travel time and energy, as well as pressures to increase productivity, all provide economic incentives to both employer and employee to continue innovation in the employment relationship. One by one, these innovations will recast the relationship between employer and employee.

Wydra concludes that this change is inevitable because it promises more efficiency than is available in our present system. Greater employee independence, flexibility, participation, and self-reliance will lead to production of more goods and services at lower costs. In sum, Wydra believes that through electronic technology, the traditionally inefficient worker is about to become efficient.

"Office Productivity Is an Eighties Imperative." By A. S. Welch. Reviewed by A. F. Franklin, Director, OOH.

In this article, A. S. Welch maintains that productivity in the office, as it relates to clerical procedures, has not kept pace with other improvements in productivity in other areas. He points out that there is a large gap between the equipment support for the clerical worker as compared to that supporting other functions. The author says that the automation of clerical functions would permit administrative support personnel to do just that: support their supervisors. Relieving execu-

tives of as much of the support work as possible allows them more time to engage in pure management or problemsolving, thus resulting in improved productivity.

Welch pinpoints the major factor that will determine the success of this change to automation, namely the attention we pay to the human factor. He says that we need to be aware that solving the productivity problem in clerical work is not as simple as unplugging one machine and plugging in another. It is important that the skills, capabilities, and emotions of the staff be considered when deciding which type of equipment would help in the automation process. The author suggests that the equipment is available. However, he says that people must adjust to these automated developments and that the changing work force and a trend toward unionization of clerical personnel also will affect this adjustment. He contends that these pressures will demand that management come to grips with the human factor and sharpen its human relations skills so that it can respond more effectively to the needs of the employees.

To increase its consideration of the human factor even further, management must increase its emphasis on education and training to keep abreast of progressive technology and personnel trends.

Introducing New Technology

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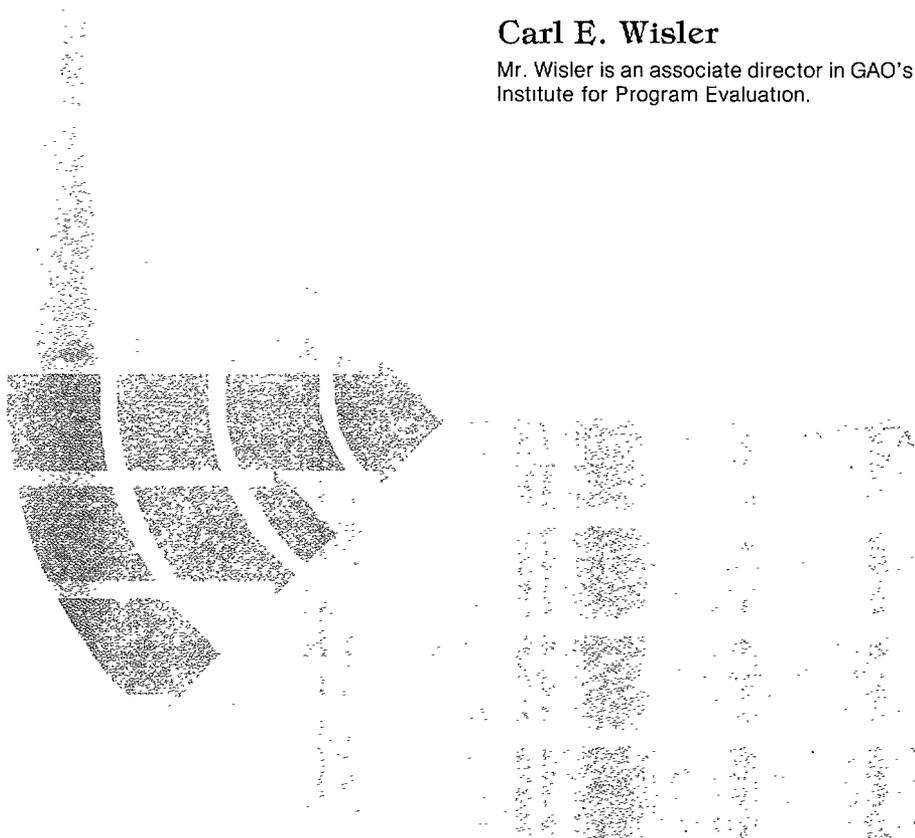
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Topics in Evaluation

Carl E. Wisler

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This issue's topic is content analysis.

An SES contract, a description of a Federal education program, and Alexander Pushkin's novel *Eugene Onegin*: what do they have in common? Each has a message and has been examined by means of a tool called content analysis. While recent columns of "Topics in Evaluation" have focused on evaluation concepts, we turn now to a particular technique for getting answers to certain evaluation questions. Readers who wish to go beyond this brief overview should obtain copies of the IPE Methodology Transfer Paper entitled *Content Analysis*.

What Is Content Analysis?

Messages, taken in the most gen-

eral sense, are necessary to human interaction. Mass media communications, government and business transactions, and personal exchanges all carry messages. Content analysis is a tool for drawing reliable and valid inferences about such messages. It is a tool which has evolved over the last 80 years and has been applied to many purposes outside of evaluation. In this article, we shall be primarily concerned with how to use content analysis to help evaluate government programs and policies.

Though the analysis of documents is our main concern, the method is not limited to written communications. Examples of the wide variety of documents that GAO draws from in doing evaluations include program descriptions (CED-82-52), insurance claims (CED-82-68), safety condition reports (EMD-81-108), and evaluation reports

(PAD-78-44). These and many other forms of communication can be systematically examined using content analysis.

The essence of content analysis is the conversion of written information into a form more conducive to interpretation. For example, suppose we were studying safety faults in nuclear power plants and wished to know whether a reported fault varied by type of monitoring: self-report or independent inspection. Content analysis could be applied to safety condition reports to classify faults, yielding a frequency count by fault type. Then, standard statistical analyses could be performed to determine if certain kinds of faults were more likely or less likely with self-reporting or independent inspection.

In many content analyses, the aim is to convert messages from written, narrative form into a quantitative form that can be interpreted by using common data analysis methods. The challenge is to make the conversion in a reliable and valid way, a point we shall return to later.

Doing Content Analysis

To illustrate the main steps in doing a content analysis, we will use the Federal Crime Insurance Program (CED-82-68). The program offers insurance against burglary, robbery, theft, and similar crimes. In 1981, 72,782 policies were in force, and \$38.4 million was paid out in claims. In the same year, premiums totaled \$13.1 million. The deficit of \$25.3 million indicates the extent to which the program is subsidized by transfers from another insurance program.

As part of our review of the program, suppose we want to know the probability of policyholders making claims on certain categories of property, given various characteristics of the policyholders and locations of property. If data are available, statistical techniques can be used to estimate such probabilities. Content analysis helps provide the necessary data by extracting it from written material by a process known as coding.

Using file information about the 72,782 policyholders, our attention

will be focused on learning the extent to which property, in various categories, is reported as stolen. The process involves five steps common to all content analyses: (1) choosing a sample of written material for the content analysis, (2) selecting units of analysis, (3) developing coding categories, (4) coding the written material, and (5) analyzing and interpreting the coded information.

The first step is to choose written material for analysis. The underwriter's files on all policyholders will constitute the universe upon which the analysis will be based. Because the number of files is quite large, a sample must be chosen. The principles of statistical sampling for content analysis are the same as for other methodologies and will be considered outside the scope of this overview.

The next step is to select a unit of analysis. This means putting a boundary around the written material to be coded. A policyholder's claim for losses, a part of each file, is a reasonable choice as the unit of analysis because it is a well-defined set of papers which almost certainly describes the property in question. Often in content analysis, the definition of a unit of analysis is more complicated than in this particular example.

The third step is to develop categories for the conversion of information from policyholder files to quantitative information. Such property categories as jewelry, entertainment equipment, business machines, and retail goods are among the candidates. For the purpose of our analysis, an important category is a no-claim for stolen property. Two principles which guide the development of categories are that the categories be exhaustive of all possibilities and that no piece of information be coded into more than one category.

The hard labor of content analysis comes in the next step: coding the written material. In our example, we have focused on only one class of information—categories of property reported stolen—but ordinarily a content analysis applies to multiple classes of information. Typically, a team of analysts undertakes the coding and, to ensure uniformity and accuracy, the team is furnished

with codebooks and trained in the procedures. Each team member reads a portion of sampled materials and codes each class of information. For such information as reported stolen property, the coders simply record a tally mark for each category observed.

Once the sample of written material has been coded, it is ready for analysis and interpretation. The methods are standard data analysis techniques ranging from simple descriptive and inferential statistics (see "Topics in Evaluation," Fall 1982) to more advanced procedures, such as log-linear models, for estimating the relationships among categorical variables. Because the data analysis techniques are not unique to content analysis, appropriate methods can be found in statistics texts and need not be covered here.

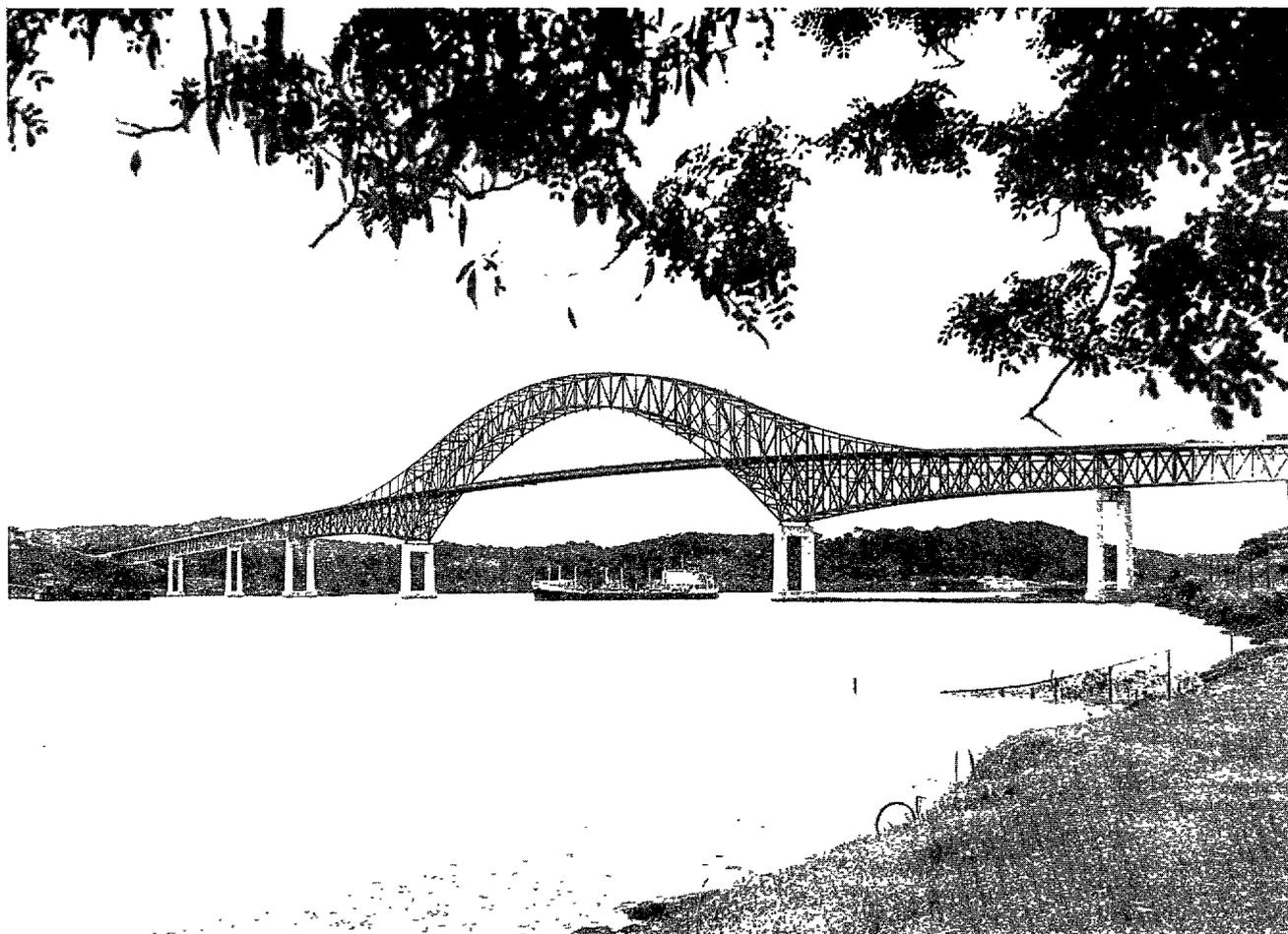
The Reliability and Validity of Content Analysis

Content analysis may be considered a measurement process and therefore the concerns we have about the quality of any measurement process will apply. Two indicators of the quality of a measurement process are reliability and validity. (See "Topics in Evaluation," Summer 1982.)

Reliability is an indicator of the extent to which the results of a measuring process are replicable. In content analysis, if we repeat the coding process using the same sample of material and the same definitions of categories, but use a different team of coders, we are likely to get different results because the coders will occasionally make different judgments about how to categorize the written material. When differences are small, the reliability of the coding is said to be high. One of the reasons for having codebooks and training coders is to achieve high reliability. Procedures exist for making quantitative estimates of the reliability of the coding process and should be applied before using the results of a content analysis.

See TOPICS, p. 52

Looking South: The Latin America Branch



Spanning the Panama Canal, the Bridge of the Americas joins North and South America.

Author F. Marvin Doyal would like to thank members of the Latin America Branch staff for their assistance with this article.

Recently the United States has been paying a lot of attention to our southern neighbors in Latin America and the Caribbean. This area dominates our energy pipeline, provides markets for our exports, and offers political, social, and economic challenges. For these strategic, commercial, and human reasons, the United States is seeking and cementing new friendships in the area. The Latin America Branch (LAB), one of the International Division's three branches,

provides a GAO presence in this increasingly important geographical area. Through this article—profiling LAB and its geographical area of responsibility—we share a bit of the history, importance, and enjoyment of our Latin American experience.

Tiajuana to Tierra Del Fuego Plus the Caribbean

The branch's geographic area of responsibility covers what is known as Latin America—Mexico and Central and South America—plus the Caribbean island nations and territories that generally define the

northern and eastern limits of the Caribbean Sea. The physical appearance of the land in this area varies greatly, from the Panama Canal crossing the continent at 85 feet above sea level to Chile's snowcapped Andes, from Barbados' idyllic beaches on the peaceful blue Caribbean to the Magellan Strait's penguin-populated, stormy seas.

The people are as diverse as the geography. Indians, blacks, caucasians, and orientals are all widely represented, each contributing from their individual cultures to the unique culture of the region. Spanish is the language most frequently spoken, but in Haiti, one will hear French or Creole; in Brazil, Por-



and Brazil's national product exceeds the combined national products of Indonesia, the Philippines, South Korea, Hong Kong, Thailand, Malaysia, and Singapore. Other Latin countries, though not as large as Brazil, have their own cultural heritages which, in some cases, date back to the advanced civilizations of the Mayans, Incas, and Aztecs who flourished long before Columbus discovered the New World.

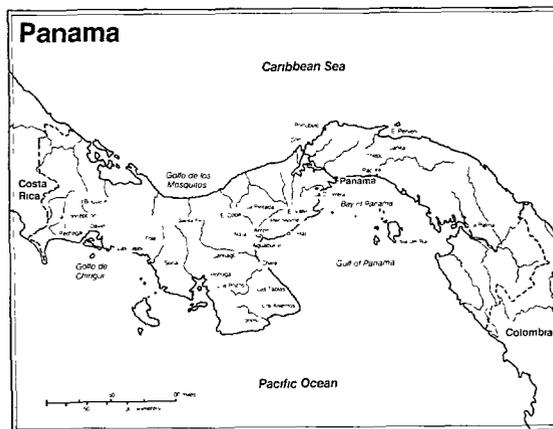
GAO in Latin America

While national attention has only recently increased on Latin America, GAO has a long history in the area. The earliest presence was related to Panama Canal audits. The list of persons who contributed to this work reads like a GAO version of "Who's Who." For example, the 1947 crew included Oye Stovall and Adolph T. Samuelson, both of whom became division directors. Others are too numerous to mention, but veterans include a substantial number of GAO's senior staff today.

Even though canal audit work was important in the early days and remains so today, it was not the only work done in the area. During the 1960's and 1970's, numerous GAO auditors from the United States trooped through Latin American countries to perform "country-wide reviews" and "country cognizance" (COCOG) reviews. The travel demands and costs of this work, coupled with the desires of then Comptroller General Staats to increase GAO's presence in the region, led to the Latin America Branch's creation 8 years ago.

tuguese; and in Jamaica, English. Although English is widely spoken or at least understood, the LAB staff has all found that a little bit of Spanish goes a long way toward enhancing the experience of living and traveling in Latin America.

Many countries in the region are large and highly sophisticated. Latin America boasts three of the five largest cities in the world—Sao Paulo, Mexico City, and Rio de Janeiro—each having a population over 10 million. Further, Brazil's population (120 million) equals that of France and Germany combined,



Early July 1975 marked the arrival of our first director, George L. DeMarco, in the Republic of Panama. He supervised the work of setting up our first office in the *Edificio de Diego*, the building which also housed the American consulate. In 1979, the office was moved one block to our current location on the fifth floor of the *Edificio Aseguradora Mundial*. Like the original office, this building overlooks Panama Bay, where ships queue awaiting transit through the canal. Since LAB's start in 1975, the number of assigned staff has grown from 5 auditors and 1 administrative staff to our current level of 14 auditors and 2 administrative staff. During the interim, the director's baton has been passed to Wayne T. Tucker, John P. Competello, and Thomas Brogan, LAB's present director.



Director Tom Brogan.

Living in Panama

Even though Panama is only 2½ hours flying time from Florida, it offers a truly foreign living experience for LAB staff. Although predominantly Latin, Panama has an international flavor. Influenced by a variety of cultures—European, Asian, Jamaican, and American—which were brought together during the building of the canal, many Panamanians proudly claim that their country is more of a “melting pot” than the United States.

Panama is roughly the size of South Carolina and has a population of almost 1.8 million. Ciudad Panama, its capital, is a modern city of 700,000. The country's topography includes beaches, prairies, tropical forests, and 11,000-foot mountains. The temperature is rather constant, with a May-to-December rainy season and a January-to-April dry season. By the way, in Panama there is no malaria, there are very few mosquitos, and the water is safe to drink. As a result, some of our staff who prepared themselves with quinine, bug spray, and water purification tablets have been very pleasantly surprised.

Something seems to breed athletes in Panama, and except for a few holdouts, the LAB staff members are no exception. Softball, volleyball, bowling, and now even



LAB's Transisthmian Relay Team celebrates completion of 51 miles.

aerobics—to salsa music—are among our activities. The most spectacular, though, is the GAO relay team which has twice run from ocean to ocean. A few of our more determined staff have run occasional individual marathons. Other recreational opportunities abound in the area. World-class sailfish and marlin roam the Pacific; bass, tarpon, and snook swarm in the 150-square-mile Gatun Lake; the Atlantic coast is a skin diver's and shell

hunter's paradise. Golf courses and tennis courts are readily available. Sports and spectacles, such as horse racing, baseball, soccer, cockfights, and bullfights, are also available.

Most of our staff live in medium-sized apartment buildings. However, unlike staff at ID's branches in Hawaii and Frankfurt, we neither live in the United States nor in a U.S. enclave. Each staff member has had to search out, locate, and negotiate

a lease for their residence. Nearly all of the searching and negotiating are in Spanish, and the lease almost certainly will be. Needless to say, this is an interesting part of getting settled in Panama.

While we live and work in Panama City, the presence of a large American community in the nearby canal area makes it possible for us to enjoy many of the comforts of home while still living overseas. We have access to all Department of Defense commercial, educational, medical, and recreational facilities. Our access to military facilities also gives us opportunities for such things as inexpensive boat rental for deep-sea fishing and "jungle training" at the U.S. Army Jungle Operations Training Center. On weekends, we can go to the military commissary and PX to purchase American products, go home and watch a live football game on Armed Forces television, and later join friends in Panama for a night of Latin music, casinos, and Panamanian cuisine. By living in a foreign country while still having access to U.S. military facilities, we feel we have the best of all worlds.

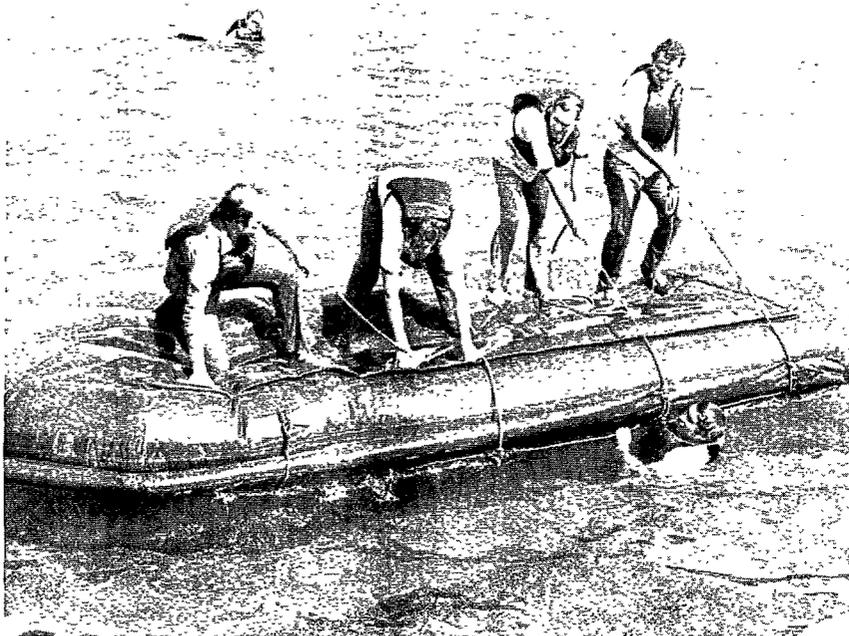
Traveling in Latin America

When we travel in Latin America, we visit some of the most romantic and interesting cities in the world. Consider, if you will, Rio de Janeiro, Buenos Aires, Montevideo, and Santiago. However, we are not restricted to major cities and have visited totally unknown places where rains can raise water level by 10 feet overnight and where termite hills dominate the landscape. Each trip, even those in Panama, has the makings of an adventure. Here are a few examples:

- Two staff members left Georgetown, Guyana, on a Saturday en route to Brasilia, Brazil. Five days later, they finally arrived—their transportation had stopped in Port of Spain, Trinidad; Caracas, Venezuela; Bogota, Colombia; Manaus, Brazil; and Rio de Janeiro. (This was *not* exactly according to plan, but it made for some good stories after the ordeal ended.)
- Several staff were able to squeeze a visit to the isolated Inca ruins of



Panama City from a staff member's apartment.



LAB and embassy staff learn how to survive in jungle waters.

Machu Picchu high atop the Andes during their work in Peru.

- Many staff have ventured well into the outback in remote areas of Peru, Costa Rica, Honduras, Haiti, and the San Blas islands of Panama, where four-wheel drive vehicles are necessities, roads are paths, electricity is unheard of, and running water means a stream to be crossed in dugout canoe. It can be rough, but the excitement in being in remote villages where even host govern-

ment officials rarely venture makes for interesting stories and fond memories.

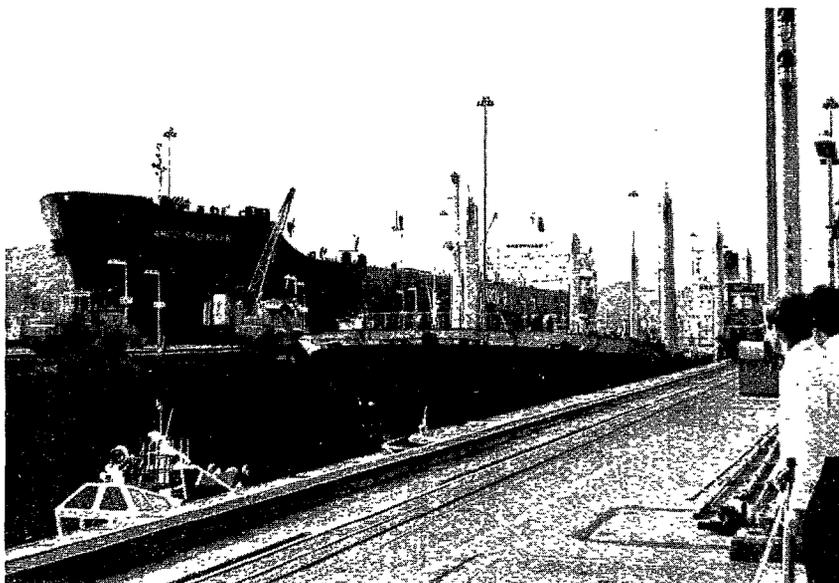
Working in the Latin America Branch

Although a substantial part of our workload concerns the Panama Canal, other assignments we undertake address a wide range of issues, including development assistance concerns, U.S. military matters,

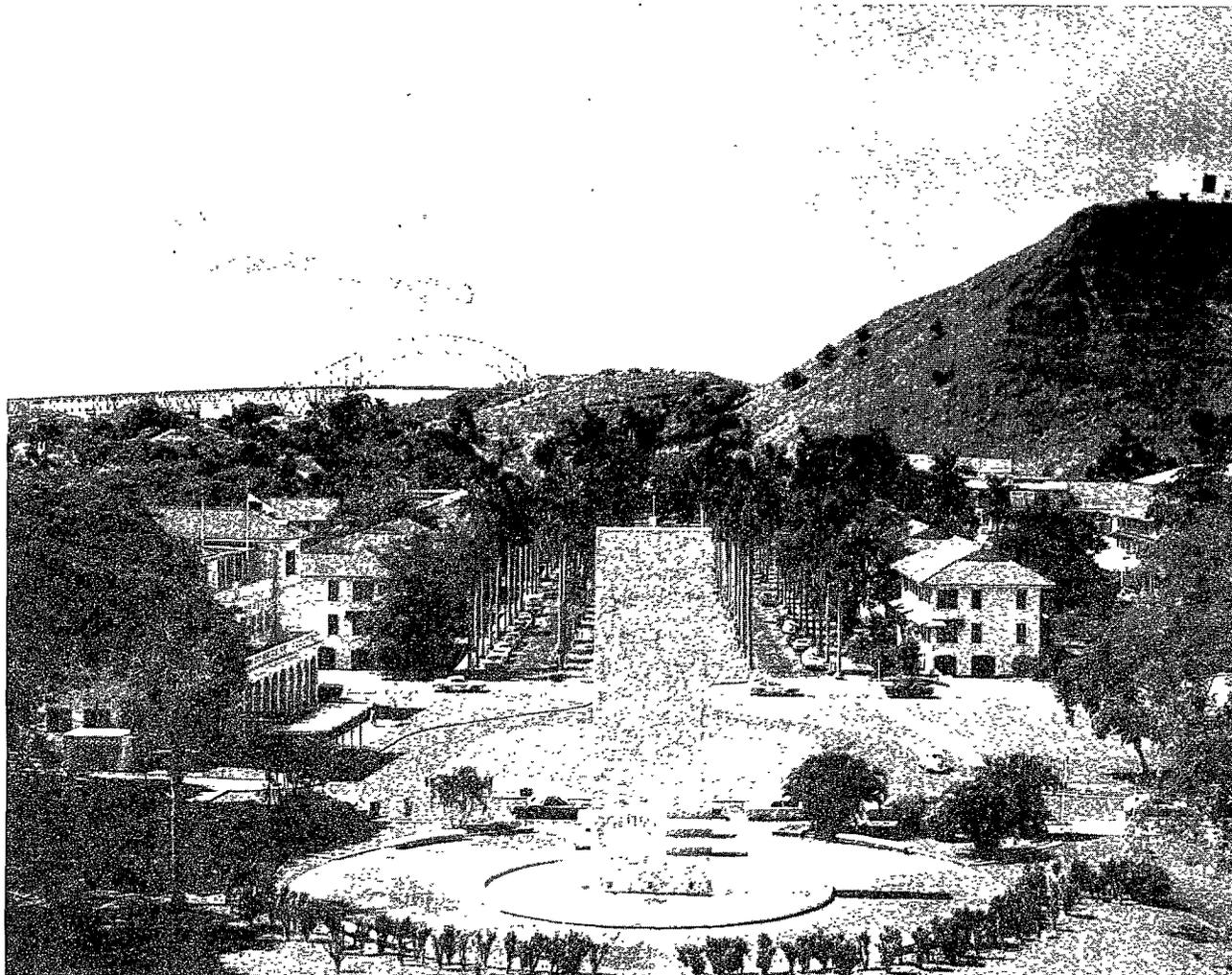
trade and investment decisions, and other U.S. Government activities. As one can imagine, LAB work is as stimulating and challenging as it is diverse. Examples of recent work follow.

Panama Canal Work

The Panama Canal was begun in 1904 and completed in 1914. The treaty of 1904 granted the United States the right to act as if it were sovereign in the Canal Zone. This concept was softened several times in later years—1936 and 1955—and was finally disposed of altogether when the Panama Canal Treaty of 1977 was signed. This treaty was implemented by passage of the Panama Canal Act of 1979 which assigned GAO specific audit duties. The treaty and the act provide for a



LAB staff inspect ships going through Miraflores Locks.



Canal Area monument to the building of the Canal, with the Bridge of the Americas in the background.

cooperative relationship between the United States and Panama until 1999, when the canal will be turned over to Panama.

The new treaty and a Canal Commission Board of Directors (which includes foreign nationals of a U.S. agency) combine to make our work on the Panama Canal even more challenging. Each year we are required to

- audit the Commission's transactions, including the payment to Panama for public services,
- certify estimated revenues for future years, and
- provide listings of the cost incurred to implement the treaty and the cost of property transferred to Panama.

Unless the law changes, LAB's canal audit responsibility will continue until 1999. Currently, the work

at the Commission requires about 6 staff years of effort. We deliver a minimum of two reports to the Congress each year and complete others as requested, which are addressed to the requester or the Administrator of the Commission.

Staff assigned to this work transit the canal on the bridge of a merchant vessel to gain a perspective of the canal enterprise, the people, and the country that otherwise would be missed. For example, they learn the canal goes southeast/northwest, not east/west or north/south, as most believe, and that the sun rises on the Pacific and sets over the Atlantic. The marvel of the Panama Canal is a thing that must be experienced. All of us still flock to the Miraflores Locks to see the Queen Elizabeth II—the largest ship to transit the canal—make its annual

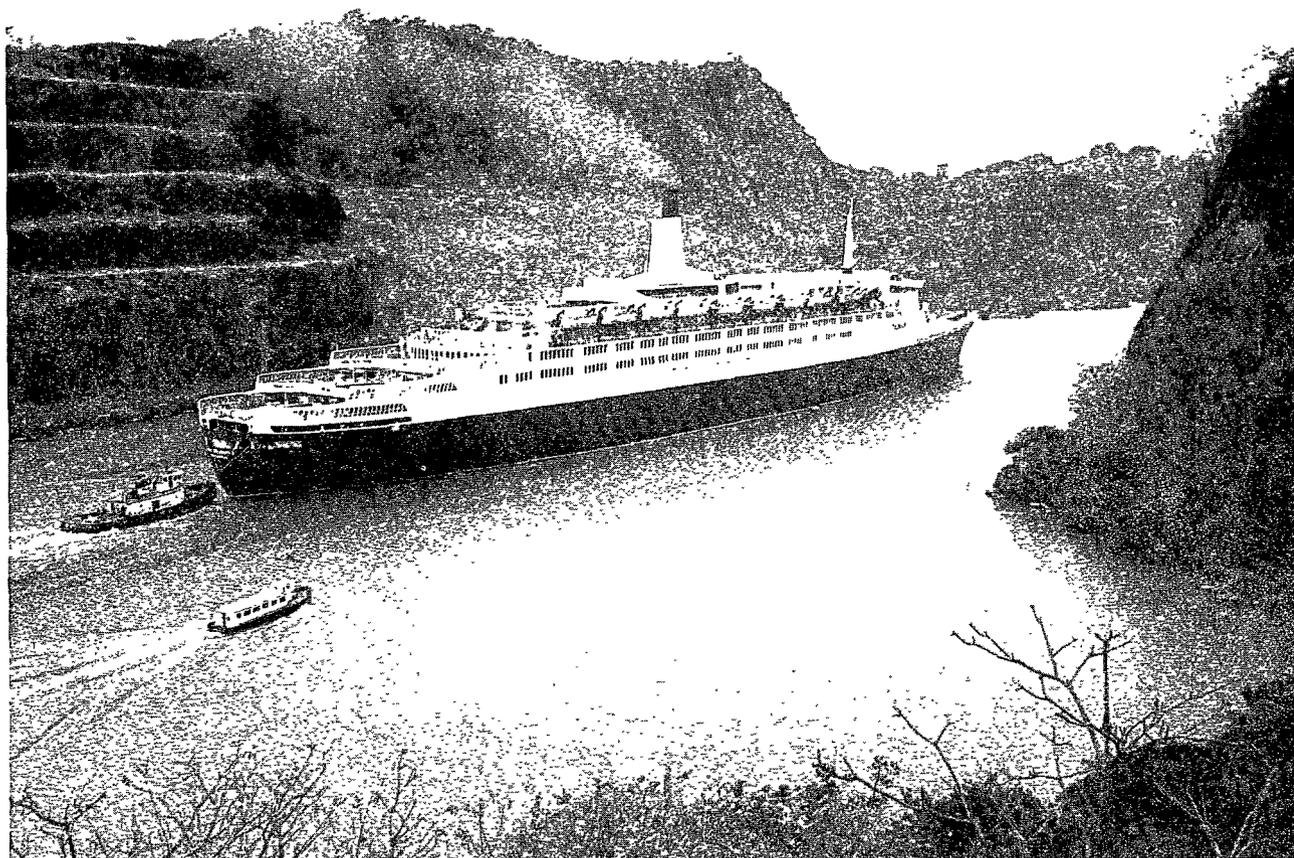
canal passage.

Development Assistance

The administration, the Congress, and the media are increasing their attention to development assistance in LAB's area of responsibility. In the last year, this attention has resulted in our participation in reviews of development assistance efforts of the Inter-American Foundation and those of the Agency for International Development in Haiti, Jamaica, and the Eastern Caribbean.

Inter-American Foundation

Because the nature and strategy of U.S. foreign assistance programs in Latin America were under close



The Queen Elizabeth II squeezes through the narrow cut in the Continental Divide.

scrutiny in the Congress and the executive branch, GAO undertook an in-depth review of the Inter-American Foundation activities. The IAF is a semiautonomous Government development corporation characterized by independence from the United States and host governments' short-term foreign policy objectives and nonintervention in the affairs of groups it supports. During field work, LAB staff visited over 66 private, indigenous groups who had received IAF grants. These visits required trips to remote locations in Panama, Costa Rica, Peru, Honduras, and the Dominican Republic to determine how effectively the group needs were being met by this new type of development assistance. LAB staff also met with U.S. mission personnel, other private and governmental development organizations, and host government representatives in all countries visited to get their reactions to the program.

Haiti

In 1981, the phenomenon of the "boat people" and the concern that U.S. economic assistance to Haiti was ineffective led GAO to undertake an assessment of assistance program effectiveness, the reasons for past assistance failures, the adequacy of planned corrective actions, and possible development assistance options. As part of the fieldwork, LAB staff visited all parts of Haiti to observe the attempts to improve living conditions. This work gave LAB staff a taste of the appalling poverty and hunger which exist so close to the United States, the difficulties AID faces in its development efforts, and an understanding of why Haitians are so willing to crowd into leaky, unseaworthy vessels for the chance for a better life in the United States or elsewhere.

Elsewhere in the Caribbean

Other islands in the Caribbean, though generally considered to be tourist havens, face serious development problems. The United States is undertaking a major assistance effort, more than tripling assistance provided to these islands in the last several years. Our staff recently vis-

ited several of the islands (Jamaica, Barbados, and five other small Eastern Caribbean islands) to review the effect this assistance is having.

Future LAB Role in Development Assistance

President Reagan recently proposed the Caribbean Basin Initiative, designed to assist developing countries in the Caribbean and Central America through an integrated program of trade, aid, and investment. Even though much of this proposal is still under congressional consideration, it is clear that development assistance efforts in Central America and the Caribbean will be emphasized in the future. This increased emphasis is likely to result in a continued LAB leadership role in the development assistance area.

Trade, Energy, and Finance

Although America's trade relationships are still predominantly oriented to the east and west, recent economic growth in Latin America is beginning to change the trade relationships with Latin America. Latin America depends on the United States for the bulk of its imports and provides agricultural products and important raw materials in return. Mexico and Venezuela are key suppliers of oil, and Jamaica a major supplier of bauxite. In the future, our trade links with Latin America will likely include more nontraditional items.

In recent years, LAB has participated in reviews of the changing structure of the international oil markets and U.S. efforts to encourage mining investments for strategic and critical minerals. Upcoming work includes examining U.S. energy interests in the Caribbean, including reviewing the lessons Brazil learned from its program to produce and use alcohol fuel as a substitute for fossil fuel.

National Security

The geographic proximity of Latin America and the Caribbean makes them vital to our national security. Major strategic concerns are main-

taining unimpeded use of sea lanes adjacent to North America and the Panama Canal and access to Mexican and Venezuelan petroleum and other raw materials. Further, as our closest neighbors and friends, these countries are important in gaining support for U.S. policies in hemispheric and international forums.

Political unrest and territorial disputes in the hemisphere continue to raise security concerns for the United States. Specifically, civil violence in Nicaragua, El Salvador, and Guatemala and territorial disputes in the Falklands and elsewhere have attracted considerable international attention. Recognizing the importance of stability in the region, the United States is increasing security assistance programs and reemphasizing planning for military contingencies.

This is creating additional work for GAO and the LAB. For example, we recently participated in a review which provided the Senate Foreign Relations Committee information on U.S. military assistance programs in El Salvador. Ongoing and planned work involves U.S. base access in Honduras and U.S. strategic planning for the Caribbean basin.

Management of Foreign Affairs

Consistent with the emphasis on budget savings, LAB has also worked to improve foreign affairs management to achieve budget savings. Latin America is an excellent location for reviews of administrative and management practices. There are 23 embassies and 20 consulates which vary in size from very large posts in Brazil and Mexico to small posts in Guyana and Suriname. (The embassy and consulates in Mexico employ about 1,000 people, making it one of the largest U.S. missions in the world.) Further, many agencies are represented here which may not be represented elsewhere. For example, Federal Aviation Administration officials are stationed in Panama, and U.S. Government health and agricultural inspectors are located in many Central American countries.

See LOOKING SOUTH, p. 53



Patricia A. Cole

Patricia A. Cole, a GAO evaluator, is currently with the Office of Program Planning. She joined GAO in 1981 at the Washington regional office. She received an A.B. magna cum laude with distinction in history and an A.M. in history from Duke University.

The following article was adapted from a presentation made in August 1982 at a roundtable discussion on "Robotics: Its Impact on Education and Training," sponsored by the Department of Education. The material was gathered during a GAO review of automated manufacturing technology

Vocational Education and the Robotics Revolution

The subject of robotics is arising with increasing frequency in the United States. It has become an important topic at the collective bargaining table. Automobile companies now use robots to symbolize quality workmanship. Wall Street firms consider companies which use robots to be sound investments. Can there be any doubt that, as several headlines have proclaimed, "The Robots Are Coming, The Robots Are Coming?"

Even the General Accounting Office is interested in robots. For several years, GAO has looked at private-sector productivity and its effect on international competitiveness. A 1976 GAO report, "Manufacturing Technology—A Changing Challenge to Improved Productivity," recommended that manufacturing productivity become a national priority and that the Federal Government strengthen its support for and development of productivity-enhancing technology related to manufacturing. Since 1976, the Japanese strategy of adopting the technology to enhance competitiveness has become increasingly visible. In view of the growing threat to American industrial markets, GAO recently reviewed the current Federal involvement in advanced manufacturing technology, including robotics. The review found that, while the technology's use does have a positive effect on private-sector productivity, it also raises many other concerns about social effects.

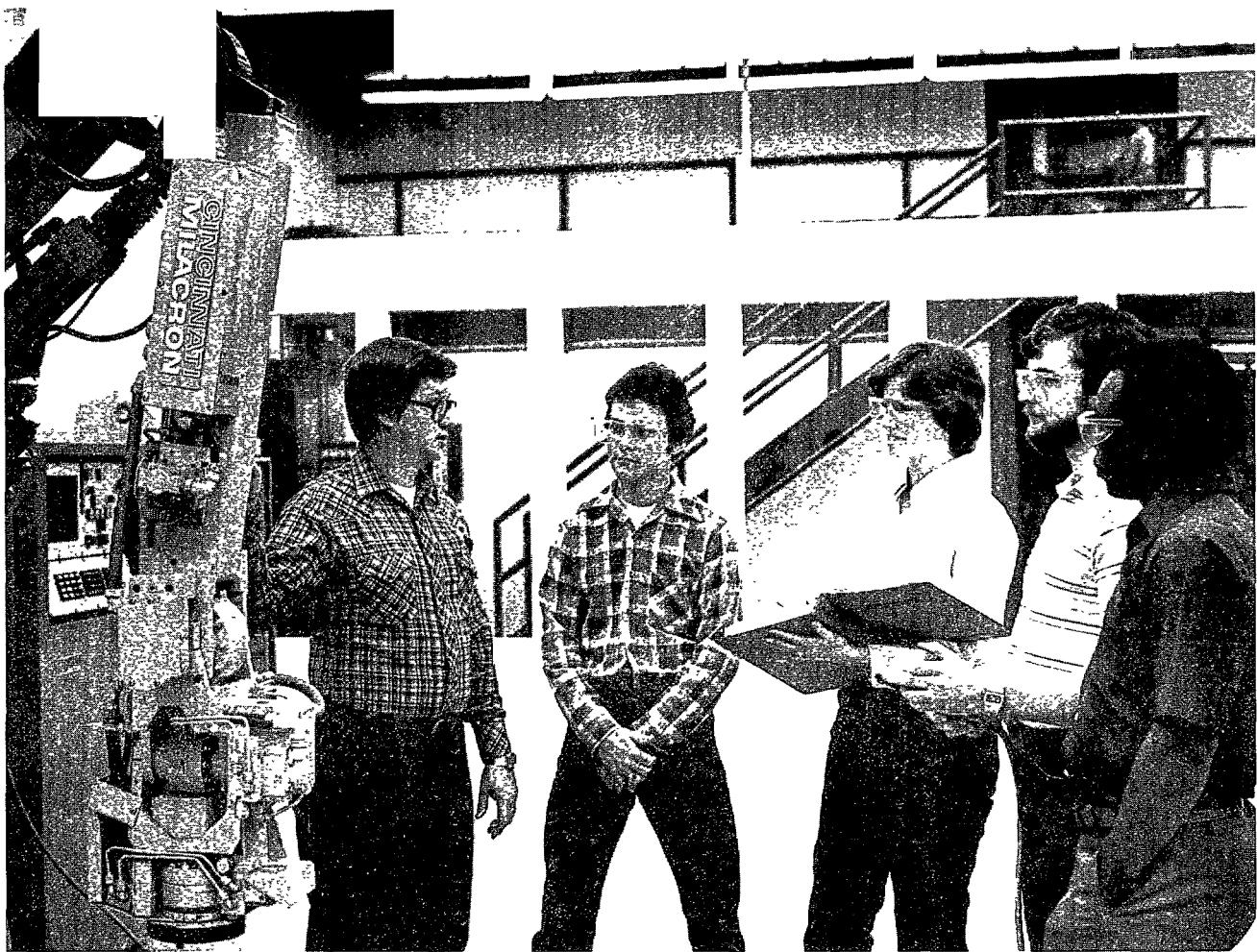
The machines that are causing such a stir are not the anthropomorphic beings of science fiction. At best, they look like giant arms performing such mundane tasks as lifting, welding, and painting. In the future, they will have rudimentary human characteristics like vision and touch. They are prized more for their nonhuman abilities: robots work tirelessly around the clock,

with unfailing precision and in environments from which humans must be protected. Though their appearance may disappoint science fiction buffs, robots are at the center of a revolution in manufacturing technology which various economists, government officials, and business leaders claim will rejuvenate the Nation's aging industrial base.

The robot is the focus of attention in the media. However, it is only the most visible part of a complete manufacturing system run by a computer. In a computer-aided manufacturing system, a computer assists or directs manufacturing from design of an article through production. The payoff is an overall improvement in productivity and quality.

What distinguishes this new technology from previous forms of automation is its ability to be reprogrammed. Previously, "hard" automation was built to repeat only one operation. Programmable automation not only can perform several different operations in succession, but can also be reprogrammed to perform a new set of operations as production needs change.

Automated manufacturing technology will play a dramatic role in our manufacturing sector and may revitalize American industry. But in doing so, it will fundamentally change the nature of manufacturing jobs. The skill shift that will accompany the new technology will create serious stresses on many parts of our social structure, but none more so than the vocational education system. The vocational educational system will be given the job of training technicians to operate and maintain robots. But a greater challenge may be looming ahead. The voc-ed system may also have to face the formidable task of preparing workers to adapt to radical shifts in employment trends resulting from this technological revolution.



Students at the South Carolina robotics center become acquainted with their new partner on the production line. Officials hope this program will give the State an edge in attracting new industry.

Training Workers for Robots

Training workers to work with robots on the factory floor may not solve the larger problems created by the new technology, but it is clearly the most immediate task facing society. Robotics itself creates a skill shift on the production line. Failure to meet this shift with properly trained workers could seriously impede introduction of the technology.

Robotics and other advanced technologies generally will cause skills to shift upward, since by design they usually replace unskilled and semiskilled tasks. Manual labor jobs, such as welding and assembly, will become increasingly scarce as more sophisticated, sensory-capable robots are developed.

Most new jobs created by robotics will require a variety of technical skills not needed for today's jobs. This skill shift may change the definition of the factory worker from the traditional blue-collar worker to a white-collar technician. Preliminary

results of a study on robotics' effects in automobile plants being conducted for the State of Michigan show significant movement of factory jobs from production line to professional categories.¹

At present, there are many barriers impeding the development of vocational education programs to train these technicians. The training equipment remains expensive, although the cost of a robot is dropping and new training robots have been developed. Qualified teachers are scarce since industry can offer higher salaries for people knowledgeable about the technology. The high risk associated with creating a program dealing with revolutionary technology and unknown demand may also deter some institutions, especially when scarce resources in an era of fiscal austerity may mean that existing programs have to be cut to make way for this new training.

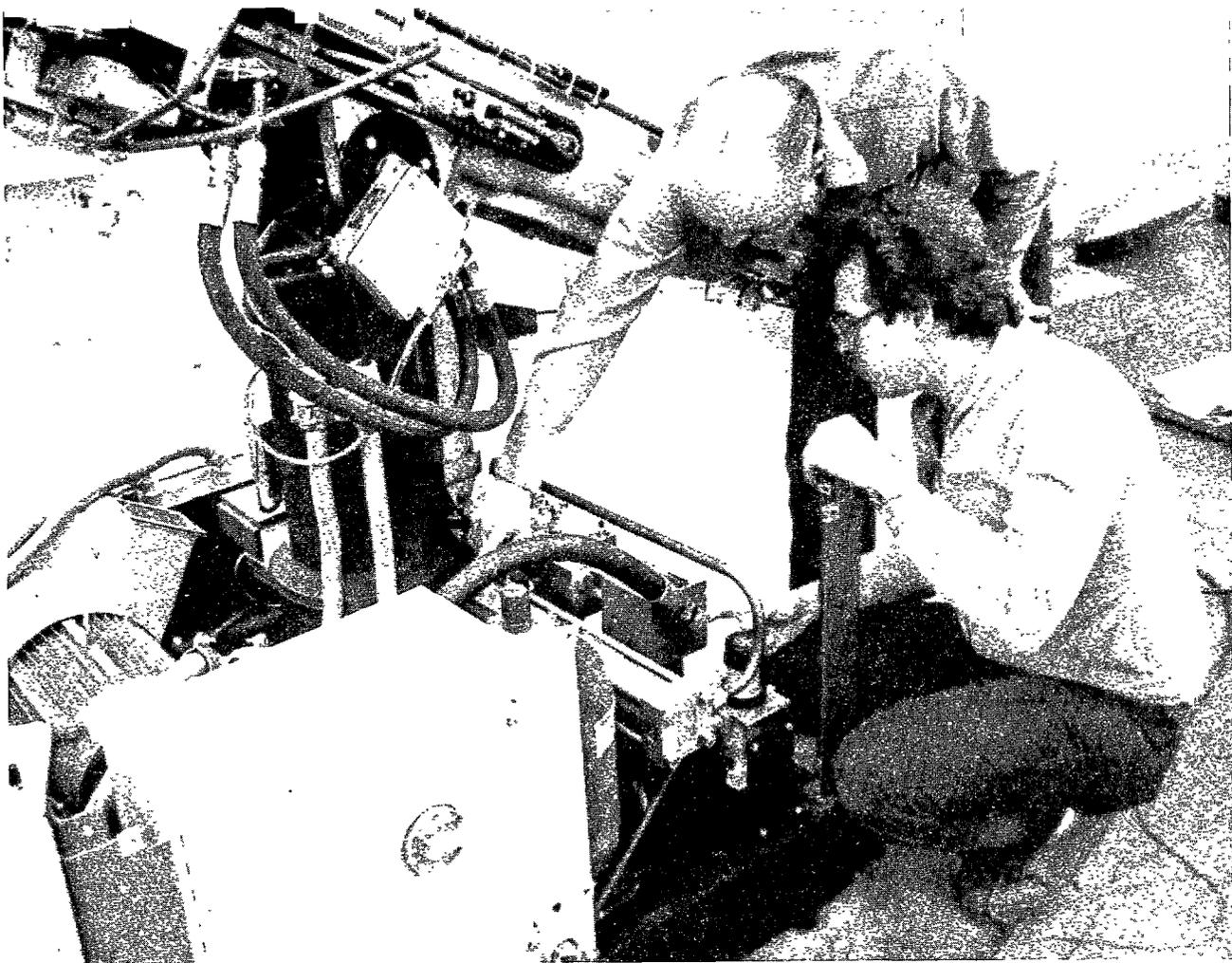
One thing, however, remains certain. The States and institutions which are developing robotics training programs feel they will have a decided edge in attracting high-tech

industries to their areas of the country. The South Carolina State Board of Technical and Comprehensive Education has created a robotics resource center as part of its Design for the Eighties program. South Carolina established this program as its response to the impending technological revolution. Similarly, Michigan is creating a program to attract high technology businesses, including robotics manufacturers. Workers trained in robotics are essential to Michigan's plan.

Future Jobs May Be Outside the Manufacturing Sector

Although these educational efforts are important, they do not address the larger problems which may result from introducing the range of technologies which compose the computer-aided manufacturing sys-

¹Presentation by John M. Koval, Staff Economist, Office of the Governor of Michigan, before the Robotics Roundtable, Department of Education, August 19, 1982



Robotics students examine the hydraulic system in a Unimate 2000 robot. (Photo by Kevin A. Rourke, Downriver Community Conference)

tem. Widespread introduction of these systems may create a massive job shift between economic sectors. This movement could create enormous job dislocation for workers and would require major changes in vocational education programs.

Automated manufacturing technology probably will not create as many manufacturing jobs as it destroys. Fewer workers on the production line is a basic goal of the technology. Robotics technicians and other workers will be needed to maintain and operate the machinery, but not in a one-to-one ratio with the production workers it will replace. Many futurists predict the factory of the future will employ only a few workers where hundreds were previously needed.

Some observers, including policy-makers in Michigan, point to the potential for creating a new industry to construct the robotics technology itself. However, this new industry would be highly vulnerable to the very technology it will produce. The ability of the robotics construction industry to take up the employment slack caused by the automation of

traditionally labor-intensive industries is doubtful. In addition, countries such as Japan are moving aggressively to capture the high technology construction market, and it is uncertain whether the United States will be able to retain these jobs domestically.²

The manufacturing sector's share

of total employment in the United States is already shrinking. In 1959, that figure stood at 24.1 percent. By 1979, it had declined to 20.6 percent. (See table 1.) Some experts predict

²"Is Talk of High Tech Jobs More Political Than Real?" *New York Times*, October 24, 1982

Table 1

Employment by Major Sector, 1959-1979

Industry Sector	Percent Distribution	
	1959	1979
Total employment	100.0	100.0
General government	14.1	15.9
Agriculture	7.8	2.7
Mining	.9	.7
Construction	5.4	5.8
Manufacturing	24.1	20.6
Transportation, communications, and public utilities	6.1	5.3
Wholesale and retail trade	18.8	21.5
Finance, insurance, and real estate	4.1	5.3
Other services	13.6	19.4
Government enterprises	1.4	1.4
Private households	3.7	1.7

Source: Bureau of Labor Statistics

this share could drop to 10 percent or less by the end of the century. If this shift does occur, other sectors would have to account for a greater portion of total employment. Yet other sectors of the economy which have provided job growth in the past may be unable to absorb more workers during the next two decades. Ironically, the same technology which makes computer-aided manufacturing possible—microelectronics—also creates new opportunities for automation in the service sector, thereby raising the potential for further job displacement.³

General Economic Conditions Complicate the Problem

The impact of automation on the work force cannot be separated from the overall health of the economy. The current recession has slowed new equipment orders and thus may retard the introduction of advanced technologies. However, the recession has also resulted in record unemployment rates. Many jobs lost to the recession may never be recreated as labor-intensive industries fail to regain their earlier levels of production. Assistant Secretary of Commerce Robert Dederick testified recently that the automobile industry alone will permanently lose 500,000 jobs by 1985.⁴ The introduction of automation at a time of declining market share internationally may prove to be a double blow to automobile assembly workers.

Challenge for the Educational System

As the parameters of the impact of this new technology become apparent, so do the challenges facing those who must prepare the work force. The skills associated with programmable automation require new, highly technical training programs. However, these new programs may not need to train as many people as traditional vocational programs, such as welding or drafting. Thus, the vocational education system will have to provide very expensive training for a relatively small number of students. At the same time, the vocational education system will be confronted

with the task of providing trainees for the nonmanufacturing sectors, many of which will also feel the effects of microelectronics.

Educators will have to reexamine the vocational education system not only to decide where to place future emphasis, but also to prevent students from training for occupations which could soon be obsolete. And reexamination must extend beyond vocational training. Secondary educators also must evaluate the adequacy of existing mathematics and science courses as these disciplines become prerequisites for obtaining highly skilled technical jobs in automated technology industries.⁵

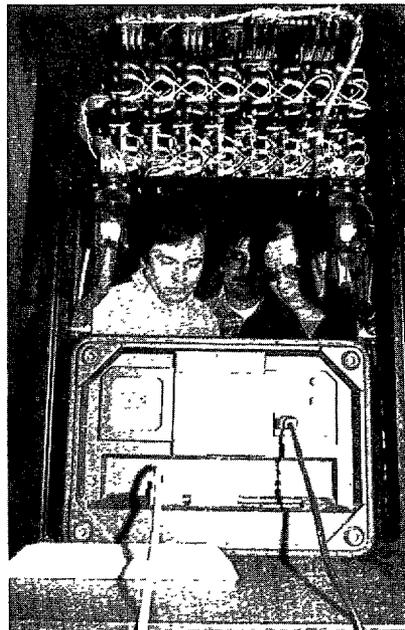
Displaced Workers Have Unique Problems

Workers displaced by the new automation face problems different from those of a generation of young people just beginning training. These workers will need retraining, but it is unclear whether employment opportunities will exist. The new technology may not create enough new jobs to absorb the workers it displaces. Many of these workers may not possess the technical background necessary to move into the jobs which are created. Furthermore, many

workers with families to feed and mortgages to pay will not be able to spend 2 years in a traditional training program.

Displaced workers also could have age and mobility problems. Older workers may be harder to retrain. They are also more likely to have familial and economic ties to geographic locations. Many of the new jobs created in the future may not be in the industrial heartland of the Northwest and Midwest, but rather in the Sun Belt States of the South and West. Many older workers simply may not be able to face the uprooting the new jobs would require.

A Comprehensive Employment and Training Act (CETA) demonstration project sponsored by the Downriver Community Conference in Michigan is trying to solve some of these problems. The project offers training and placement assistance to workers laid off because of increasing import sales and the recession. During the past year, the project included a robotics training program which demonstrated one role for voc-ed institutions in retraining displaced workers. A 2-year community college course was condensed to 36 weeks as workers were retrained to build and service robots. At the completion of the training program, CETA placement services and industry contacts were used to find the workers new jobs.⁶



Unemployed Michigan workers learn new skills in a robotics program (Photo by Kevin A. Rourke, Downriver Community Conference)

³Colin Norman, *Microelectronics at Work Productivity and Jobs in the World Economy*, Worldwatch Paper 39, October 1980, p. 35

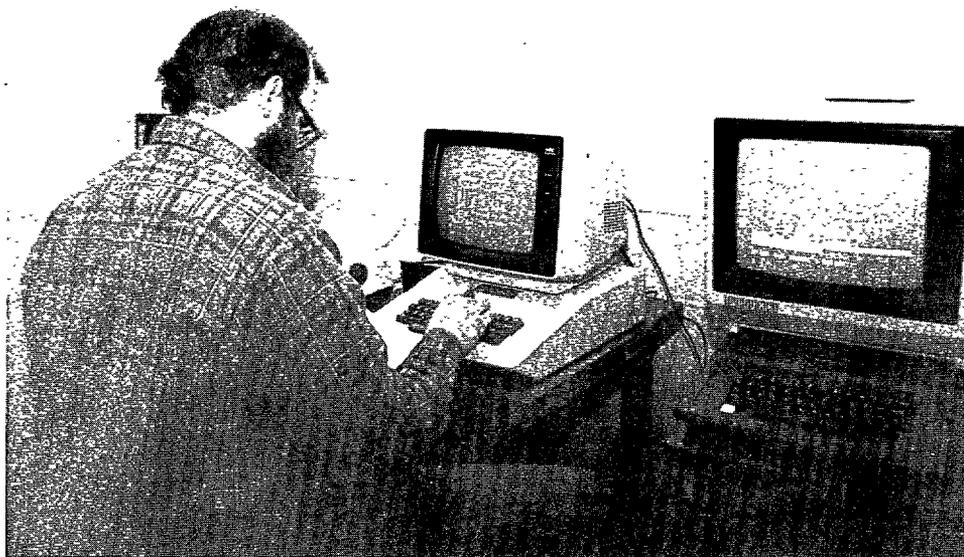
⁴Statement of Robert G Dederick, Assistant Secretary for Economic Affairs, U.S. Department of Commerce, before the Subcommittee on Employment and Productivity of the Senate Committee on Labor and Human Resources, January 12, 1982

⁵Stanley Pogrow, "On Technological Relevance and the Survival of U.S. Public Schools," *Phi Delta Kappan*, May 1982, pp 610-611

⁶Statement of Raymond Uhalde, Office of the Assistant Secretary for Planning, Evaluation and Research, U.S. Department of Labor, before the Robotics Roundtable, Department of Education, August 19, 1982

Lack of Information Is the Largest Problem

Perhaps the greatest impediment to preparing for the robotics revolution is the lack of detailed information about how this new automation affects skills and job distribution. A 1981 study by Carnegie-Mellon University sought to identify tasks and occupations vulnerable to robotics. (See table 2.) Only in the past year, however, have plant-level studies been initiated to corroborate various theories on the effect of automation on job displacement. And little research has been conducted to determine at what rate



A student learns to operate and program a computer which controls a small training robot. (Photo by Kevin A. Rourke, Downriver Community Conference)

Table 2

Prime Operative Tasks for Robots

Occupational Title	Percent of Tasks Performed by	
	Level I robots ^a	Level II robots ^b
Production Painters	44	66
Welder/Flamecutters	27	49
Machine Tool Operators	20	50
Electroplaters	20	55
Heat Treaters	10	46
Packagers	16	41
Inspectors	13	35
File/Grind/Buffers	20	35
Assemblers	10	30

^aLevel I robots have no sensory input.

^bLevel II robots have sensory capabilities, such as rudimentary vision and touch.

Source *The Impacts of Robotics on the Workforce and Workplace*, Department of Engineering and Public Policy, and School of Urban and Public Affairs, Carnegie-Mellon University, 1981, p. 99.

being trained for obsolete occupations. For example, students training today for jobs as welders or drafters may soon find themselves replaced by robots and computer-aided design techniques. Second, students may be properly trained for new manufacturing occupations but in numbers that far exceed the number of jobs the new technology will create. And, finally, there is the potential for an increase in the number of people who have none of the skills in demand. Would-be workers without skills, or with the wrong skills, will have no place to start in the job hierarchy. This condition is already becoming a problem and will only grow in magnitude unless these people can be channeled into training programs offering appropriate skills.

The Federal Role: Coordinating Future Policy

The Federal role in future vocational training has been the subject of intense debate, but policy inconsistencies continue. For example, federally sponsored research may hasten the development of robots with sensory capabilities, but little Federal effort has been devoted to determining the social impacts of these machines. Existing tax policies encourage industry to invest in capital equipment but provide little incentive to invest in training workers.

More than any other institution,

See *ROBOTICS*, p. 53

this displacement will occur.

Unfortunately, without information on the new automation's potential for skill change, educators and social planners cannot properly design programs to handle future educational demands.

Consequences of Not Being Prepared

In human terms, the possible consequences of not preparing for future skill shifts range from a few thousand workers being dislocated to a dramatic increase in the number of unemployable people in the work force.

No one disputes that computer-aided manufacturing will displace workers. The real question is whether these workers will become permanently unemployed. Traditionally, retraining has not been the responsibility of vocational education institutions, but certainly they could play a critical role in providing the work force with new skills. However, these institutions can fulfill this role only if their curricula are expanded to meet this new demand.

Failure to close the gap between the latest technological demands and the vocational curricula offered could lead to several serious problems. First, students could end up



Roger L. Sperry

Mr. Sperry heads the General Government Division's General Management Studies Group. Before that, he served as Special Assistant to the Comptroller General, leading a project which produced *GAO 1966-1981: An Administrative History*. He joined GAO's Civil Division in 1963 and has served with the Joint Committee on Atomic Energy and in the Office of Congressional Relations. Mr. Sperry holds a bachelor's degree in accounting from the University of New Mexico and a master's degree in public administration from Harvard University.

Auditing, Evaluation, and Management Improvement – The Canadian Experience

Since 1981, GAO has been experimenting with ways to study broad organization and management issues. These studies have been aimed at answering one question: how well or poorly is an agency being managed?

Three GAO divisions have undertaken studies at several Federal agencies, including the Department of Housing and Urban Development (HUD) and the Federal Emergency Management Agency (FEMA). The General Government Division established a separate unit—the General Management Studies Group (GMS)—to develop expertise in making broad-based management assessments and to assess the extent to which the Office of Management and Budget and other central management agencies provide the guidance and support needed to ensure that Government programs are effectively managed.

While GAO has broadened its perspective substantially in recent years, its reviews have focused generally on either programmatic issues or individual administrative activities, such as budgeting, personnel, or procurement. The perspective of the total organization responsible for a given set of programs was missing, however, as was the sense of how activities, such as planning, budget, and evaluation fit together to support an entire organization or management system.

Early in 1982, Comptroller General Charles A. Bowsler indicated that finding ways to conduct these broad-based management studies would receive high priority. While testifying on GAO's fiscal year 1983 appropriations, he announced this effort as one of three major new initiatives.

Around that time, he traveled to Canada to look at how our northern neighbors performed work similar to

GAO's. There he was briefed on two activities relevant to the management studies initiative:

- the comprehensive audits conducted by the Auditor General's office and
- the IMPAC program, a major management improvement effort carried out jointly by the Office of the Comptroller General and the individual executive departments in the Canadian government.

When he returned, he asked Bill Anderson, director of the General Government Division, and me to make a follow-up visit, an assignment we were more than pleased to accept. As it turned out, we made the trip in August, a delightful month in Ottawa and one of the muggiest in Washington.

Our 3-day trip took us to several offices in the Canadian Government, including the Auditor General, the Comptroller General, two executive departments, and the Bureau of Management Consulting in their Department of Supplies and Services. We wanted to find out not only how the management improvement efforts were being implemented and assessed, but also how they were being received in the agencies themselves.

We conducted our interviews with an awareness that there were significant differences between the Canadian system and our own. For example:

- Canada functions under a parliamentary system. Funding and policy decisions are made almost entirely in the executive branch by the Prime Minister and his cabinet.
- Canada has only about one-tenth the U.S. population, and its central government is proportionately smaller than ours.
- Canada has much clearer separation in functions between the central and provincial governments than

exists between our own Federal and State governments.

Policy and Expenditure Management

The concept we found most striking about the Canadian approach to governing was a mechanism called the Policy and Expenditure Management System (PEMS). Introduced about 3 years ago, PEMS is a government-wide planning and management scheme designed to ensure greater control over the management of policies and expenditures. Like our own recent history, Canada's 1960's and early 1970's were marked by significant policy and program expansion as well as great organizational growth and change in government. By the mid-1970's, it became clear that the central government had to follow a policy of restraint to control escalating inflation and the growing gap between expenditures and revenues.

PEMS is a conscious attempt to alter the decisionmaking process in a way which more clearly delineates the government's objectives within the context of available resources. A major effort was made to bring together policy decisions and resource allocations in a longer term perspective. The objective is to ensure that policy and program decisions are made with full knowledge of cost and expenditure limits and that, in turn, expenditure decisions are made with an understanding of the government's policies and priorities.

Figure 1 summarizes Canada's policy and expenditure planning cycle. Two significant features in the new system are

- long-term fiscal plan encompassing government revenues and expenditures over a 5-year period, i.e., setting out the overall financial constraints within which policy choices must be considered, and
- expenditure limits—resource "envelopes"—for policy sectors, which are related to the government priorities, with a particular cabinet committee assigned the responsibility for managing each policy sector's resources.

Figure 2 provides a list of cabinet

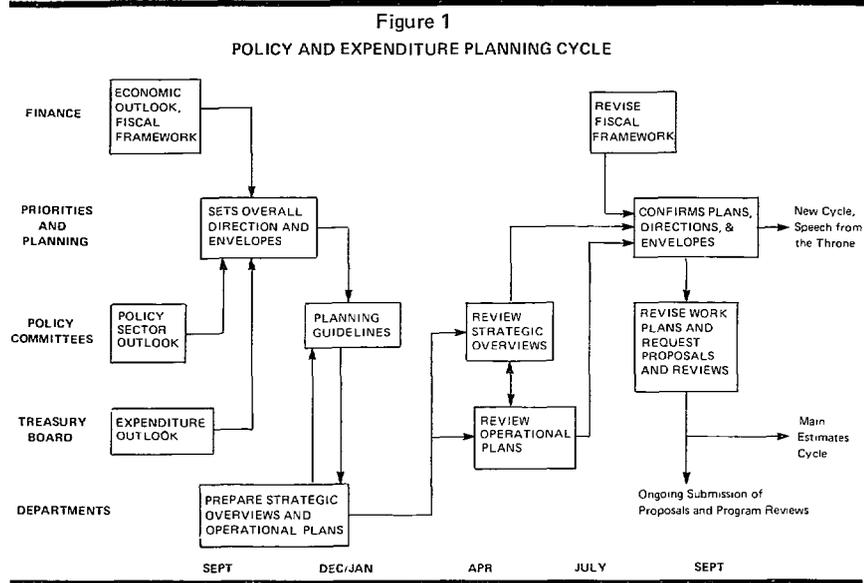


Figure 2
Cabinet Committees and Resource Envelopes

Cabinet Committee	Resource Envelope
Priorities and Planning	1. Fiscal arrangements
Economic Development	2. Public debt
Social Development	3. Economic development
Foreign and Defense Policy	4. Energy
Government Operations	5. Social affairs
	6. Justice and legal
	7. External affairs and aid
	8. Defense
	9. Parliament
	10. Services to government

committees, policy sectors, and resource envelopes. Understanding this new system required us to absorb a lot of new terminology and comprehend its functioning in an environment significantly different from our own. In summary, it seemed that the Canadians have taken seriously the need for long-term planning by matching policy decisions to resource allocations and establishing a structure which permits government initiatives to be systematically implemented. This system provides the framework for planning, managing, and evaluating government programs.

The Auditor General's Role

The watchdog over all this activity is Canada's Office of the Auditor General, which is much like our own GAO. This office has existed for a little more than 100 years, but only recently has it moved beyond the traditional financial and compliance auditing GAO performed in its early years. Armed with a new charter (the Auditor General Act of 1977) and a staff of more than 500 employees, the incumbent Auditor General, Kenneth Dye, and his predecessor, James Macdonell, have leap-frogged

Figure 3
SUMMARY COMPARISON

	<u>GAO</u>	<u>OAG</u>
1. Title	Comptroller General of the United States.	Auditor General of Canada.
2. Term	15 years	10 years
3. Office	United States General Accounting Office (GAO)	Office of the Auditor General of Canada (OAG)
4. Mandate – Legislation	The Budget and Accounting Act, 1921, as amended. Government Corporation Control Act, as amended. Legislative Reorganization Act of 1946. Accounting and Auditing Act of 1950. Legislative Reorganization Act of 1970, as amended by Public Law 93-344, July 12, 1974 (88 Stat. 297). Budget and Impoundment Control Act of 1974. The General Accounting Office Act of 1974. The General Accounting Office Act of 1980.	The Auditor General Act, 1977. The Financial Administration Act, 1970, as amended.
5. Scope of Work	Auditing and Evaluation (Economy, Efficiency and Effectiveness). Accounting Systems. Legal Services Claims Settlement. 35% initiated by Congressional Request; 65% by GAO.	Auditing (Economy, Efficiency and Procedures for Effectiveness, Attest and Authority). Virtually all work initiated by Office.
6. Reporting	To the Congress, Committees, and Members of Congress.	To House of Commons.
7. Organization	Audit Operations by Issue Areas and Lead Divisions.	Audit Operations by Government Expenditure Envelopes.
8. Staffing – Professional – Other	4,130 – 81% 970 – 19% 5,100 at September 1981	386 – 76% 125 – 24% 511 at February 1982
9. Offices	Headquarters – Washington, D.C. 15 Regional Offices and 3 Overseas.	Headquarters – Ottawa. 6 Regional Offices.
10. Standards and Methodology	“Standards for Audit of Governmental Organizations, Programs, Activities, and Functions.” General Policy Manual. Project Manual. Report Manual.	Comprehensive Auditing Manual. Audit Guides. Accounting and Auditing Bulletins.
11. Number of Reports	Approx. 1,000 per year plus an Annual Report – Summary.	One Annual Report and opinion on Public Accounts and opinion on Financial Statements of Crown corporations.

GAO's evolution toward program evaluation by conducting several ambitious governmentwide studies and adopting a comprehensive audit approach to assessing departmental management systems. Figure 3 provides a summary comparison between the Auditor General's office and GAO.

Traditionally, the Auditor General's office examined departmental performance and expenditure control by focusing on isolated examples of improprieties discovered during field audits of individual transactions. To provide Parliament with a better understanding of the underlying problems and possible remedies, the Auditor General adopted a more comprehensive systems-based approach, first through a series of governmentwide special studies, then by means of departmentwide comprehensive audits performed on a cyclical basis. These departmentwide audits concentrated initially on five interrelated facets: financial

controls, reporting to Parliament, attest and authority (financial authority for disbursements and opinion on the financial statements), management controls, and electronic data processing controls. The management controls facet focused on the "systems, policies and procedures for evaluating and reporting on the effectiveness of programs and for promoting the economic acquisition and efficient use of resources," the so-called value-for-money concept.

To conduct these comprehensive audits, teams were assembled from the audit staff, experts were housed in a separate "Control Evaluations Branch," and outside consultants were hired as needed. Each team was headed by an audit principal and monitored by an audit advisory committee consisting of top management officials and several outside experts. The focus was on a department's program delivery and management systems (internal

audit, planning, financial controls), plus the support systems for implementing programs. The auditors determined whether a department's managers established clear objectives and if they had reasonable procedures to measure and report on their achievement. They assessed whether appropriate procedures were in place to plan, direct, and control a department's operations. The theory behind this approach is that, if the systems were in place and working, then there was a good possibility the organization was being managed efficiently and effectively.

The Auditor General issues only one report a year to Parliament. It contains the results of several of these governmentwide studies and comprehensive audits as well as chapters on the office's other major activities.

When we visited Ottawa, the Auditor General's office was just completing its first 5-year cycle of

comprehensive audits at the Canadian departments and agencies and was about to launch another. We learned that they were rethinking their initial approach. Essentially, the first round had focused on departmental management controls and what additional controls were needed to ensure "value for money." One official told us that the departments were "amused" by this approach and were beginning to wonder just how much overhead they needed to get on with their jobs. Managers questioned whether the Auditor General's rationalistic approach was consistent with political reality and the day-to-day demands confronting managers.

Ironically, the office seems to be heading toward a stronger emphasis on program accomplishment and systems delivery just at the time when GAO is experimenting with departmentwide management audits. Auditor General staffs may be asking whether the described services are actually being delivered and, if not, why not. Recognizing that there is, at best, a tenuous cause-and-effect relationship between management control procedures and effective service delivery, the auditors are now addressing what the systems are actually producing and how organization structure and systems can be assessed in this context.

We came away from these discussions with the feeling that the Auditor General's staff was quite proud of its accomplishments during the initial round of comprehensive audits. We also sensed their awareness that a more sophisticated approach which considered the daily realities of departmental management was needed to fully achieve the goal of helping to improve service delivery while ensuring that value for money was also achieved.

The Comptroller General and IMPAC

Our next stop was the Office of the Comptroller General, an agency in the Canadian government's executive branch established in 1978 to (1) oversee the quality and integrity of financial systems and related practices and (2) develop and maintain policies, procedures, and prac-

tices necessary to evaluate and report on the efficiency and effectiveness of government programs. Most of its efforts have been devoted to a major governmentwide program called IMPAC—Improvements in Management Practices and Control. The program is headed by Harry G. Rogers, former vice-president of operations for Xerox of Canada.

IMPAC was designed to identify the current state of management practices in Canadian departments and agencies, to support the development of departmental "action plans" for improving existing practices, and to implement these plans. By March 1982, about 50 action plans had been submitted and approved or were being developed. The Comptroller General reported that about 2,500 to 3,000 people were working on IMPAC projects with the total one-time cost over 5 years estimated at between \$200 and \$250 million (Canadian). OCG has less than 100 people working on this program, and most of the resources and funding are being furnished by the departments themselves.

To supplement departmental funding, a temporary fund was established under OCG control. This fund provided OCG an important stimulant for departmental action by enabling it to furnish "seed money" for management improvement projects.

In helping to perform the initial IMPAC surveys, assisting in developing departmental action plans, approving those plans, and assisting with their implementation, the most significant OCG role was to act as an agent for change. This role was fulfilled by OCG liaison officers who worked directly with departmental staffs in developing and implementing their action plans. Mr. Rogers described their role this way:

Liaison work is a blend of attitudes and practices necessary to achieve change cooperatively. It involves being pro-active and service-oriented with departments, including investing the time and effort required to understand departmental circumstances and to acquire the background necessary to give effective guidance and advice.

Based on our discussions with OCG officials, it became clear that the IMPAC project was a major undertaking that had no parallel in the U.S. Government either today or in the past. These were the key questions: How well was it working? How was it relevant to our management studies effort?

In testimony before a committee of Parliament in March 1982, Mr. Rogers said that IMPAC had produced "noticeable crystallization or clarification" of objectives in at least six departments, but there was less evidence of improved management information for better management control. He saw IMPAC as a long-term educational process that offered opportunity to achieve "a significant improvement in management practices that will endure."

The Auditor General had been monitoring IMPAC, and in an earlier report had noted the magnitude and complexity of the program, observing that many of the original surveys and action plans had required revision and rescheduling. Implementation of these plans was taking longer than expected, much longer in some cases. Major areas where there was progress slippage included planning, management information, and evaluation components.

OCG officials acknowledged that nearly all program schedules had slipped, and some improvement goals had been changed. However, they believed significant progress was being made, particularly where there were strong cooperative relationships between OCG and department personnel. One Assistant Comptroller General told us that the most successful management improvement projects were those involving identifiable cost savings. He also stressed the importance of the seed money in getting agency projects started. Another factor was the great respect within the Canadian government for Comptroller General Harry Rogers. Managers believed he understood their problems and wanted to help them. In addition, the Comptroller General sits on a board which annually rates the performance of every department's top career manager, the

See IMPROVEMENT, p. 54



Bob Minick

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A Model for the Systematic Internal Evaluation of Agencywide Human Resource Development and Training

Over the past several years, evaluators have devoted considerable thought to the emerging roles and relationships between themselves and program managers. In particular, they have focused on their shared concern for using evaluation information. Unfortunately, the connections between management decision-making and the domains of formal evaluation are not usually well defined in the minds of those directly involved. Though evidence suggests that formalizing evaluation as part of the system of management information resources has potential, guidance is needed to realize this potential. This article presents a model for considering the role of internal evaluation in the planning and implementation of agencywide human resource development and training.

Integrating Evaluation and Decisionmaking through a Systematic Approach to Internal Evaluation

To develop a working concept of internal evaluation, we must consider the kind of information needs which can be addressed with evaluation methods and information systems. Although the purposes of internal evaluation can be quite varied, everyone will agree that the aims stem from the information

needs of key management decision-makers. If we consider the common demands of managers, three types of information needs seem to emerge. The first type, which we will call the Anticipatory Evaluation, judges the value and likely success of programs or actions being planned. The second type, the Effort and Effects Evaluation, offers evidence of the quality of program implementation, particularly evidence of program effectiveness. Finally, the third type, the Organization Impact Evaluation, looks at the relatively enduring organizationwide impacts of efforts within broad functional areas.

Examples of the objectives encompassed by these three types of internal evaluation are presented in figure 1. They were taken from the model prepared by GAO's Office of Organization and Human Development (OOHD) for the evaluation of in-house human resource management and development (HRM/D) efforts. As these objectives illustrate, a comprehensive internal evaluation system would require a great deal of planning and organization. From a management perspective, to keep such a comprehensive system cohesive, all of the organizational decisionmaking processes, including the evaluation components, would have to be integrated. Ideally, integration would occur (1) within the organizational decisionmaking cycle, (2) within the management decisionmaking structure, and (3) through the role of the internal evaluator.

Figure 1

Evaluation Objectives—GAO (OOHD)
Integrated HRM/D Evaluation Model**A. Anticipatory Evaluation (Planning phase evaluations)**
Objectives:

1. *Context Evaluation.* Purpose: "to provide a rationale for the determination of objectives." (Stufflebeam, 1973, p. 136)
 - a) To decide if functional and/or program goals address relevant human resource development needs.
 - b) To determine whether functional or program goals reflect the priorities set by policymakers (strategic rules).
2. *Evaluability Assessment.* Purpose: "(to test) the extent to which managers and policymakers have defined measurable program objectives and defined specific uses for information on program performance." (Wholey, 1979, p. 13)
 - a) To determine the degree of ambiguity in human resource development program objectives and implementation designs.
 - b) To assess the plausibility and utility of selected objectives and approaches.
 - c) To identify program options and alternative evaluation designs.
3. *Limited Implementation Evaluation.* Purpose: to provide preliminary evaluation of program performance based on model runs or program pilots.
 - a) To identify problem areas in policy or program implementation.
 - b) To test alternative methods for delivering programs.
 - c) To test the utility and reliability of alternative evaluation designs and instruments.

B. Effort and Effects Evaluation (Implementation phase evaluations)**Objectives:**

1. *Program Effort Evaluation (Program Management).* Purpose: to determine if the program/project was implemented according to the levels agreed on in the planning phase.
 - a) "To determine if specified target groups or organizational domains were appropriately included." (Bernstein and Freeman, 1975)
 - b) "To determine if the various practices and intervention efforts (were) undertaken as specified in the program designs or derived from principles explicated in the design." (Bernstein and Freeman, 1975, p. 19)
 - c) To obtain evidence of potential problems with, or alternatives to current practices, including unintended consequences of program/project performance, and cost-saving measures.
2. *Program Effect Evaluation.* Purpose: to evaluate the extent to which enabling objectives and the

overall goals of the human resource development program or project have been achieved.

- a) To assess the level of program/project goal attainment according to agreed criteria or standards.
 - b) To assess the extent to which intermediate or enabling objectives were achieved. (See Kirkpatrick, 1975, for relevant examples of measurable human resource development objectives.)
 - c) To determine effects of variations in implementation program/project goal attainment.
3. *Administrative Evaluation.* (Aggregated Assessment of Functional Human Resource Development Efforts) Purpose: to assess the relative progress among functional lines of human resource development effort using aggregated program evaluation data, cost estimates, quality assurance, and other management data. (See Attkisson, et al., 1978; Weinstein, 1975.)
 - a) To assess the adequacy and reliability of administrative data sources.
 - b) To array aggregated estimates of current efficiency and/or cost effectiveness (goal attainment/cost) among human resource development lines of effort using appropriate auditing models. (See Kearsley and Compton, 1981; see also Attkisson, et al., 1978, especially ch. 13, for human resource development examples.)
 - c) To estimate the degree of policy and/or quality assurance (standards) compliance within and among human resource development programs. (See Attkisson, et al., 1978, especially ch. 14, for examples.)

C. Organizational Impacts Evaluation**Objectives:**

1. *Predictive Evaluation.* Purpose: to estimate current and projected contribution of human resource development policies and efforts to organization effectiveness.
 Objectives:
 - a) To test alternative causal models for explaining human resource development contributions to organizational effectiveness.
 - b) To project the generalizability and adaptability of trial human resource development programs/projects for wider organizational application. ("Prognosticative Evaluation"—Snyder, et al., 1981)
 - c) To audit evaluations in order to summarize major learnings about the organizational effectiveness. (See *Standards for Program Evaluation: Exposure Draft*, Evaluation Research Society, 1980, pp. 7-8.)

The Organizational Decisionmaking Cycle

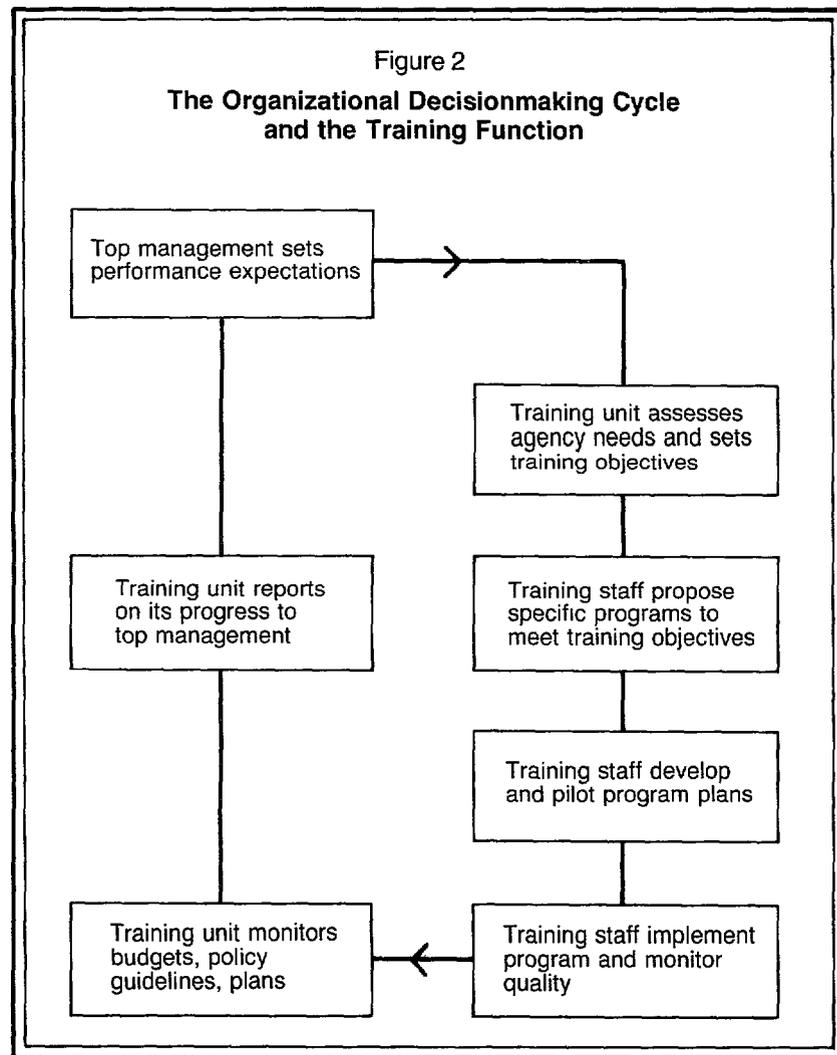
The organizational decisionmaking cycle, the most explicit integration of internal evaluation and management decisionmaking, is a succession of decisions beginning with the development of strategic plans through the articulation of operational plans to the actual implementation of lines of effort, programs, and projects. Within this cycle, evaluation, either formal or informal, is used to ensure the congruence of decisionmaking. Figure 2 shows how this organizational decisionmaking cycle would play out within a common functional area, personnel training and development.

The ideal planning process for an agency's training effort would be based on a well-defined set of organizational needs and expectations. The GAO-OOHD evaluation model (figure 1—Anticipatory Evaluation) helps training managers translate those needs and expectations into training objectives by providing them the means to assess their strategies in light of agency goals and objectives. The methods for such assessment range from very informal deductive procedures to sophisticated decision research strategies.

As part of this Anticipatory Evaluation, training managers can apply two other assessments. First, they can determine program logic and the extent to which measurable results are likely to occur through the processes of "Evaluability Assessment." And second, they can test the program design through pilot runs of the program.

Once programs have been implemented, decisions regarding ongoing adjustments to training programs would be aided by the kinds of objectives cited for the Effort and Effects Evaluation. Strategic concerns of both top agency management and training managers are addressed in the Organizational Impacts Evaluation.

Due to the recent emphasis on risk analysis and decision modeling, the contribution of formal evaluation procedures during the planning phases of the organizational decisionmaking cycle are just



now gaining serious attention. The GAO-OOHD model makes explicit some of the decision maintenance objectives of such Anticipatory Evaluations. These objectives rely on comparisons of an implicit nature; e.g., comparing goals to internally defined criteria for acceptance. Very often, the value of Anticipatory Evaluation lies in making explicit the criteria for deciding.

The traditional roles of program evaluation are encompassed in the objectives of the Effort and Effects Evaluation and, to some extent, in the Organizational Impacts Evaluation. However, it is important to note a few ways in which internal evaluation demands imply unique objectives and information products.

The implementation of organizational strategy and policy occurs at several levels simultaneously. The

structural implications of organizational decisionmaking are discussed in the next section. For now, let us just say that administrative hierarchies create special demands for internal evaluation. The GAO-OOHD model designates Administrative Evaluation objectives to assist decisionmakers regarding resource distribution and, in some instances, to provide data which will help decisionmakers weed out failing efforts. This program monitoring function of evaluation in organizations imposes a demand for information systems which cuts across program units and accumulates data in an ongoing fashion.

The most significant role for internal evaluation is often described as the evaluation of organizational impact. After all, when the time comes to make a decision regarding

future commitments to action, the decisionmaker wants to know what worked for the organization, what did not work, and what will work. In the actual implementation of the GAO-OOHD model, each human resources program or project director would be able to provide some evidence of program effectiveness on the basis of the Effort and Effects Evaluation for his or her own area of responsibility.

It is not acceptable, given current theories of organizational effectiveness, to assume that organizational impact could be determined by summing up all these various individual evaluations. The evaluation of organizational impact, rather, is inextricably tied to the organization's theory of effectiveness. Therefore, the GAO-OOHD model gears the objectives of the Organizational Impacts Evaluation toward the measurement and projection of underlying assumptions about successful human resource management and development.

Internal Evaluation and the Management Structure

For an internal evaluation system to be useful and valid, it must fit the organizational context. Different levels of decisionmakers in the organization require different kinds of information. Top-level agency leadership requires broad-based and "future-oriented" data on organizational capabilities. Division- or office-level management probably requires a combination of administrative and program effectiveness data. Program directors and project leaders want to know the specific results of their efforts and possible ways to improve performance. The keys to implementing a comprehensive internal evaluation are the processes used for determining information needs and the system for gathering, processing, and disseminating the data.

The effectiveness of a systematic approach to internal evaluation requires that information be useful to the various and key categories of decisionmakers. Generally, internal evaluation addresses the requirements of three types of decisionmakers:

1. Policymakers—those who

Figure 3
**Structural Requirements of Internal Evaluation
Focusing on the Organizational Training Function**

Management Role Group	Top Agency Management	HRM/HRD Administrators	Program Training Managers
Primary Decision Responsibility	Strategic	Tactical	Operational
Key Generic HRD Decisions	Outlining agency goals and needs for resources Defining basic concepts in the relationships of the work force directions of the agency.	Ranking HRD efforts according to agency objectives and goals. Allocating HRD resources to HRD objectives. Applying criteria to quality control.	Selecting "best" means to meet HRD goals. Allocating program resources to lines of effort. Adjusting resources and means to meet goals
Primary Evaluation Demand	HRD impacts on agency objectives.	Economy in allocations of HRD resources. Efficiency of HRD efforts. Compliance of HRM practices and/or efforts with judicial, legislative, and internal policy/quality standards	Effectiveness of program operations in meeting program goals Best approach and process analysis
Primary Internal Evaluation Focus	1. Anticipatory Evaluation (Context Evaluation) 2. Organizational Impacts Evaluation.	1. Anticipatory Evaluation (Context Evaluation and Evaluability Assessment) 2. Effort and Effects Evaluation (Administrative).	1. Anticipatory Evaluation (Limited Implementation Evaluation). 2. Efforts and Effects Evaluation

decide where the organization is going (strategy planning) and the rules for getting there (policy).

2. Policy Administrators—those who structure the organization's response to strategic goals and administer the organizational mechanisms which maintain the desired response.

3. Project/Program Managers—those who made organizational objectives operable and manage production efforts.

Figure 3 provides a simplified picture of the structure of managerial evaluation demand.

Without going into detail concerning the match between the levels of managers and the types of evalua-

tion information which are likely to be most useful, the point which is most important in implementing this concept of internal evaluation is the need to coordinate the demands of various decisionmaker audiences. Each manager has some unique information needs. But since managers often occupy several roles in the decisionmaking hierarchy, other information needs overlap. In addition, managers are faced with both routine and *ad hoc* information demands. Therefore, to coordinate these diversified demands, a management information system must be able to handle data which is (a) program or activity specific, (b) comparable and collapsible

across program areas, (c) summable over time, and (d) accessible in evaluative formats and arrays. With respect to the latter point, management information of an evaluative nature should include both indicators of the current conditions and indicators of the desired state which are criteria for judging the meaning of the current picture.

The Role of the Internal Evaluator

It is difficult to discuss the concept of internal evaluation without addressing the role of the internal evaluator. Granted, not all the evaluation functions discussed here require a specialist. However, it's hard to conceive of a comprehensive function without a specially trained person(s) to implement the requisite systems and research projects.

The relationship between the internal evaluator and decision-makers distinguish the internal evaluator from the prototype external program evaluator. The essential characteristics of the internal evaluator's role are revealed in the following quote (from the highly respected volume by Attkisson, *et al.* (1978, p. 470)).

There seems to be a growing consensus that evaluators make their most effective contribution when they are ongoing members of the decisionmaking team. . . . The need for ongoing, direct evaluator participation in all important administrative levels implies that program evaluation resources are needed at each major administrative level. . . . Much current evaluation effort is still focused on one-time summative evaluations. . . . This distribution of effort does not match our current understanding of how to maximize the impact of evaluation. Evaluators must be close enough to the decisionmaking process to group clearly the needs and problems of management. . . .

The role of internal evaluator demands not only technical skills and abilities, but, just as important, the ability to act as information manager. The internal evaluator must negotiate management demands for information and coordinate a system of response.

This requirement has many impli-

cations for traditional notions of evaluation research design. Internal evaluators cannot treat the use of information as something that occurs after the evaluation work is done. Given the nature of most important organizational decisions, internal evaluators should be able to anticipate the form and timing of information before asking a question. In other words, the internal evaluator should be an active participant in planning activities and have the ability to structure routine and exceptional information strategies.

In the final analysis, implementation of a systematic internal evaluation will be judged successful or unsuccessful on the basis of the amount of *useful* information produced. Fortunately, the most apparent solution to the problem of information overload or "informania" is simple. The more the evaluator knows about the nature of a manager's decision, the better able that evaluator is to tailor feedback. Similarly, the more the manager knows up front about the nature of possible evaluation feedback, the more that manager can aid the evaluation process.

The task of integrating evaluation into management decisionmaking processes requires a conscious and collaborating effort on the part of managers and evaluators. Managers are responsible for providing the type of information needed at the right time and in a useable format; the internal evaluators must demonstrate the usefulness of evaluation.

Summary

Because of the current emphasis on methods for improving management accountability and control in government and industry, the concept of internal evaluation is gaining popularity. But this concept requires clarification. The idea of using evaluation tools to improve management effectiveness is valuable, but the implications of the concept are uncertain.

In this paper, we have looked at the relationship between management decisionmaking and the concepts found in professional evaluation literature. On the basis of previous work in the area, we have presented a tentative model (figure 1) to capture

this integration. As we noted several times, the aims of internal evaluation require a sensitivity to the information demands of different management audiences. In turn, this requirement of responsiveness implies a systematic approach to the development of evaluation models and procedures.

Perhaps most important to the understanding of the concept of internal evaluation and to the development of a working model are the implications for managing information in a systematic approach to internal evaluation. The unique issues and problems identified in the discussion of these requirements have significant meaning for those who would assume the role of an internal evaluator.

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The following article was adapted from an address given by Mr. Bowsher to the American Institute of Certified Public Accountants' 95th Annual Meeting, held in October 1982 in Portland, Oregon

GAO and the Accounting Profession

Some of the important issues governments face in their attempts to improve financial management are challenging to the accounting profession. We in GAO have been involved in many efforts involving every aspect of government financial management: budgetary processes, accounting systems, financial reporting, and auditing. GAO believes more attention to the problems in each of these areas is urgently needed, especially in light of President Reagan's goal to pass more responsibility and authority to State and local governments through the New Federalism proposals and block grant legislation.

If government is to satisfy the public's expectation of greater accountability over public funds, especially with the shift in focus away from the Federal level, government financial management systems must be improved. The strong leadership and commitment of the accounting profession, along with the dedicated efforts of GAO, will be required if the improvements are to be made and if the public's demand for efficient government operations is to be met.

Status of Financial Management in Government Today

The Budgetary Process

The first process occurring in the government financial management cycle, and one in which improvements are critical, is the budgetary process. Combined Federal, State, and local budgets total nearly \$1 trillion a year, a level of funding that has severely strained existing budgetary processes.

At the Federal level, the budget process has become extremely complicated and cumbersome. It is beset with severe timing problems, duplication, and an alarming increase in using continuing resolutions to

finance Government operations. Even more disheartening are the delays in funding decisions, such as those which threatened to interrupt operations at the Department of Defense, the Internal Revenue Service, and even at GAO.

This state of affairs is in no small measure the result of our budget process, which requires 13 appropriation bills to be passed each year to fund Federal Government operations. When any of these bills does not pass, various Government agencies operate on what are termed continuing resolutions. Essentially, these resolutions permit agencies to continue spending at the prior year's spending levels, but even these resolutions may not be passed. In any case, using continuing resolutions is not an efficient way to run a country. For example, if the new fiscal year appropriation was to be increased or decreased, spending at a previous year's level distorts what the Congress intends with the new appropriation. Lately, it seems the Congress is delaying its vote on more and more funding decisions—either appropriation bills or continuing resolutions—until agencies are threatened with shut-downs, or, as happened in November 1981, until after some agencies actually do shut down. These delays not only affect the efficient and effective operation of Government programs, but also the financial markets and the economic stability of the country.

The Federal budget process was last examined comprehensively in 1967. Clearly, it is time for the Federal budget process to be overhauled. Such an effort requires creating a high-level budget study group or commission to act as a catalyst for badly needed changes in the Federal budgetary concepts and procedures.

Meanwhile, the Congress is considering changes in the Federal budget process. One of these changes is the establishment of a 2-year bud-

get cycle, which is a major provision of the proposed Budget Reform Act of 1982. In addition to this provision, the bill is designed to improve congressional control over the budget, streamline the requirements of the budget process, improve the legislative and budgetary process by providing additional time for oversight and other legislative activities, and provide stability and coherence for recipients of Federal funds. I recently testified before the Congress that enactment of this bill or some features of it will be an important first step toward bringing greater stability to our Government's activities, and thus to our economy.

By themselves, proposed changes to the Federal budgetary process can solve only some of the problems in Federal financial management. The other financial management processes and systems that support Federal policymaking—accounting and financial reporting, in particular—also need to be strengthened and integrated with the budgetary process to meet the needs of the Congress and the executive branch.

Integrating Budget Processes and Accounting Systems

Currently, decisionmakers in both the executive branch and the Congress have to cope with separate and sometimes uncoordinated budgeting and accounting systems. These systems badly need to be integrated. One problem with non-integrated systems is their inability to tie expenditures to specific areas of concern. Budgets usually address significant areas of concern to the public, such as military readiness. The Federal accounting systems, however, are designed to track expenditures by type rather than by area of concern, so a direct relationship between funds expended and areas of concern is usually not possible, and no assurance can be made that funds are expended as planned.

An excellent example of this inefficient relationship between funds expended and areas of concern is contained in GAO's recent report on how the \$72 billion increase between the fiscal 1980 and 1982 Defense budgets was spent. The

President requested the large increase, and the Congress passed it to improve military readiness, modernize the forces, and improve the quality of life for military personnel. GAO's examination at selected military bases showed that some of the readiness funds were used to buy and insert simulated redwood slats in a chain-link fence at one location and to build a new gatehouse, a visitors center, and a parking area at another. Obviously, the relationship between these expenses and military readiness is not apparent.

As that same report demonstrates, separate systems inhibit effective communication between the executive and legislative branches of Government. Integrated systems, however, can provide assurance that the budget is executed according to spending plans and that all funds are accounted for, including those provided to grantees. So, it is clear that the separate systems must be integrated, and I believe the accounting profession is in an excellent position to help.

Accounting Systems

In addition to the improvements needed in government budgetary processes and in integrating these processes with accounting systems, the accounting systems themselves—the second major area in the government financial management cycle—need to be improved. GAO is dedicated to improving the usefulness and the reliability of the information provided by Federal Government accounting systems.

GAO's reviews of accounting systems in operation have shown that many agencies maintain marginal systems which neither function the way they are intended nor provide financial managers with the information they need to control and account for activities. Why? Because many of these systems are poorly designed, improperly implemented, or contain inadequate internal controls.

GAO is required by law to review and approve the adequacy of Federal agencies' accounting systems. GAO is currently studying its accounting systems work to see how agencies can be better encouraged to seek review and approval and to operate

more effective and efficient accounting systems. GAO is consulting with top financial managers within the Government, the public accounting profession, and academia to learn how we can improve our accounting systems approach.

The 1929 stock market crash was the catalyst that forced improved accounting and financial reporting in the private sector. The 1975 New York City fiscal crisis did the same for the government sector and has prompted many State and local governments to make notable progress in developing sound accounting systems. Several States now have accounting systems that, in whole or in part, produce reports in accordance with generally accepted accounting principles (GAAP). Also, a number of other States, as well as local governments, such as New York City and the Nation's Capital, have invested a great deal of time and money improving their accounting systems. This area of accounting systems work presents one of the greatest opportunities for the accounting profession to contribute to improved government financial management.

Internal controls are another area in which the accounting profession has a great deal of expertise and, therefore, can make a notable contribution to improved government accounting systems. One reason accounting systems do not function as well as intended is their lack of good internal controls. Adequate internal controls form the cornerstone of a good accounting system, but only recently have they begun to receive the attention they rightfully have deserved for so long.

Even though effective internal controls have been mandated by law for Federal agencies for over 30 years, the ever-increasing disclosures of fraudulent activities and ineffective financial procedures existing in many agencies demonstrate the inadequacy of many of the internal controls. GAO, as well as many other organizations throughout the accounting profession, feel that this situation will improve substantially soon as a result of the recently passed Federal Managers' Financial Integrity Act of 1982. We testified in support of this legislation, as did the AICPA, and the

Association of Government Accountants. Also, the firm of Price Waterhouse & Co. played a very active role in developing the legislation.

The legislation requires ongoing evaluations of internal accounting and administrative control systems of each executive agency. These evaluations, conducted according to OMB guidelines, will determine whether the agencies' internal control systems comply with standards to be set by the Comptroller General. The legislation calls for an annual statement, signed by the agency head, attesting to the effectiveness of the agency's internal controls. It also calls for outlining—if necessary—a plan and timetable for strengthening any weaknesses found in the controls.

To carry out GAO's responsibility under the act, I have established a task force in GAO on internal controls. Its task will be to consolidate GAO's numerous publications stating its policy and standards on internal controls into a single document. As part of this project, we are consulting with various public accounting firms to discuss their views on internal control standards. We expect to publish this document by the end of this year.

Inspectors general also will play a significant role in implementing the legislation because of their continuing responsibility for assessing agency accounting and administrative control systems. Before the first Office of Inspector General was created in 1976 at the Department of Health, Education, and Welfare, the Federal agency audit functions were relatively weak. Even agencies' assessments of their own accounting and administrative control systems were not as strong as they could be. Since then, however, the creation of 18 statutory Offices of Inspector General has significantly changed the organizational placement and the activities and responsibilities of Federal agency audit operations. We expect these assessments of internal control systems (as required by the Federal Managers' Financial Integrity Act of 1982) will contribute greatly to improving internal controls in the Federal Government.

State and local governments are also beginning to place a high prior-

ity on internal controls. With the new Federalism proposals, internal controls at these levels will become even more important. At least two States—California and New York—are following the Federal Government's example and are considering legislation similar to the Federal Managers' Financial Integrity Act of 1982.

Financial Reporting

Financial reporting is the third major area in the government financial management cycle needing the attention of the profession. Sound financial reporting is the major means public officials use to review their operations and communicate their accountability to the public. To be effective, financial reporting must be based on accepted accounting principles and standards. In general, government efforts to establish effective and efficient accounting principles and standards have lagged behind private industry's.

The GASB, which is proposed to set accounting principles and standards for the State and local governments, is about to be formed after three years of work and dedication by several individuals and organizations in the accounting profession. The principal organizations—including GAO; AICPA; the Financial Accounting Foundation; the Municipal Finance Officers Association; the National Association of State Auditors, Comptrollers, and Treasurers; and the National Council on Governmental Accounting—have agreed on the final proposal for the GASB and returned it to their executive boards for endorsement. Also, the seven public interest groups involved in the GASB formation are currently considering endorsement of it. As it is now envisioned, the GASB will be equal to the FASB under the Financial Accounting Foundation. It will have a full-time chair and a part-time board, an annual operating budget of approximately \$1 to \$2 million, and will be based in Stamford, Connecticut. It will be very important that all organizations concerned with State and local governmental accounting and reporting support the GASB, once it is formed.

I hope that State and local govern-

ments will follow the same policy GAO intends to, that is, that they will adopt as many of the GASB and FASB standards as possible. In this way I think government accounting will become more useful and more understandable to the outside world.

Auditing

Auditing is the fourth major area in which the profession can help bring about needed improvements in government financial management. Improvements in budgeting, accounting, and financial reporting will be ineffective without assurance that the financial systems are working properly and that full disclosure of results will be made at all levels of government. This assurance can be provided through the audit process, but only if improvements are made in that process.

This need for improvements was discussed in a 1979 GAO report. According to that report, many Federal grants (totaling about \$90 billion) are not audited, and substantial duplication often occurs when individual grants are audited. This information illustrates the critical need to improve audit coverage and to make the audits more cost effective.

GAO supports the single audit concept as an approach that can increase audit coverage while it streamlines the audit process. This concept will change the focus of audits from the individual Federal grant recipients to the operating entity at the State or local level. It emphasizes a review of entire financial management systems—including the internal control systems—that monitor grants. The single audit concept also provides an improved audit base for performing additional selective compliance, economy and efficiency, and program results audits to satisfy specific Federal, State, and local user needs.

The Accounting Profession's Help Is Needed To Bring About Changes in Government Financial Management

I have discussed many improvements needed in the government

financial management cycle. These improvements cannot be made without the dedicated efforts of the accounting profession working with governments at all levels. Many firms probably are involved in providing professional services to governments or will soon be involved because of the big push toward improved accounting systems and audited financial statements. When providing these services, these firms are in an excellent position to greatly improve government accounting by designing effective systems that can be audited efficiently, possess strong controls, and produce GAAP financial reports.

The attention finally being placed on internal controls, especially as evidenced by the recent passage of the Federal Managers' Financial Integrity Act of 1982, is an important step toward improving the Federal Government's financial management systems and procedures. Several efforts are underway to study what other measures can be taken to bring about improvements. For example, the President's Private Sector Survey on Cost Control is studying many of the problems I have discussed here. In addition, the Reagan Administration is undertaking a multiphased management effort which will address Federal budget and financial management systems.

The fact that these studies are ongoing shows the high level of interest in improving government financial management. When developing their proposals for the needed improvements, these groups should consider several items. In addition to a streamlined budget process and an integration of budget, accounting, and other supporting systems, these items include

- consolidating the Federal Government's accounting into several major accounting and finance centers;
- establishing qualified Chief Financial Officers at each major agency in the Federal Government with strong, well-qualified staffs to support them;
- establishing a stronger central financial management function in the executive branch that would be responsible for keeping the central

- books of account;
- continuing to develop consolidated financial statements for the Federal Government, which will require good accounting at the agency accounting and finance centers and the proper flow of information to the central accounting function;
- continuing to have accounting standards established by and accounting systems approved by GAO; and
- performing—in the long run—an annual financial audit of the Federal Government.

If these improvements are made to the Federal Government's financial management systems, I believe an annual financial audit of the Federal Government might be both desirable and economical. If we could ever have 10 to 15 major accounting and financial centers operating on a standard system according to Comptroller General accounting standards and a proper flow of financial data to a central accounting function, then we might be ready to have an annual audit of the financial records and statements of the Federal Government. As I have mentioned, many of our larger cities and counties have moved toward an annual audit and improved accounting systems since 1975. Several of the States are now moving in that direction. Soon, people will ask, "Why not the Federal Government?"

However, I do not believe that we should embark on an annual audit until we know it can be done efficiently. These improvements will require a substantial investment in personnel and systems. And support at the highest levels of government will be vital. With this support, we will ultimately achieve what we all want—improved financial management in the Federal Government.

Finally, one of the most important steps I believe the profession must take to help bring about needed improvements is to encourage more of its members to apply their skills in the government arena. Other professions, such as law and investment banking, have placed many more people in government than the accounting profession. One recent effort to help public accountants enter the Federal Gov-

ernment is the AICPA's publication entitled "Federal Conflict-of-Interest Laws as Applied to Government Service by Partners and Employees of Accounting Firms." This publication, developed by the Washington Office of the AICPA, explains the conflict-of-interest laws so that members of the profession will know the precise scope and limitations of the laws and the steps they must take to comply with them. We need more such efforts to increase the opportunities and attractiveness of Government service to members of our profession.

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I believe the accounting profession has been making notable contributions in government financial management for some time now. But now more than ever, we must continue to work diligently together. Such efforts as the possible review of the financial management of the Federal Government, the committees and conferences at which the accounting profession and GAO are working together on government financial management, and changes that are already taking place at the State and local level will go a long way toward improving government financial management.

With the public's ever-increasing demand for governmental accountability and with the administration's shift in emphasis from the Federal to other levels of government, it is extremely important that improvements not only continue to be made, but also continue with the full involvement of the accounting profession. We can make the improvements that our profession envisions and can meet the public's demand for better accountability only if we continue to work together with a strong sense of commitment and dedication toward a common goal: effective and efficient government financial management.

Abbreviations

- AICPA-American Institute of Certified Public Accountants
- GASB-Government Accounting Standards Board
- FASB-Financial Accounting Standards Board



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Relocating Witnesses: Necessary But Administratively Difficult

Witnesses are crucial to the successful prosecution of any type of organized criminal activity. No matter how sophisticated Federal investigative techniques become, nearly all criminal trials turn on the testimony of an individual who can say "I saw him do that" or "I was with him when he did that." However, the fear of reprisal or retaliation has deterred many potential witnesses from testifying. This led to the creation in 1970 of a formalized program to protect witnesses, the Witness Security Program.

While the basic concept of the Witness Security Program—relocating a witness and his or her family and providing them with new identities—is fairly uncomplicated, its implementation and administration has been anything but easy. In prosecuting high-profile criminals, the Government rarely finds witnesses who are innocent bystanders at the commission of a crime. Rather, prosecution witnesses are usually found within the criminal organization and are integrally involved in crime themselves. Thus, to gain successful prosecutions in some cases, the Government may have to, in essence, "make a deal with the devil."

The very people the Government is forced to deal with have created most of the administrative problems that have beset the program. GAO recently issued a report that looks at some of these problems and made recommendations to correct them.

Background

Prosecutors and law enforcement agents have long recognized that witnesses who testified against certain individuals did so at serious risk to themselves and their families. The Kefauver Committee found in

the 1950's that a major organized crime syndicate

... will eliminate anyone who stands in the way of its success and destroy anyone who betrays its secrets and will use any means available, including intimidation, to defeat any attempt by law enforcement to interfere with its operation.

Before the existence of a formalized protection program, witnesses were protected on an *ad hoc* basis. Police officers, investigative agents, and prosecutors periodically aided witnesses whose cooperation with the Government placed them in jeopardy. The assistance varied and included arrangements for relocating to a new residence, establishing a new identity, or obtaining employment. Often, the assistance was little more than a bus ticket to some distant location.

In the late 1960's, the Congress became increasingly concerned about the increased influx of "organized crime" into both illegal and legal segments of society. Congressional hearings again disclosed that organized crime groups were known to have murdered, tortured, and threatened witnesses. Law enforcement officials testified that this situation was hampering prosecutions and deterring witnesses from cooperating with law enforcement agencies.

Congressional hearings in the 1960's led to the passage of the Organized Crime Control Act of 1970. The purpose of the act was to eradicate organized crime by strengthening the legal tools used in gathering evidence. Title V of the act authorized the Attorney General to provide security to persons—and their families—intended to be called as Government witnesses in proceedings against organized crime activity. Thus, the Witness Security Program

was born. The Marshals Service, a bureau of the Justice Department, was given responsibility for the program.

The types of cases investigated and prosecuted with the assistance of the Witness Security Program have changed over the years. Initially, the program was intended to protect witnesses testifying against persons allegedly engaged in "La Cosa Nostra" activity. As time passed, however, the number of witnesses sponsored by other departmental units increased, and the prosecutive priorities of the Department changed, resulting in emphasis on other types of crimes. For instance, relocated witnesses have been used to prosecute public officials in the FBI's "Abscam" investigation and in attempts to prosecute members of motorcycle and prison gangs. Overall, more than 4,000 witnesses have been admitted to the program since 1970.

The basic mechanism used to protect witnesses has also changed since the program's inception. At first, witnesses were protected in "safehouses" (secured facilities) where they were provided with round-the-clock protection by deputy marshals. Experience showed, however, that safehouses were not well suited to the realities of protecting individuals for several reasons: the location of safehouses was often inadvertently disclosed, they were unappealing for individuals not under a jail sentence or who had families, and they were not compatible with the long-term assimilation of witnesses back into society. Because of the necessary 24-hour protection, they also were becoming prohibitively expensive to operate. For these reasons, the safehouse approach was abandoned.

The Marshals Service now provides protection by giving witnesses new identities with supporting documentation, such as a birth certificate and social security card. It also relocates them to areas free from the criminal element they testified against and provides them with a temporary living subsistence until they can achieve self-sufficiency. The Marshals Service conceals the new identity and location of a witness. The Marshals Service also arranges for other types of social

services, such as employment assistance, resumé preparation, emergency medical treatment, and drug rehabilitation services. This is done to help the witness become successfully established in his or her new community as a law-abiding citizen.

Because of the types of persons who enter the program, however, the Marshals Service's relocation task has proven difficult. Many witnesses do not make successful adjustments into their new communities. Relocated witnesses frequently have failed to satisfy civil obligations, and some have been convicted of serious crimes.

The "Gamble" Sometimes Fails

Several factors make the Witness Security Program difficult to administer and hinder the chances that relocated witnesses will successfully establish themselves in their new communities. First, the program's basic operating concept—relocation under a new identity while leaving behind all previous ties—is traumatic. Further, inherent conflicts exist in this concept. Although witnesses are assisted in finding employment, verifiable employment references cannot be given as this would conflict with the goal of concealing a witness' identity and location. The Marshals Service's job is complicated further by the fact that most relocated witnesses have criminal backgrounds, limited education, and often lack marketable job skills.

The trauma derives from the basic method of providing protection. Relocating and changing the names of persons forces them to totally restructure their lives. Under the program, witnesses and their families must break all direct contact with nonrelocated family members, past friends, and associates. In some instances, relocation must occur literally within hours to protect the life of a witness. Any subsequent communication by a witness with friends from the "danger area" can only be made in a secure manner, such as through the use of an anonymous post office box. The trauma of relocation is compounded because witnesses must often be evasive

about their pasts in the course of establishing friendships and business associations in their new locations. Adding to that trauma is the never-ending fear that someone from their past might recognize them and cause them harm. As would be expected, many witnesses cannot cope with this drastic lifestyle change and have voluntarily returned to their "danger area" despite the threat to their lives. A handful have died as a result of this decision. One witness was blown up when he opened the front door of his residence after he returned to the "danger area."

Inherent conflicts also exist in basic program goals. The need to keep a witness' new identity and location secret creates problems in helping a witness establish a new life. For example, witnesses must attempt to find work in their new locations. However, to protect their identities, they cannot provide prospective employers with any verifiable employment references. If such references were provided and checked, a link between the witnesses' past and their new identities could be established. Similar problems are encountered when witnesses attempt to establish credit in their relocation area.

Obviously, the program would be difficult for the Marshals Service to administer under the best of circumstances. However, the Marshals Service usually does not encounter the best circumstances. An estimated 95 percent of the persons admitted to the Witness Security Program have prior criminal backgrounds. This creates additional problems in obtaining jobs for witnesses because the Marshals Service is obliged to disclose the general nature of a witness' criminal background to prospective employers. The criminal nature of witnesses also requires the Marshals Service to be especially careful in its assistance efforts. Marshals Service officials have stated that one reason they do not give a witness extensive background documentation is the potential liability the Government would incur if the documentation is used for fraudulent purposes.

Finally, the Marshals Service's efforts to assist a witness in obtaining employment are complicated by

the fact that witnesses often have limited marketable job skills and/or limited education. Education and job skill information for witnesses admitted to the program during fiscal year 1981 showed that 59.2 percent of their reported labor skills were of an unskilled nature and 34.2 percent of the witnesses did not complete high school. In comparison, Bureau of the Census educational data indicates that, in comparable age groups, 20.3 percent of the Nation's population did not complete high school. During December 1980 congressional hearings, a Federal prosecutor who personally sponsored the admission of about 20 witnesses into the program summed up the problem they face:

The witness, however, has never worked a day in his life at an honest job. His prospects for finding gainful employment are less than realistic. We would be naive to assume that we can take a hardened criminal out of one city, put him in another, and then ask him not to engage in criminal acts, but to be content as a sanitation worker.

Consequently, each use of the Witness Security Program actually constitutes a "gamble" as to whether relocated witnesses will be able to adjust to their lives and become law-abiding citizens under their new identities. Witnesses do not always achieve this goal. In reviewing many different types of program-related information, it is not uncommon to find instances where witnesses had failed to satisfy their debts or had committed crimes, some of an extremely violent nature.

Civil Problems Caused by Witnesses

Longstanding problems encountered in the Witness Security Program are that witnesses have ignored their civil obligations and innocent citizens often have had difficulty in enforcing court judgments against witnesses. Our work showed that

Separated or divorced parents who were not in the program have encountered hardships trying to enforce their legally established parental rights against the other parent, who

is relocated in the program with a minor child or children, and creditors have suffered financially because they were hindered in their ability to enforce judgments and collect debts from witnesses.

The civil problems experienced with the program do not result simply because witnesses owe money, nor do they result from the fact that the debtors are relocated witnesses. The problems occur because of a dilemma the Justice Department faces when witnesses ignore court judgments and fail to repay their lawful obligations: How does the agency protect a witness' secret new identity (and thus their safety) while assisting an injured party in enforcing a judgment against a witness?

The case of Thomas Leonhard has been the most celebrated case of a nonrelocated parent attempting to enforce parental rights against the parent in the program. Twice Mr. Leonhard has lost lawsuits at the Federal appellate level. His plight was portrayed in *Hide in Plain Sight*, a 1976 book by Leslie Waller, and in a recent movie by the same name. For 8 years, Thomas Leonhard unsuccessfully attempted to get the Government to tell him where his children (living with his ex-wife and a witness) had been relocated so that he could enforce his court-ordered visitation rights.

Another case that is currently being litigated in Federal appeals court is that of William Franz. From 1974 to 1978, Mr. Franz regularly visited his three children. However, in February 1978, Franz's children and ex-wife were suddenly relocated with a Government witness, a self-admitted organized crime enforcer. Mr. Franz was not told about the relocation. Since that time, he has been attempting, to no avail, to see his children. Because the Government maintains it has a duty to protect the security of the witness and his family, it will not reveal their location to Mr. Franz. This prevents Mr. Franz from going before an appropriate court to seek legal assistance to enforce his parental rights.

A less emotional but more frequent problem occurs when witnesses don't pay their lawful debts. A recent

example that demonstrates this point is the case of Peter Aver.

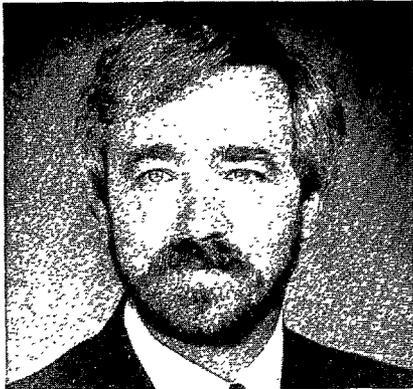
Aver was admitted to the Witness Security Program in October 1978 because he testified in the prosecution of two men in Boston accused of murdering four others in what became known as the "Blackfriars' Massacre." Because of his testimony, Aver was given a new name and relocated to Huntsville, Alabama. However, he left in Boston many creditors who to date have been unsuccessful in collecting monies allegedly owed them by Aver.

After a short stay in Huntsville, Aver relocated himself (without Government assistance) to Jacksonville, Florida, where he became involved shortly thereafter as an undercover operative in the FBI's "Resfix" sting operation. However, Aver left a woman in Huntsville holding a court judgment (worth over \$100,000 in property and money) against him. This woman is still attempting to enforce this judgment (now over 2 years old) against Aver. Aver, who reportedly has been given yet another new identity, is currently in Federal custody after being convicted in Florida of passing bad checks and after being convicted of Federal wire fraud charges.

While certainly representing an extreme, the difficulties caused by Mr. Aver unfortunately do not represent an isolated example of this type of problem. During congressional hearings in December 1980, a Marshals Service official testified that 35 letters a month are answered from creditors or other persons alleging they have been defrauded by witnesses. In GAO's review, we found that, during a 6-month period in calendar year 1980, 36 witnesses owed or allegedly owed over \$7.3 million.

The types of persons to whom these debts were owed varied from private individuals to large companies and to the Government itself. There were doctors seeking to recover money for services rendered, nonrelocated parents seeking to collect child support, a woman seeking to recover a personal loan, a stock brokerage firm seeking to recover money from a former em-

See WITNESSES, p. 55



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Measuring Student Academic Progress: A Case Study

• A private, 4-year college requires students receiving Federal aid to attain a minimum grade point average of 0.5 (an "F-plus") on a 4.0 scale by the end of the first year. The requirement increases with each successive year, with a 2.0 required for graduation. Because of these low standards, more than 40 percent of the students on aid have averages below 2.0, and more than 20 percent have averages below 1.5 (a "D-plus").

• A student at a community college receives more than \$9,000 in Federal aid over a 4-year period, completing only 60 of 108 credit hours attempted and never attaining a grade point average sufficient to graduate. She attempts five courses three times each and two other courses twice each, with only the last grades received included in her grade point average.

• A student at another community college obtains an associate degree in nursing, assisted by more than \$5,000 in Federal aid. After obtaining this degree, she remains in school for two more quarters, receiving an additional \$2,000 in aid to pursue such general interest courses as automotive electric systems, architecture construction, beginning snow skiing, and yoga.

Shocking? Certainly. Flagrant disregard for Federal requirements? Not at all. In fact, the above examples fall perfectly within the parameters set for the appropriate Federal student aid programs. And therein lies the problem.

In a recent review of academic progress standards for students receiving Federal aid, we found case after case of students who had received thousands of dollars in aid without demonstrating the desire or potential to complete their programs of study. While examples such as those above were not exactly typical, they did occur with enough frequency to point to an underlying weakness in Federal requirements.

Our work in this area presents an interesting case study for program evaluators because it shows the complexities of administering and evaluating student aid where the Government, students, institutions of higher education, and other organizations form a unique partnership. It is an area of immense complexity, where right and wrong often depend on one's perspective and where circumstances are heavily influenced by a set of constantly changing variables. A full understanding of the issues requires first an understanding of the many diverse elements that make student aid work, then an appreciation for the difficulties in setting and enforcing Federal requirements in an area where academic freedom is paramount.

A College Education: The Dream Becomes Reality

A college education has long been an integral part of the American Dream. Parents coming out of the long, hard years of the Depression and two world wars saw education for their children as a solid start toward a better life than they themselves had known. For some, college was only one of many stops on the way up. For others, it was a ticket out of a life of poverty and missed opportunities. For still others, a college degree was an end in itself, signifying that a person had "made it."

And yet, all too often, a college education was the exclusive privilege of the advantaged. Always available to the well-to-do, college remained only a dream to many from middle- and lower-income families where the financial resources to make it happen simply did not exist. There were always the oft-cited examples of the poor but brilliant and hard-working types who received scholarships or worked their way through school but, for most, money remained a huge and often insurmountable

obstacle.

Federal support to students in higher education goes back many years. Among the earliest and most popular forms of support was the G.I. Bill, which enabled thousands of veterans to go to college. Aid on a broad-based level did not really begin until the late 1950's, however, when the National Defense Student Loan program began a trickle of aid that was later to become a torrent. With passage of the Higher Education Act in 1965, student aid for the economically disadvantaged became a major national objective, and Federal funds available for this purpose began to mushroom.

Today, student aid is big business on college campuses. It is an industry in itself, employing thousands of professional personnel who spend years mastering the intricacies of packaging aid for students and administering the requirements of the various programs. Student aid is now available through a myriad of programs, offering benefits to students from middle-income families as well as the economically disadvantaged. Also, aid is available to students seeking technical training beyond the high school level as well as those enrolled in traditional colleges and universities.

Despite this increased availability, many problems in providing aid to those who need it still exist. Many students, for example, find that the amounts of aid available are not always a match for the skyrocketing costs of a postsecondary education. And recently, there has been considerable discussion on cutbacks in Federal aid, or at least in redistributing it among programs. Also, there is the problem of administering the billions of dollars distributed among thousands of institutions and millions of students to ensure that abuse is not taking place.

Sources of Student Aid

Literally dozens of Federal programs offer financial assistance to students enrolled in postsecondary educational institutions. Some are well known and offer benefits to thousands of students from all social and economic strata; others are severely restricted in their

scope, aimed at relatively small numbers of students in specific target groups. Some offer benefits that are not even known to the vast majority of people.

In recent years, however, three providers of funding have stood out as being the largest sources of Federal student aid: the Department of Education (ED), the Veterans Administration (VA), and the Social Security Administration (SSA). In 1980, these agencies provided more than \$9.1 billion in direct aid, and were responsible for billions more through loan guarantees and matching funds.

The largest single source of student aid is ED, which offers assistance to postsecondary students under five major programs. These are the Pell Grant, an entitlement program for students who meet certain low-income and cost-of-school requirements; the National Direct Student Loan, Supplemental Educational Opportunity Grant, and College Work-Study Program, all administered directly by participating schools; and the Guaranteed Student Loan, available from commercial sources to qualifying students. In total, these programs were responsible for about \$9.2 billion in aid in fiscal year 1980, with an actual Federal outlay of about \$5.3 billion.

A second major source of student benefits is VA, which provides educational benefits to veterans and certain dependents. In fiscal year 1980, VA benefits totaled about \$2.3 billion.

Finally, social security benefits are available to the children of deceased, disabled, or retired contributors. To be eligible, the child must be unmarried, under 22 years of age, and attending a postsecondary institution full time. This program is now being phased out, with the last benefits to be paid in fiscal year 1984, but in fiscal year 1980, benefits to postsecondary students totaled \$1.6 billion.

In our review of academic progress standards, we focused on benefits provided by these three agencies. The primary reason for this focus is obvious: the bulk of the money available is concentrated in these programs. Other reasons, however, made them attractive for an evaluation of this type. First, schools can usually identify the students receiv-

ing aid from these three sources, although this is not always the case in smaller programs. Second, there is sufficient contrast among the requirements in each program to make some general evaluations of their effectiveness. Third, there are considerable differences in the manner in which the three agencies administer the programs. VA is heavily involved in monitoring school and student performance; ED, to a much lesser extent; and SSA, practically not at all.

What Is Academic Progress?

Although not always specifically defined, an undergirding principle of student financial aid is that a recipient should make satisfactory academic progress. Requirements vary, but the general aim is to ensure that a student is moving toward an educational goal at a reasonable rate while making acceptable grades. Simply stated, a student should be able to prove he or she has the desire and the ability to use public funds for the purpose intended. Thus, with the right comes a responsibility.

What is academic progress? This question is largely unanswerable because of the many variables involved. Like beauty, progress is often in the eyes of the beholder. What constitutes acceptable progress at one school might get a student suspended at another. Certainly a school has the right to some flexibility in setting academic standards, since the aid recipient is first and foremost a student at that institution. At the same time, however, the public interest must be protected by ensuring that the limited supply of aid is not abused by students unwilling or unable to meet minimum levels of performance. Another element often overlooked is the responsibility to the student, who should be encouraged to seek that program best suited to his or her abilities and interests.

The three agencies providing the bulk of student aid have treated the problem of determining academic progress in completely different ways. VA, with the most rigid Federal requirements, requires that a school must have an approved standard meeting certain specific criteria. In

addition, it requires that a student be enrolled in an approved course of study, have a specific objective, and make progress toward that objective. A major provision of the VA requirement is that students can be paid only for courses leading to program completion.

Requirements for ED programs are considerably more lenient. Schools must establish standards for academic progress but receive no guidance on what these standards should include.

The SSA program has no requirements for academic progress. As long as an eligible student can stay in school full time, he or she can continue to receive benefits. Unlike the VA and ED programs, the SSA program does not even have an academic progress requirement in its authorizing legislation.

Selecting Institutions for Visits

Choosing a representative group of institutions for site visits in evaluating student aid programs is a formidable, if not impossible, task. The sheer number of schools, with more than 7,700 participating in ED's Pell Grant program alone, is the first problem. Couple that problem with the fact that no two institutions are alike. There are 2-year schools and 4-year schools, public schools and private schools, and proprietary schools. Institutions may vary in size from 100 or so students to more than 50,000. Admissions standards range from those which are open to virtually anyone who applies to those which take only a few of the most highly qualified applicants. The variations of academic standards, curricula, and course offerings are endless.

GAO Findings: Standards Too Low

Our analysis of transcripts and aid records at the schools visited confirmed the findings of previous GAO work in the area: many students receiving Federal student aid were not making real academic progress. This is not to say that either schools or students were not following established standards because, for the most part, they were. The real

problem was that the schools often set their standards too low or failed to consider all the elements necessary to measure progress. The cause: inadequate Federal requirements.

Overall, VA students typically made better progress than students receiving ED or SSA benefits. Although only one factor of numerous probable factors which led to this result of better progress, VA required much more of both schools and students in establishing, enforcing, and complying with academic progress standards.

As noted earlier, there is no one magic formula for determining academic progress. In closely evaluating the Federal requirements and the standards of the 20 institutions GAO visited, however, we eventually isolated those factors which affect the measurement of progress and which we believe must be considered in establishing a standard. These factors include such items as minimally acceptable grade point averages, an equitable policy on awarding nonpunitive grades, and a rate-of-progress requirement to ensure a student moves through a program at a reasonable pace.

The most popular and most nearly standardized method for measuring academic progress is the grade point average (GPA). Schools normally require a student to have a cumulative GPA of 2.0 on a 4.0 scale (a "C" average) to graduate. The GPA standard applied during the years before graduation is often much less than 2.0, however. While allowing a low interim GPA requirement is not wrong in itself, it can lead to a situation where the student stays in school on Federal aid for years without making satisfactory progress toward graduation.

As an example, a community college visited had no GPA requirement for the first 30 semester hours attempted, which means a student could attend full time for a year and a half before being subjected to the standard. The minimum GPA applied was a 1.5, which never changed as long as the student remained in school. A student could not graduate, however, until his or her GPA reached a 2.0. Under this standard, a student could theoretically receive aid for years without achieving the grades necessary to graduate.

In total, GPAs for students receiving ED and SSA aid were lower than those receiving VA benefits. Nearly 20 percent of ED aid recipients and 23 percent of SSA aid recipients in the GAO samples had cumulative GPAs of less than a 2.0; only 12.4 percent of VA aid recipients had cumulative GPAs of less than 2.0. Even worse, 9.5 percent of ED aid recipients and 10.8 percent of SSA aid recipients had less than a 1.5 GPA; only 3.5 percent of the VA aid recipients had GPAs at that level.

Another factor greatly influencing the measurement of academic progress is the treatment of nonpunitive grades given for withdrawals, courses not completed, and courses repeated. Possibly the most common of these is withdrawals. While allowing students to withdraw from courses without penalty of a failing grade is an acceptable practice in itself, a policy which is too lenient can artificially inflate a student's GPA and distort the measurement of real progress. Such was the case at one school where a student with a cumulative GPA of 2.3 had actually completed only 20 of 47 credit hours attempted, while receiving \$5,400 in ED aid. A student at another school had maintained a GPA near a 2.0 over eight semesters by withdrawing from 57 of 115 hours attempted, receiving more than \$6,900 in ED aid during this period. School policies on withdrawals were often quite permissive, sometimes allowing a student to withdraw without penalty up to two-thirds of the way through a term. One school had even let students withdraw after they had taken the final examination.

Students who have not met all the requirements of a course by the end of a term are typically assigned a grade of "incomplete," with the understanding a regular grade will be awarded when the requirements are met. Academic progress standards are weakened by policies that are too permissive in awarding incomplete grades or do not require them to be cleared promptly. One college visited allowed students an entire year to clear incomplete grades and did not even strictly enforce this policy. Consequently, student GPAs were higher than they would have been if failing grades had been assigned.

Policies on grades for repeated courses vary greatly among schools. In computing the GPA, some schools include all the grades achieved, others only the highest grade, and still others only the last grade. A policy which fails to include all the grades received or allows students to repeat courses a number of times raises questions about the ability to measure progress. One student who had received more than \$8,400 in ED aid had attempted the same speech course eight times and the same sociology course five times without passing either. A student at another school had taken accounting principles five times, earning three F's and two D's.

Sometimes the problem with nonpunitive grades is the sheer number awarded. One school awarded 15 different letter grades of which only 5 affected a student's GPA. During one term, nonpunitive grades accounted for almost half of the grades awarded by the school.

Another factor greatly influencing academic progress is a student's rate of progress toward his or her educational goal. At the schools GAO visited, the standards often included no quantitative measure of progress. Less than half of the students receiving aid were progressing at a rate to graduate within 4 years. Some students were several terms behind.

Nothing is wrong with allowing students extra time to complete programs unless this becomes the norm. The minimum requirement for a student receiving a Pell Grant for VA assistance is 12 credit hours per term. By continually enrolling for the minimum number of hours, many students otherwise making progress move toward program completion at a slow rate. This could be a potentially serious problem in the Pell Grant program, which no longer places limitations on the number of years a student may receive aid.

In addition to inadequate standards, we found that some schools did not even enforce the standards they had implemented. Five schools had consistently failed to enforce standards for ED programs, leading to overpayments of about \$1.28 million. Three other schools had not enforced their standards on ED stu-

dents in a limited number of cases. We also found that four schools were not adequately enforcing standards for VA recipients; however, we were unable to determine the level of overpayments because VA benefits go directly to the student rather than through the school.

What Can Be Done?

While our findings could not be projected nationwide, setting adequate standards of academic progress was clearly a problem. But what can be done? How can the Government ensure that schools establish adequate standards for students receiving aid without infringing on the schools' rights to establish academic requirements consistent with their own goals?

One answer to the problem is to encourage the institutions themselves to develop effective self-regulatory standards. To this end, the American Council on Education published a policy statement in December 1981 outlining general guidelines for academic progress proposed by the American Association of Collegiate Registrars and Admissions Officers and the National Association of Student Financial Aid Administrators. This statement urged schools to establish and publish effective standards for academic progress that are consistent with each school's academic objectives and own diversity of students. School standards should set a reasonable length of time for a student receiving aid to complete a program; provide a statement on the effects of course incompleteness, course withdrawal, course repetition, and non-credit remedial courses; include procedures for the appeal and reinstatement of aid lost; and ensure that an evaluation of aid eligibility is made at established intervals, at least once a year.

While GAO agreed that improved self-regulation is an effective way to attack the problem, we also believed there was still a need for better criteria at the Federal level. There is really no good reason for three Federal agencies having policies so different. A need exists for a more nearly uniform set of guidelines that can be applied to all forms of assistance. These guidelines should con-

tinue to permit schools flexibility in establishing academic progress standards, but they should also set certain parameters within which such standards should fall.

This recommendation was the basic thrust of our report, "Students Receiving Federal Aid Are Not Making Satisfactory Academic Progress: Tougher Standards Are Needed" (HRD-82-15), issued in December 1981. In May 1982, the Secretary of Education proposed new regulations for academic progress under ED student financial assistance programs, drawing from recommendations included in the GAO report, the policy statement by the American Council on Education, and a quality control study on Pell Grants contracted by ED. The new regulations continue to permit schools to set their own standards of progress. However, these standards must adhere to policies generally accepted by the postsecondary education community as a whole.

Under the proposed regulations, a school must conform with the standards of academic progress established by an institution's nationally recognized accrediting agency. If no such agency standards exist, or if an institution is not accredited, the institution must incorporate the elements of a standard developed by the postsecondary education community. These elements are grades, work projects completed or other factors measurable against a norm, and a timeframe for program completion. Also, a standard must be consistently applied and must define the impact of incompletes, withdrawals, course repeats, and noncredit courses. Finally, there must be provision for appeal and reinstatement of aid upon correction of academic progress deficiencies.

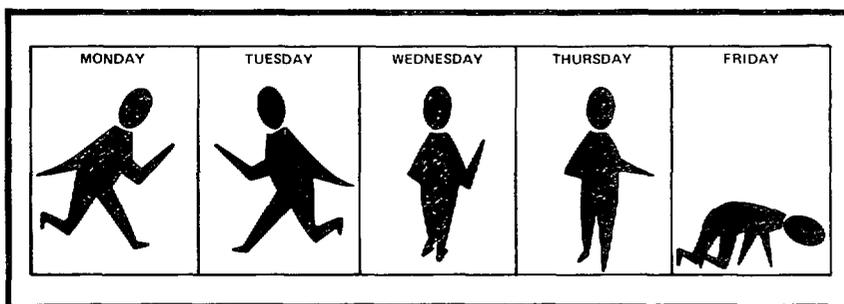
In August 1982, Senators Claiborne Pell of Rhode Island and Donald Nickles of Oklahoma introduced a bill (S. 2822) to amend the Higher Education Act, requiring minimum levels of progress that must be achieved by students receiving ED financial assistance. This amendment goes even further than the GAO recommendations by actually

See *PROGRESS*, p. 56

A Week's Worth



David G. Sapp



Mr. Sapp, a senior evaluator in the Mission Analysis and Systems Acquisition Division, joined GAO in 1970. He holds a B.S. degree from Fairmont State College, Fairmont, W. Va. Mr. Sapp is a member of the American Defense Preparedness Association, the International Test and Evaluation Association, and GAO's GS-13/14 Management and Policy Advisory Council. He has received numerous awards from his division.

Monday

"It's raining."

I was finishing my warm-up exercises when my wife Rae Ann provided this weather report. We won't do any running this morning. The traffic on I-95 was slow and heavy, a usual condition when it rains.

Upon arriving at work, my first order of business was to summarize the observation I made at last Friday's entrance conference with the Navy project office. I am the evaluator in charge of a survey assessing the Navy's development and procurement of the Trident II submarine-launched ballistic missile system. Although I have worked on various Department of Defense weapon system assignments over the past 6 years, this is my first major effort involving a strategic system. The Trident II missile is a high-visibility program in the Congress and has an estimated \$8 billion cost for system research and development.

Later in the morning, I met with Mark Wielgoszynski, who works with me on this assignment, and David Brinkman, the assignment manager, to discuss last Friday's entrance conference. We agreed the meeting was very effective in presenting survey objectives, assignment timeframes, organizations to be contacted, and the various Trident II program aspects to receive specific attention. The Navy representatives raised only a few questions, and we scheduled a number of follow-on interviews with key program officials. During this morning's discussion, we decided to begin finalizing the survey guidelines.

I returned to my office and received

a call from GAO's liaison officer in the Office of the Secretary of Defense. After reviewing the letter which announced GAO's audit, the liaison questioned how our survey differs from an assignment the Boston regional office staff is doing on the Trident submarine program. Having coordinated with Boston, I explained that my focus was primarily on the development and procurement of the missile system rather than on the submarine itself. My group's involvement with the submarine program is only to the extent that the missile system affects submarine cost, schedule, and future force levels. The liaison officer was satisfied with my explanation.

I checked my calendar and noted a reminder to follow up and confirm my attendance at an upcoming nuclear weapons orientation course. I called an administrative aide at the Federal Emergency Management Agency to verify their receipt of the paperwork and found they had not received my security clearance information which had been mailed out weeks earlier. I skipped lunch to prepare and deliver the information to their security office.

When I returned, I had a message to call our primary point of contact at the Trident II project office. Upon calling, I was asked if a briefing can be rescheduled for this Wednesday morning. I know Mark will not be available, but I agreed to the change since the information will be valuable in preparing the survey audit program.

Mark was due for a performance evaluation this week, so I spent most of this afternoon completing it. Late in the day, I received a call from Andrea Kole in the Office of

General Counsel. Andrea and I are on the same GS-13/14 Management and Policy Advisory Council study group. The Council held its quarterly meeting last week in Washington, and our group was assigned the office's Front-End Goal Test. Andrea called to see if I could attend a meeting later this week. Dick Fogel, director of the Office of Program Planning, wants to discuss how the Council can get involved with the test. I didn't have any conflicts, and Andrea said she would get back with me.

I finished the performance evaluation and stopped by David Brinkman's office to drop it off. We discussed the evaluation and some issues involving our ongoing assignment until it was time to catch my vanpool.

Tuesday

At the top of my "to do" list is reviewing the Trident II survey workpapers and firming up the audit program. This involves a considerable amount of reading, analysis, and planning. Although not very exciting, it's an essential part of assignment management.

While I was going through the workpapers, Bernie Easton, the strategic systems group director, came by. He wants me to give additional details on the assignment to an official who called this morning from the Office of the Secretary of Defense. I called and scheduled a meeting tomorrow afternoon at the Pentagon.

I went by David Brinkman's office to see if he wanted to discuss Mark's evaluation. Everything was in order, and we got together with Mark for a counseling session.

Back in my office, I got a surprise visit from John Alexander of our Huntsville staff. John and I worked together on a previous assignment, and we reminisced for a while. Our MASAD subdivision has always gotten good support from Huntsville, and John is an example of the quality of their staff.

After lunch, I stopped by Bernie Easton's office to brief him on the Trident II assignment status. On my way out, I ran into Bob Parker, our divisional contact in the Office of General Counsel. Although lately I have not encountered any problems with gaining access to agencies'

records, it's an ongoing concern in defense assignments. I asked Bob if he would refresh my memory on GAO's access rights and legal procedures. A few other interested people asked if they could sit in on the discussion. Bob went through an informal summary of our access rights, past access problems, and the procedure used to resolve those problems. He made it clear that he is anxious to help if there is a problem.

Getting back to my original project of the day, I continued going over the workpapers. I prepared a list of questions for tomorrow morning's meeting with the project office and finished a portion of the audit program.

After work, I attended the first session of a stop-smoking program in which I'm enrolled. My New Year's resolution finally caught up with me. I have needed this for quite a while and look forward eventually to out-running Rae Ann in a 6-mile race.

Wednesday

The first thing I did this morning was check to see if either David Brinkman or Bernie Easton could attend this morning's meeting. Both were tied up, so I caught the subway to Crystal City, Virginia, where the project office is located.

The project office takes up three floors of an office building and is a high-security area. Clark Gibbons, our Navy point of contact for this assignment, met me and checked me through the guard desk. Clark indicated that before I received the presentation on the project office's organization and functions, one of the project directors wanted to discuss a request for documents I made during the entrance conference. I tend to be a pessimist prior to these types of discussions because I am always aware of potential problems with access to records. I'm glad I talked to Bob Parker about this matter yesterday. However, the project director was very reasonable. He asked me to get some of the documents from the Office of the Secretary of Defense since that organization prepared the information. I can take this up with the appropriate officials during my meeting at the Pentagon this afternoon. I concluded the discussion by arranging for an on-site office for the GAO staff to use dur-

ing the Trident II assignment.

Next, I was escorted to another area where one of the branch heads had prepared a three-part slide presentation. I had a number of questions, and the first part of the presentation, normally running 20 minutes, took over 2 hours. Since it was getting late and I had an early afternoon meeting at the Pentagon, no one objected to scheduling a meeting Friday morning to finish the presentation.

I caught the subway to the Pentagon and had a quick lunch. Having a few minutes before the meeting, I stopped to see our Navy liaison, Aaron Cohen. Aaron said he received some positive feedback from the Trident II missile project office concerning our entrance conference. We briefly discussed the assignment status, and I had to rush to make my meeting.

I arrived at Captain MacClary's office, and we exchanged a few pleasantries. After I briefly described GAO's assignment objectives, timeframes, and areas of interest, we discussed the overall program, and the captain recommended a number of additional contacts. I asked for copies of three program documents prepared by the Office of the Secretary of Defense, and we ended our meeting by arranging to meet again Friday afternoon.

Back to the subway. At the office, I found I had enough time to write up the day's discussions. That's good; I didn't want to take work home this evening. Our new house came with a steep backyard, and tonight I'm going to make some plans for landscaping.

Thursday

Mark stopped by early this morning to discuss the meetings I had yesterday. I gave him the documents I received and the corresponding writeups, and I made sure he would be available for tomorrow's meetings. We also discussed moving to the project office for the remainder of the survey. Working on-site supports our divisional philosophy that "there are no findings in the GAO building."

Next, I finished my travel order for next week's training seminar. When I dropped it off for typing, I remembered I had not yet briefed Walt Sheley, MASAD's director, on last

week's GS-13/14 Council meeting. I stopped by Mr. Sheley's office and made an appointment for early tomorrow morning.

I checked my correspondence box and found Andrea Kole had called to tell me she couldn't get the Council members coordinated for the meeting with Dick Fogel this week. There was also a note from Les Farrington, one of our group directors, asking if I would drop by his office after lunch. I then stopped by David Brinkman's office to give him a summary of yesterday's meetings. I spent the remainder of the morning working on the Trident II audit program.

Returning from lunch, I ran into a coworker from our mission analysis subgroup who has some workpapers from a previous assignment which was related to the Trident II missile program. I arranged to use the workpapers during the Trident II survey.

I dropped by Les Farrington's office. Les is MASAD's expert on Department of Defense matters related to evaluation. The Management College sponsors a 1-week course on test and evaluation in which Les and I present a segment on GAO's view of the test and evaluation performed by the military services. The experience has been beneficial in establishing contacts within the test community and providing the military services with a better understanding of GAO's role and responsibilities. This afternoon Les wanted to discuss an upcoming course. We get together periodically and discuss parts of the presentation which may need to be updated or clarified.

After meeting with Les, I got together with Mark to review the progress on the Trident II assignment and prepare for tomorrow's meeting. I returned to my office and organized

my GS-13/14 Council meeting notes for tomorrow's appointment.

Friday

I arrived at work this morning a little early to prepare for my meeting with Mr. Sheley. Last week's GS-13/14 Council meeting began with remarks from Comptroller General Bowsher and ended with a number of Council projects being defined. These projects will require a considerable amount of work before the next meeting. In my talk with Mr. Sheley, I highlighted the numerous speakers and presentations which received the Council's attention. Mr. Sheley is very supportive of the Council and appreciated the report on our activities.

I met Mark and we caught the subway to the project office in Crystal City. Today their security office had some trouble locating our clearance information. I made a mental note to request a temporary project office identification card for the remainder of the assignment. Clark Gibbons escorted us to the briefing room, and we resumed the presentation at part two. The presentation went into detail concerning project management and overall acquisition strategy. An interesting aspect of their organization is the existence of a Program Evaluation Branch. The branch provides the program manager with an independent assessment of virtually all aspects of the ongoing program. I had a good discussion with the branch manager over the role and reporting methods his office uses in relation to how GAO selects and performs assignments. Everything went smoothly, and we finished just before lunch.

Mr. Gibbons found an office we

could use, so we decided to spend the afternoon at the project office reviewing a number of documents identified during the morning's presentation.

Mr. Gibbons had the information available when Mark and I returned from lunch. The material provided a good overview of certain technical aspects of the program and generated a number of discussion topics. I scheduled a meeting for later next week, requesting a briefing on the Trident II development program status and the missile's effect on the Trident submarine configuration.

Before leaving Crystal City, I called Captain MacClary's office and arranged to stop at the Pentagon to pick up some documents I had previously requested. Captain MacClary arrived a few minutes later, and we briefly discussed the Trident II missile development status and various technical aspects of the missile's configuration. The captain briefly summarized the documents he gave us, and we agreed to contact him if we needed any further clarification.

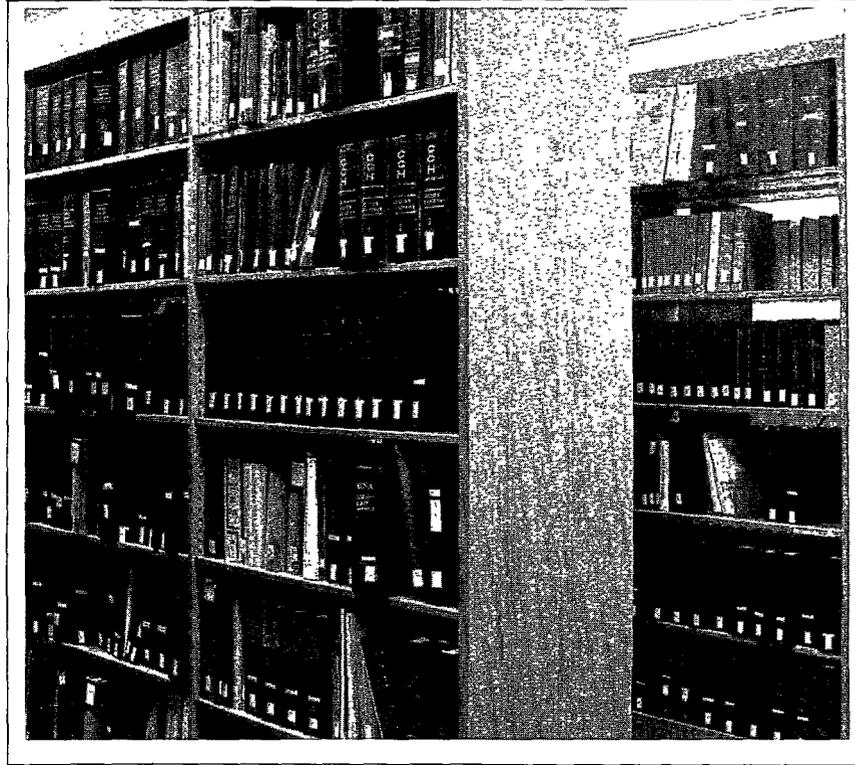
After getting back to the GAO building, I logged in and read the documents we had picked up. I made some notes and prepared a list of follow-on questions to be pursued later. I then took a moment to reflect on this week's events. All in all, the week had been hectic but productive.

After work, Rae Ann and I met our MASAD coworker John Hutton and his wife Debbie for dinner at their favorite Irish restaurant in Old Town Alexandria. We wound down by talking about the week's activities but quickly made the transition into the weekend by listening to Irish music.



Judith Hatter

Legislative Developments



Federal Managers' Financial Integrity Act of 1982

Public Law 97-255, September 8, 1982, 96 Stat. 814, the Federal Managers' Financial Integrity Act of 1982, amends the Accounting and Auditing Act of 1950 to require ongoing evaluations and reports on the adequacy of systems of internal accounting and administrative control of each executive agency.

Internal accounting and administrative controls are to be established in accordance with standards prescribed by the Comptroller General.

The Director of the Office of Management and Budget, in consultation with the Comptroller General, is to establish guidelines for the evaluation by agencies of their system of internal accounting and administrative control.

Tax Equity and Fiscal Responsibility Act of 1982

The Tax Equity and Fiscal Responsibility Act of 1982 (Public Law 97-248, September 3, 1982, 96 Stat. 324) contains several references to the work of the General Accounting Office.

The Comptroller General is to monitor and evaluate a study and report by the Secretary of Health and Human Services on whether or not the reimbursement method and benefit structure (including copayment) for hospice care under title XVIII of the Social Security Act are fair and equitable and promote the most efficient provision of hospice care.

Title V of the law, "Airport and Airway Improvement Act of 1982," provides for airport development and airport planning by project grants. GAO is provided access to

records of grant recipients for purposes of audit.

In cases where independent audits which may be required by the Secretary of Transportation are made, the grant recipients are to file a certified copy of the audit with the Comptroller General.

On or before April 15 of each year, the Comptroller General is to report to Congress describing the results of each audit conducted or reviewed by him during the preceding fiscal year.

Title VI, "Federal Supplemental Compensation Act of 1982," provides for payment to States having agreements for the payment of Federal supplemental compensation. The Secretary of Treasury, prior to audit or settlement by GAO, is to make these payments to States in accordance with a certification by the Secretary of Labor.

The Internal Revenue Code is amended with respect to disclosure of returns and return information for use in certain audits by GAO. The authority is expanded to include any returns or return information obtained by a Federal agency for use in any agency program or activity. GAO is permitted access to returns and return information that have not been obtained by the agency in certain circumstances, provided that the agency is authorized to obtain the information for use in the program or activity that is the subject of the GAO audit.

Net Worth Guarantee Act

The Net Worth Guarantee Act, Public Law 97-320, October 15, 1982, contains a requirement for the Comptroller General to conduct an

audit and report to Congress on a semiannual basis on the net worth certificate programs of the Federal Deposit Insurance Corporation and the Federal Home Loan Bank Board.

Job Training

The Job Training Partnership Act, Public Law 97-300, October 13, 1982, contains an amendment to the Wagner-Peyser Act requiring the Comptroller General to evaluate the expenditures by States of funds received in order to assure that expenditures are consistent with the provisions of the act and to determine the effectiveness of the State in accomplishing the purposes of the act.

Military Medical Facilities Construction

Legislation recommended by GAO to provide realistic sizing criteria for the construction of military medical facilities, taking into consideration retired personnel and their dependents, was enacted into law on October 15, 1982. (Public Law 97-337)

Student Loan Marketing Association

The conference report on S. 2852, Student Financial Assistance Technical Amendments Act of 1982 (H. Rept. No. 97-887) contains a request by the conferees that GAO conduct an extensive review of the Student Loan Marketing Association's (SLMA) legislative authority and its program operations, as well as a more narrow interim study to be completed within 6 months. The

conferees hope that these reports will advise them as to possible modifications to the existing loan consolidation authority of SLMA and the feasibility of extending such authority to State guarantee agencies. The bill was enacted into law on October 13, 1982. (Public Law 97-301)

Operational Testing and Evaluation

Senator David Pryor of Arkansas introduced S. 3001, "Operational Testing and Evaluation Act of 1982," to create within the Department of Defense an independent Office of Operational Testing. During his comments on the legislation, Senator Pryor indicated he has "asked the General Accounting Office, the investigative arm of Congress, to conduct an intensive review of the Defense Department's operational testing system. This request asks the GAO to look for weaknesses in the system and find out if test data compiled by the services gives us a valid and reliable indication of how weapons will perform in real-life situations."¹

Debt Collection

Referring to GAO studies describing "the Federal Government's poor performance in collecting overdue debts," Senator Roger W. Jepsen of Iowa introduced S. 3020, which establishes a Presidential Advisory Panel for Coordination of Government Debt Collection and Delinquency Prevention Activities. He further states, "I am convinced that such a panel, composed of experts from the collection industry in the United States, will give the Government much needed advice in this area."²

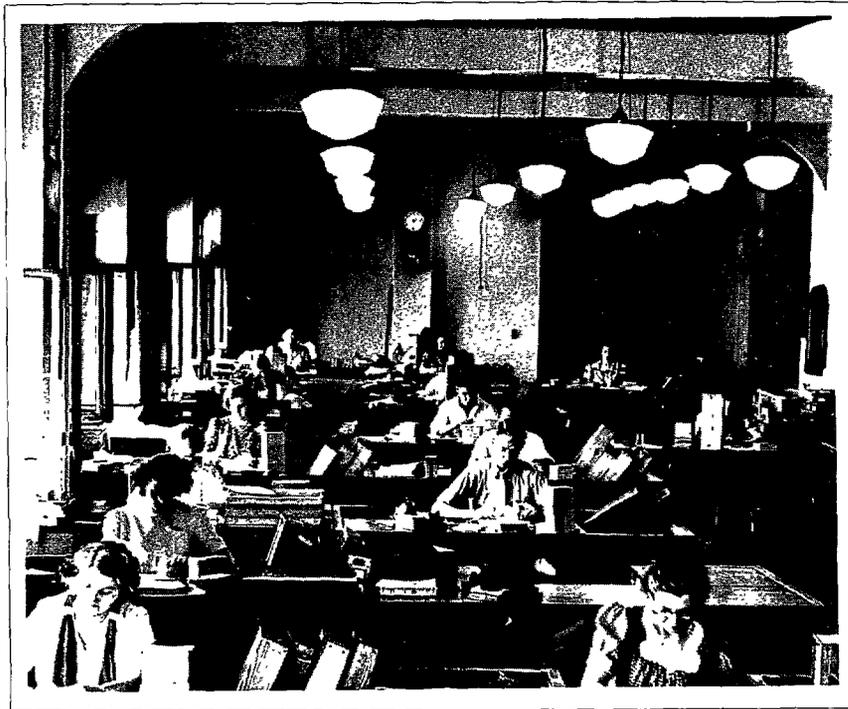
¹Cong. Rec., Vol. 128 (Oct. 1, 1982), p. S12992.

²Cong. Rec., Vol. 128 (Oct. 1, 1982), p. S13331.



Diane E. Grant

Reflections



Since the *Staff Bulletin* stopped appearing in March 1960 and the *GAO Review* was not published until the winter of 1966, the following items were taken from the 1963 spring issues of the *Watchdog*. Twenty years ago:

- Joseph Campbell, Comptroller General of the United States, stressed "equal employment opportunity" by issuing, for the guidance of all GAO employees, a new Comptroller General Order that was in accordance with the rules and regulations of the President's Committee on Equal Employment Opportunity.

The statement of policy, consistent with law, was based solely on merit and fitness; all supervisory employees and other employees authorized to initiate or effect specific personnel actions were directed, within the limits of the authority, to take appropriate steps to ensure that there would be no discrimination because of race, color, creed, or national origin. It specified that all qualified persons would be afforded equal employment opportunity for employment in the General Accounting

Office and was to assure nondiscrimination in personnel matters, by policy and directives of the President, as stated in Executive Order 10925. Also, the regulations of the President's Committee on Equal Employment Opportunity would be adhered to.

- Comptroller General Elmer B. Staats established within GAO the Office of Energy and Special Projects due to the growing problems emerging from shortages of energy resources. The new Office was under the direction of Assistant Comptroller General Phillip S. Hughes, formerly director of the GAO Office of Federal Elections.

- James D. Martin, regional manager, Dallas, was honored by the Washington Chapter, Federal Government Accountants Association, for his "outstanding performance evidenced in the work of the special GAO task force set up to make a comprehensive study of health facilities construction costs." Mr. Martin was at that time an assistant director in the Manpower and Welfare Division.

See REFLECTIONS, p. 52

REFLECTIONS, Cont. from p.51

- Edward A. Densmore, deputy director, HRD, was awarded the 1973 William A. Jump Memorial Award for distinguished service in public administration. Mr. Densmore was then an assistant director in the Resources and Economic Development Division.
- Baltas E. Birkle, deputy director of the Resources, Community and Economic Development Division, was designated an associate director in the Resources and Economic Development Division, responsible for audit assignments involving

housing programs of the Department of Housing and Urban Development, effective September 17, 1972.

- Brian P. Crowley, associate director, senior level, Resources, Community and Economic Development Division, was designated an assistant director in the Resources and Economic Development Division, responsible for the audits of the air and water pollution control programs, effective October 29, 1972.
- Seymour Efras, associate general counsel, was designated an assistant general counsel in the Office of General Counsel, effective September 1972.
- Robert A. Peterson, senior asso-

ciate director, Human Resources Division, was designated an assistant director in the General Government Division, with responsibility for the audits of seven independent regulatory agencies, effective October 29, 1972.

- Carmen E. Smarrelli, senior group director, Procurement, Logistics and Readiness Division, was designated an assistant director in the Logistics and Communications Division, responsible for audits of logistics support services, such as industrial preparedness, Government printing, food services, public affairs, and industrial plant equipment, effective November 26, 1972.

TOPICS, Cont. from p. 13

Validity is an indicator of the extent to which a process measures what it purports to measure. With respect to content analysis, validity refers to how well the coded information corresponds to reality. For example, how well does our count of insurance claims for stolen entertainment equipment correspond to the actual claims in the same sample? (Errors due to sampling are a separate matter.) It is difficult to judge the validity of a content analysis because some other estimate of the number of claims needs to exist—an estimate which can be used to gauge the correctness of the coding procedures. A variety of approaches is available for determining the validity.

It should be noted, incidentally, that a measuring process may be high on reliability and yet low on validity; that is, there may be great consistency among the coders (high reliability), but they may make many common coding errors (low validity).

Applications

Whenever a need exists for numerical data and written messages from which we might extract such information, there is an opportunity to use content analysis. Whether any given opportunity would be a good application of the method depends upon several factors, some of which are outside the realm of content analysis. No doubt there have been many ill-advised ap-

plications of the data obtained from content analyses. We confine our comments to the coding process itself, not to analyses performed on the data.

In most GAO applications, content analysis would be one of several tools used to obtain answers to evaluative questions; that is, data produced by a content analysis would usually be combined with other information and then analyzed by standard techniques. For our purposes, written material is divided into two main categories: messages already available as a result of human transactions and messages that GAO elicited directly from respondents. Already available material includes legal documents, program descriptions, policy directives, government reports, legislation, transcripts of hearings, grant applications, etc. The distinguishing characteristic of this category is that the only act necessary to acquire the information we need is to ask for it.

We obtain the other category of material when GAO seeks information directly from respondents through questionnaires or interviews. Although some directly acquired information might already be in numerical form, other information, such as answers to open-ended questions, might usefully be coded by content analysis. Similarly, taped interviews and transcribed interview notes are candidates for content analysis. The reason for distinguishing this category of material is that there is

an opportunity, in the planning phase, to organize the information collection so as to minimize problems during the content analysis phase.

Where To Look For More Information About Content Analysis

Babbie, E. R. *The Practice of Social Research, Second Edition*. Wadsworth, 1979. Includes a short, nontechnical introduction to content analysis, with examples.

General Accounting Office. *Content Analysis: A Methodology for Structuring and Analyzing Written Material*. Washington, D.C., 1982. Methodology Transfer Paper 3 from the Institute for Program Evaluation. A brief, readable introduction to the topic.

Holsti, O. R. *Content Analysis for the Social Sciences and Humanities*. Addison-Wesley, 1969. Good coverage of operational details.

Krippendorff, K. *Content Analysis: An Introduction to Its Methodology*. Sage, 1980. More difficult to read than the others, but useful, especially for its reliability and validity sections.

North, R. C., et al. *Content Analysis: A Handbook with Applications for the Study of International Crisis*. Northwestern University Press, 1963. Includes several variations on the content analysis theme.

GAO Is on the Scene

For followers of world affairs, it is clear that interest in Latin America and the Caribbean has never been greater and is on the increase. When you pick up tomorrow's paper, you will read about developments in this region. It may involve a presidential or congressional visit, the Caribbean Basin Initiative, the Panama Canal, illegal immigration, or U.S. military assistance. But whatever the issue, rest assured that GAO has staff on the scene and is prepared to provide information and knowledgeable insights which can only be gained through firsthand experience. The LAB staff enjoy working in a region which is finally beginning to receive increased attention, and we also enjoy living in an environment that ID staff in Washington and the European Branch can only dream about from November to March.

AND you thought it was only a canal!

DID you know that . . .

- over 850 species of birds make Panama their home?
- the name Panama is an Indian word meaning "abundance of fish?"
- Panama's Colon Free Zone is the largest free zone in the Western Hemisphere with \$4.2 billion worth of goods passing through annually?
- Panama has over 800 islands?
- the 1983 Miss Universe contest will be held in Panama?
- Panama has over 130 international banks?
- over 300 species of orchids flourish naturally in Panama?
- Rod Carew and Roberto Duran are from Panama?
- the longest vessel to transit the Canal was the 973-foot-long San Juan Prospector?
- the most expensive transit was by the Queen Elizabeth II, which paid \$89,154?
- the cheapest transit was by Richard Halliburton, who swam the canal in 1926 for \$.36?

ROBOTICS, Cont. from p. 25

the Federal Government will be involved in all aspects of the social problems created by automation. The controversial CETA program has raised many questions about Federal participation in training. Debate over the extent of this involvement will continue, but some roles filled by the Federal Government in the past should not be overlooked. They include the following:

- *Providing information.* The government is in the best position to collect and analyze work force information on a national scale. However, to date little effort has been devoted to providing information about the new technology, and recent budget cuts have impaired the reliability of data bases at the local level.
- *Promoting curriculum development.* In the past, the Federal Government has assisted in developing high-risk curricula to alleviate risks too great for individual institutions and prevent unnecessary duplication of effort. This type of Federal involvement is critical for vocational education.⁷ Job displacement and technological transformation are already occurring at a swift pace and will

accelerate in future years. Vocational institutions simply do not have time to waste resources and fail to explore critical new programs.

• *Promoting cooperation.* The Government could also act as a catalyst in promoting cooperation between industry and educational institutions, as well as among the institutions themselves. Such cooperation could alleviate problems, such as high equipment costs and teacher shortages. The Department of Education's series of Robotics Roundtables is a step toward fostering this coordination.

• *Providing training assistance.* Federal training funds have undergone massive budgetary cuts during the past 2 fiscal years. Funds for retraining have been and will continue to be relatively small. Yet allowing the burden to fall on the private sector may not provide adequate coverage. The responsibility for retraining workers when there are no jobs for them within the same company, or even the same industry, is unclear. However, the social costs to the Government of increased social welfare payments and services argue for Federal involvement. Programs such as the Downriver

Community Conference may ensure worker protection while retaining local control.

Programs to give the structurally unemployed useful skills will continue to be important as more unskilled jobs are eliminated. The recently enacted training legislation sponsored by Senators Quayle and Kennedy emphasizes this approach, but at funding levels far below those of the old CETA program. The ability of private-sector institutions to reach out to these people and absorb the Federal cuts is doubtful. Under CETA, vocational educational institutions sometimes acted as providers for Prime Sponsors. Private Industry Councils, a recent CETA addition emphasized by the new legislation, should try to improve their coordination with vocational educators.⁸

Are We Prepared for Robotics?

The mention of robotics evokes emotions ranging from optimism to

⁷National Commission for Employment Policy, *The Federal Role in Vocational Education*, September 1981, pp. 11-13.

⁸*Ibid.*, p. 67

apprehension according to the perception of benefits received from the technology's introduction. Automation undoubtedly will cause structural hardship. The real questions are how long this hardship will

last for individual workers and whether the problems programmable automation creates will be greater than they need be.

Failure to prepare for advanced technologies could lead to disaster, both for workers and the country's industrial base. Yet early awareness of the technology's implications

could turn the potential for disaster into an opportunity for progress. For the vocational education system, anticipating the technology's effects could mean an opportunity to prepare a highly skilled work force and to prevent the familiar paradox of skill shortages in the midst of unemployment.

IMPROVEMENT, Cont. from p. 29

deputy minister. This gives him a significant opportunity to assess progress toward meeting action plan goals at the individual manager level.

The departmental officials with whom we met tended to support the OCG views about the importance of the cooperative relationship and the seed money provided to get projects started. One department had established a separate management services division to implement its action plan and help better organize the department's operations.

In summary, we were quite favorably impressed by the concepts underlying the IMPAC programs, the skills and attitudes of OCG personnel responsible for carrying them out, and the progress described to us by department officials. We will benefit from their experience in developing guidelines for the original IMPAC surveys. Their thinking about what constitutes a good public management system complements our own concepts and ideas. Finally, their faith in this change agent role and the departmental officials' receptivity to the hands-on assistance provides valuable insights about how to achieve change constructively.

Program Evaluation and Internal Audit

While visiting the Comptroller General's office, we also met with officials responsible for overseeing program evaluation and internal audit activities in the executive departments. OCG establishes governmentwide policies on both these activities.

With regard to program evaluation, departments and agencies are expected to regularly evaluate the efficiency and effectiveness of their programs as an integral part of program management. In the last 2

years, Canadian departments have been quite active in setting up program evaluation functions. Based on guidance provided by the OCG, they first established a departmental program evaluation policy to ensure that evaluations are conducted objectively, and then developed a departmental program evaluation plan delineating a set of program evaluation components and identifying when each component is to be evaluated.

In theory, program evaluation should fit nicely into the PEMS system by providing program managers feedback to enable them to adjust and improve their long-range plans in light of actual results achieved. In reality, the progress to date has fallen short of expectations. Mr. Rogers reported in March 1982 that

While progress is substantial, even impressive, I am unable to report that departments are now carrying out an adequate number of good quality evaluations or that the studies conducted are uniformly and fully considered by departmental management.

In providing guidance and assistance to the departments, OCG seemed to be taking a pragmatic approach. The official with whom we met commented on the unevenness across departments with which program evaluation was being implemented. Part of the problem was a shortage of qualified personnel. Rather than prescribe a universal set of guidelines, OCG seemed to be supporting a concept that whatever was best in a given department's environment is the way to go.

Concerning internal audit, the OCG publishes governmentwide standards akin to GAO's yellow book. Canada's internal auditors perform roles similar to those of our inspectors general but with some

differences in emphasis and style. Auditors in Canada are seen more as an integral part of the management team. While they are still expected to retain their independence, greater emphasis has been placed on developing a constructive audit approach, whereby as much interest is shown in internal controls to eliminate waste and inefficiency as in those controls maintained for the prevention and detection of fraud.

We learned about two facets unique to Canada. The first was the existence of a separate Audit Services Bureau in the Department of Supplies and Services. This bureau has 350 personnel who perform audits in such areas as federal/provincial agreements and provide special audit services to smaller departments and agencies. This is similar to a core internal audit staff that picks up the overflow and handles miscellaneous chores. The second was the widespread use of management audit committees in the departments.

The audit committees, chaired by the deputy minister and composed of senior department managers, help plan internal audit activities and assess managerial actions taken in response to internal audit reports. Through these committees, the internal auditors have a direct link to top management. In turn, top management has a voice in influencing the direction of internal audit activities.

The OCG is encouraging departments to include outside members—either from other departments or the private sector—on their audit committees to improve objectivity and add external experience to the resolution of audit issues. So far, the departments have resisted this innovation.

Overall, we viewed these audit committees as a promising initiative

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that may improve communication between auditors and managers in our own government. On the other hand, we had no way of knowing whether internal auditors' independence was infringed on by such committees. In addition, the statutory independence and reporting responsibility to the Congress may preclude the use of such committees in our own executive departments. Nevertheless, we are seeing greater cooperation between inspectors general through the President's Council on Integrity and Efficiency and interaction with agency managers through joint OMB-sponsored meetings with the assistant secretaries for administration. Perhaps instituting departmental management committees would be a logical extension of these other recent coordination efforts. With such committees, it would be harder for internal auditors to be ignored by top management.

Bureau of Management Consulting

Founded in 1946, the Bureau of Management Consulting offers a full spectrum of management consulting services to Canadian departments and agencies on a fee-for-service basis.

Although the consultants' capabilities and skills are oriented to the

public sector, they have previously amassed an impressive body of private-sector experience. They provide specialized skills and techniques, solve problems peculiar to the public sector, and advocate new ideas and methods. Interdisciplinary teams of consultants can be assembled from other Canadian departments or the private sector working under subcontract.

The consultants are well aware of Canadian government policy and procedures as well as underlying problems which might affect assessment of alternative courses of action. They claim to express their views in unequivocal fashion. To facilitate this, their reports are always confidential to the client.

Bureau officials said they took pains to avoid competing with private-sector consultants. They do not undercut their prices.

The Bureau was instrumental in helping to establish the Office of Comptroller General. They assisted in putting together the first survey package for the agency assessments. Now they are reaping the benefits. The Bureau is busier than ever as departments work toward implementing their action plans. Several new staff members had recently been brought on board at the time of our visit.

Conclusions

Reflecting on all our meetings and the information we brought back,

here are some overall impressions:

- The parliamentary system in Canada provides a different, perhaps better-suited framework for strategic planning and systematic management across government.

- The Auditor General, as an agent of Parliament, will largely be looked on as an outsider, making the comprehensive audit approach primarily an external force in management improvement. However, he has developed an approach worth considering, and his staff has worked to develop criteria for assessing management practices.

- The IMPAC program is impressive but hard to emulate in the United States. OMB would be a better base for it than GAO if it were implemented here. Identifying cost savings is important in gaining cooperation and justifying continued support. At this point, it is hard to tell whether IMPAC will be a one-time effort or evolve into a continuous management improvement program.

- Accomplishing our own management studies goals now seems more challenging than ever, but taking the constructive approach advocated by the Canadian Comptroller General appears to be the most promising alternative even if we cannot emulate the IMPAC program in all its aspects.

We will continue to follow developments in Canada with great interest in the years ahead.

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ployee, and Government agencies seeking to recover unpaid criminal fines (Department of Justice) and taxes (Internal Revenue Service).

Until April 1982, the Justice Department had a blanket policy to not disclose a witness' identity or location to help an innocent citizen enforce a court judgment against a witness. In effect, this previous policy precluded creditors and other persons from successfully collecting or enforcing lawful debts or judgments. Under its new policy, the Justice Department will now consider disclosing a witness' identity if it believes that the witness has adequate resources to satisfy a civil obligation and that the

disclosure will not result in harm to the witness. While this represents a major step in the resolution of civil problems, we believed legislative changes were needed to better balance the competing interests the Department encounters in administering the program.

GAO's Efforts

In our report on the administration of the Witness Security Program, we concluded that the resolution of civil problems caused by relocated witnesses creates a difficult dilemma for the Department of Justice. On one hand, the Department operates a program (believed to be indispensable in prosecuting high-level criminals) that makes a commitment to

protect the lives of witnesses in the program. Obviously, that protection is enhanced by keeping their new identities and locations a closely guarded secret. On the other hand, as the Nation's chief law enforcement agency, the Department has a basic obligation to uphold the laws of the land and assist in their enforcement. When a creditor or other innocent citizen seeks to enforce a court order against a relocated witness, the Department must make a difficult choice between principles: It must choose either to disclose a witness' identity to enforce law or not to disclose to protect the witness and the program's integrity.

GAO is continuing its examination of the Witness Security Program for

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the Chairman of the House Subcommittee on Courts, Civil Liberties and the Administration of Justice. This effort is the first independent exami-

nation of the nature and extent of criminal activity by relocated witnesses. Also, we will be making the first comprehensive attempt to identify and quantify program use and

results. Through its efforts, GAO hopes to present information and recommendations that will help solve problems in the Witness Security Program.

PROGRESS, Cont. from p. 45

establishing minimum GPAs that the students must meet. Students would be required to have a "C" average at the end of each year they receive assistance. Students failing to achieve this would be placed on probation for one term, with suspension of aid to follow if they still had not attained a "C" average at the end of that period. Exceptions would be granted only when the student could document an unusual hardship affecting his or her grades, such as a death in the family. A student could become eligible for assistance again by maintaining a "C" average for two consecutive grading periods, with permanent

suspension of aid to follow if aid is lost a second time. The bill containing this amendment has been referred to the Senate Committee on Labor and Human Resources.

In Conclusion

The problem of ensuring student academic progress will not be solved easily. The answers themselves are likely to present other thorny questions. How do you deal with grade inflation? What happens when a school already struggling for survival is faced with having to set standards which may significantly reduce enrollment? How is progress to be measured at nontraditional schools which do not use a competitive grading system or which offer short-

term programs?

The unlikelihood of discovering a panacea for every possible aspect of the problem should not preclude attempts to deal with the problem itself. The final answer will no doubt require a number of actions and would hopefully be provided in part by the very parties for which the programs are designed: the students themselves and the institutions they attend. The rewards are worth the struggle. Sound academic progress guidelines will not only ensure scarce resources are used efficiently but will also help to promote the integrity of these programs which have provided such a valuable benefit to Americans seeking a post-secondary education.

GAO Staff Changes



Baltas E. Birkle

Mr. Birkle has been named deputy director for operations in the Resources, Community and Economic Development Division. Within GAO, he has had widely diverse audit assignments, which included the Department of the Interior, Tennessee Valley Authority, U.S. Postal Service, NASA, GSA, VA, and HUD. In addition, he served 2 years on the former Accounting and Auditing Policy Staff and 9 years as deputy director of the former Resources and Economic Development Division and the Community and Economic Development Division.

Mr. Birkle attended the University of Maryland and received his B.S. in accounting in 1951. He also holds a master's degree in economics.

Mr. Birkle has attended the Program for Management Development at the Harvard Business School. He has received the GAO Career Development Award, the Distinguished Service Award, and the CED Director's Award. Mr. Birkle is a CPA (Maryland) and a member of the American Institute of CPAs and the District of Columbia Institute of CPAs.



Ralph Carlone

Mr. Carlone has been named the deputy director for planning and reporting in the Resources, Community and Economic Development Division.

A graduate of Bloomsburg State College in Pennsylvania, Mr. Carlone served in the U.S. Marine Corps (1956-60) and joined GAO in 1964. His diverse assignments have included responsibilities for audits at the Veterans Administration and the former Atomic Energy Commission. From 1976 to 1978, he served as associate director in the Energy and Minerals Division, responsible for the activities of the Nuclear Regulatory Commission and for audit and analysis of Department of Energy research and development programs. Since 1978, Mr. Carlone has served as regional manager of the Philadelphia office.



Mary Hamilton

Mary Hamilton has been named assistant regional manager for operations in the New York Regional Office. Ms. Hamilton was formerly the group director for science and technology in the Program Analysis Division.

Ms. Hamilton joined GAO in 1979. Prior to 1979, she managed an energy policy group at the BDM Corporation in McLean, Virginia, and taught sociology at St. Mary's University in San Antonio, Texas.

Ms. Hamilton holds a Ph.D. in sociology from the University of Maryland, an M.A. in sociology from the University of North Carolina, and a B.A. in sociology and psychology from Bethel College, St. Paul, Minnesota.

ATTRITIONS

Division	Name	To
Accounting and Financial Management Division	Kenneth George	ACTION
	Christine E. Palmer	American Speech-Language Association
Personnel	Linda Boyer	Dept. of the Interior
Program Analysis Division	Marc Bickoff	Government Printing Office
	Henry Handy	Private industry
	Thomas Woodward	Congressional Research Service
Denver	Lewis DeLeon	Dept. of the Army
	Peter Fernandez	Dept. of the Interior
	Don Gilman	Dept. of the Interior
	Kathy Pareja	Colorado Dept. of Social Services
	Robert Smith	Dept. of the Interior
	Ralph Spencer	Dept. of the Interior
San Francisco	Phil Sykora	Dept. of the Interior
	Judy Ashley	State of Washington
Seattle	Dona Sosnowski	Naval Postgraduate School
	Cynthia Buckley	Singing career
Washington	Jeffrey Glick	Federal Emergency Management Agency
	Donald Henry	Veterans Administration
	Linda Saunders	Not specified
	Patricia Serone	Honeywell, Inc.
RETIREMENTS		
Marian Becker	GAO Evaluator	Detroit Regional Office
	Phyllis Walker	Personnel Clerk

New Staff Members

The following new staff members reported for work during the period September 6, 1982, and October 31, 1982.

Office of Administrative and Publishing Services	Wheeler, Katherine M.	Dept. of the Army
Office of the General Counsel	Ashen, David A. Chalpin, Mark G. Curcio, Mary G. Gaines, Joy E. Hynous, Anne M. Klazkin, Julian Leger, Charles P. Maguire, Frank Moorhouse, Richard L. Nagata, Joyce F. Smith, Stephen G.	Hastings College of Law University of California St. John's University University of Pennsylvania Wayne State University Catholic University Antioch School of Law Loyola Law School Suffolk University University of San Diego Villanova University
Accounting and Financial Management Division	Mycka, Arleen M.	MITRE Corp.
Human Resources Division	Smith, Betty J. Vila, Maria L.	Securities & Exchange Commission Bechtel International Construction Corp.
REGIONAL OFFICES		
Denver	Brenner, Sherry M. Gvoth, Paul A. Hixson, Sue E.	Polly Chandler Bookstore University of Denver University of Cincinnati
Seattle	Robinson, Beverly	Robinson Newspaper

Professional Activities

Office of the Comptroller General

Comptroller General **Charles A. Bowsher** addressed the following groups:

President's Council on Integrity and Efficiency, Washington, Aug. 3.

American Institute of Certified Public Accountants Annual Meeting, Portland, OR, Oct. 4.

Canadian Comprehensive Auditing Foundation, Montreal, Oct. 5.

Joint Meeting of the Association of Government Accountants, Central Germany Chapter, and the American Society of Military Comptrollers, Frankfurt, Heidelberg, Rhineland-Pfalz Chapters, Frankfurt, Germany, Oct. 28.

Office of the General Counsel

Seymour Efros, associate general counsel:

Spoke to the GSA Regional Counsel's Conference on significant GAO procurement decisions on major procurement issues currently confronting Federal agencies, Atlanta, Sept. 29.

Jerold D. Cohen, senior attorney, participated in a panel discussion on architect-engineer contracts at the American Society of Civil Engineers Convention, New Orleans, Oct. 27-29.

Richard Springer, senior attorney, participated in a seminar on "Managing an International Oil Supply Crisis," sponsored by the American Bar Association, Annapolis, MD, Oct. 22-23.

Personnel

Donnie L. Dick, group manager of Personnel's Operations Group, participated in a symposium on "Careers in Transition: A Public/Private Dia-

logue for the Future," sponsored by the Montgomery County Economic Advisory Council at the Linden Hill Hotel, Bethesda, MD, Oct. 25.

Accounting and Financial Management Division

George L. Egan, Jr., associate director:

Participated in the President's Council on Integrity and Efficiency Conference at the Office of Management and Budget, Washington, Sept. 14.

Together with **Joseph D. Comtois**, group director, spoke on "What's Happening in Washington," before the Mountain and Plains Intergovernmental Audit Forum, Cheyenne, WY, Oct. 22.

Spoke on "Waste, Fraud, and Abuse," before the Office of Personnel Management's Regional Management Conference, Atlanta, Oct. 26.

Spoke on "Career Opportunities with the Federal Government," before the American University's Career Seminar on Accounting and Tax, Washington, Oct. 29.

Brian L. Usilaner, associate director, spoke on "Cutback Management" at the Office of Personnel Management's Management Conference, Atlanta, Oct. 26.

Ronald J. Points, associate director:

Spoke on internal controls before the Twelfth International Congress of Accountants, Mexico City, Oct. 12.

Spoke on Single Governmental Audit Concepts before the North Carolina State CPA Meeting,

Winston-Salem, NC, Oct. 25.

W. A. Broadus, Jr., group director:

Conducted briefings, workshops, etc., on Government Audit Standards and governmental auditing at the Colorado Society of CPAs, 1982 Governmental Conference, Denver, Sept. 10; Defense Audit Service, Washington, Sept. 21; Association of University and College Auditors, Annual Conference, Pocono Manor, PA, Sept. 28; GAO Kansas City Regional Office, Kansas City, MO, Oct. 5-6; AICPA/AGA National Governmental Training Program, Kansas City, MO, Oct. 20-21; AACSB Accounting Accreditation Visit to Indiana State University, Terre Haute, Oct. 24-27 (served as cochairman); and Indiana State Examiner's Staff Meeting, Indianapolis, Oct. 27. Was appointed to serve on the AGA's Financial Management Enhancement Board and to chair the relations with AICPA and NASBA Committee and to serve on the AACSB Special Task Force on Accounting Accreditation Standards.

Joseph J. Donlon, senior group director, served as panel moderator for a seminar sponsored by the Joint Financial Management Improvement Program and the Capital Region of the Association of Government Accountants on the Prompt Payment Act, Arlington, VA, Sept. 13.

Theodore F. Gonter, group director, chaired a session on "OMB Circular A-123 and EDP Management" at the 18th annual meeting of the Computer Performance Evaluation Users Group, Washington, Oct. 28.

James R. Watts, group director, spoke on "Computer-Related Fraud" before the Department of Agriculture's Fourth Annual ADP Security Officers Seminar, Washington, Sept. 22.

Carl R. Palmer, group director:

Chaired a panel session on "Defense Computer and Communica-

tions Acquisitions" at the Federal Computer Conference, Washington, Sept. 29.

Chaired a panel on "Financial Management" at the Computer Performance Evaluation Users Group annual meeting and spoke in the keynote session on "Challenges for the Profession in the Eighties," Washington, Oct. 25-26.

Darrell Heim, ADP assignment manager:

Together with **Lee Conyers**, management analyst, spoke on "Auditing in a Computer Environment," at the U.S. Army Logistic Management Center, Ft. Lee, VA, Sept. 20.

Together with **Roger McDonald**, senior ADP auditor, discussed "Computers, Financial Audits, and Third Party Reviews," at a training program sponsored by the Pennsylvania State Auditor General, Harrisburg, PA, Oct. 5.

Lee Conyers, management analyst, together with **Ed Wingfield**, ADP auditor, discussed "Auditing in a Computer Environment," at the U.S. Army Audit Agency's East Central Region Staff Conference, Hampton, VA, Oct. 27.

Joint Financial Management Improvement Program

Susumu Uyeda, executive director:

Gave a presentation on JFMIP to USDA's Third Annual Financial Council Conference, Washington, Oct. 12.

Spoke on "Internal Control and the Financial Integrity Act" at the Veterans Administration's National Finance Officers meeting, Austin, TX, Oct. 26.

Gave a talk to the Austin Chapter of the Association of Government Accountants on "Internal Control and the Financial Integrity Act," Austin, TX, Oct. 26.

Gave a presentation to the Houston Chapter of the Association of

Government Accountants on "Internal Control and the Financial Integrity Act," Houston, TX, Oct. 26.

General Government Division

William J. Anderson, director, addressed the Brookings Institution's Advanced Study Program Conference for Business Executives on Federal Government Operations, Washington, Sept. 27.

Sebastian Correia, group director, discussed GAO's report "Early Observations on Block Grant Implementation" (GAO/GGD-82-79, Aug. 24, 1982) before the Lutheran Resources Commission, Washington, Nov. 27.

Richard B. Groskin, social science analyst:

Was appointed cochairperson of the Policy Issues Committee of the American Society for Public Administration, Section on Criminal Justice Administration.

Authored a resolution adopted by the National Council of ASPA in July 1982 calling upon the President of the United States to establish a National Commission on Crime Control and Administration of Justice Policy.

Was appointed to a second term on the Executive Committee on National Policy for Justice Administration of the American Society of Criminology for 1982-83.

Human Resources Division

John W. Lainhart, group director:

Spoke at the Auditor General of Pennsylvania's EDP Auditor Training Program on "Evaluating Internal Controls in Computer-Based Systems," Harrisburg, VA, Sept. 14.

Spoke at the Keystone Capital Area Chapter, EDP Auditors Association meeting on "GAO's Approach to Evaluating Internal Controls in Computer-Based Systems," Lancaster, PA, Sept. 14.

Samuel Deramo, evaluator, spoke

on "Medicare Home Health Program on Need, Use, and Cost," before the Third Annual Conference on Aging and the Black Aged, at Morgan State University, Baltimore, Oct. 13.

Institute for Program Evaluation

Eleanor Chelimsky, director:

Received the Evaluation Research Society's Award for Evaluation in Government, at the ERS annual meeting, Baltimore, Oct. 28.

Garry L. McDaniels, deputy director, coauthored a chapter with Mary Kennedy entitled "Informing Policy Makers About Programs for Handicapped Children" in *Learning From Experience: Evaluating Early Childhood Demonstration Programs*, published by the National Academy of Science, 1982.

Wallace M. Cohen, group director:

Chaired a session on "Evaluation and Accountability Issues" at the national meeting of the Operations Research Society of America and the Institute of Management Science, San Diego, in October. He was also a panelist in another session dealing with "Utilization of Evaluation Information by Federal Managers."

Chaired the opening meeting of the Federal Agency Evaluation Director's Forum at the Veterans Administration, Oct. 5.

Together with **Jeremiah Donoghue**, site coordinator for the Albany regional suboffice, briefed members of the National Council of State Legislators, Executive Committee on Program Evaluation, Albany, NY, Oct. 14-15.

Ray Rist, deputy associate director, has had released by Sage Publications his most recent book, *Policy Studies Review Annual*. This book has brought together 40 of the most important policy studies articles published between late 1980 and early 1982.

Terry Hedrick, evaluator, was named the recipient of the President's Prize at the 1982 annual

meeting of the Evaluation Research Society in Baltimore, Oct. 28-30, 1982. Ms. Hedrick received the award for execution of a GAO report entitled, "CETA Programs for Disadvantaged Adults—What Do We Know About Their Enrollees, Services, and Effectiveness?"

Program Analysis Division

Osmund T. Fundingsland, associate director, served as resource person for the OPM/Washington Management Institute Program on Management of Scientific and Engineering Organizations and conducted sessions on "National Science and Technology Policies, Planning, and Organization" and "Management of R&D Programs and Projects," Sept. 22.

Mary Hamilton, group director, addressed the 50th anniversary meeting of the Accreditation Board for Engineering and Technology on "Federal Perspectives on Engineering Education," Colorado Springs, Oct. 27.

Natwar M. Gandhi, supervisory evaluator, addressed the fourth annual University of Hartford Institute on Insurance Taxation on "Is There Life After Stopgap? The GAO Perspective on Revision of the Life Insurance Company Income Tax Act of 1959," Oct. 5.

Robert Kershaw, evaluator, spoke on "The Use of Evaluability Assessment Principles To Support Congressional Budget and Oversight Reforms," at the ERS/ENET Evaluation '82 meeting, Baltimore, Oct. 29.

Charles Vehorn, economist, discussed "Enterprise Pricing—User Fees and Charges" at the region IV conference of the American Society for Public Administration," Pittsburgh, Oct. 8.

Regional Offices

Chicago

James P. Clark, evaluator, participated in a panel discussion on "Employment of the Handicapped" before the Federal Executive Board,

Chicago, Oct. 5.

Stewart O. Seman, evaluator:

In his role as regional vice president of the north central region of the Association of Government Accountants (AGA) spoke on "Developing Professional Competence" before AGA's Springfield, Illinois chapter, Oct. 20.

Was appointed to the Chicago Federal Executive Board's Hispanic Employment Program manager's awards subcommittee.

Cincinnati

Terry Davis, **Bruce Fairbairn**, **Russell Keeler**, **Diana Brettl**, evaluators, Cincinnati; and **Bob Wychulis** and **Jeff Chaney**, HRD, discussed GAO's role in auditing the Social Security Disability Insurance Program and participated in a panel discussion before the Indiana Chapter of the National Association of Disability Examiners, Indianapolis, Oct. 27.

Bob Kissel, evaluator, attended the 16th annual meeting of the Federal Interagency Advisory Committee on Water Data, Virginia Beach, VA, Oct. 19-20.

Jim Meissner, assistant regional manager:

Spoke on "Fraud, Waste, and Abuse in Government Programs" before the Indianapolis AGA Chapter's program on "Internal Controls in Government Activities," Oct. 20.

Spoke before the College of Mount St. Joseph's professional development class on "Careers in the Government—An Emphasis on GAO," Cincinnati, Oct. 28.

Detroit

Walter C. Herrmann, Jr., regional manager, spoke before the Association of Government Accountants, Lansing Chapter. His speech, entitled "The AGA: Where Are We Going?" was presented to the chapter in Lansing, MI, Sept. 23.

Denver

Emmanuel Olona, evaluator, received one of the greatest honors

bestowed by the National Boy Scouts of America: induction into the Order of the Arrow, Camp Frank Rand, NM, Sept. 10-12.

Robert W. Hanlon, regional manager:

Participated with **Shirley C. Ward**, assistant regional manager, and **Floyd A. Gonzales**, evaluator, in the Hispanic Professional Career Opportunities Conference sponsored by the League of United Latin American Citizens and the Digital Equipment Corporation. Also participating were **Frank Campos**, supervisory evaluator (San Francisco) and **Richard C. Erbal**, (Personnel), Denver, Oct. 30.

Spoke on "Practice, Practice, Practice" before the charter meeting of the Hilltoppers Toastmistresses, Denver, Sept. 8.

Together with **James A. Reardon**, senior evaluator, attended the semiannual meeting of the Mountains and Plains Intergovernmental Audit Forum, Cheyenne, WY, Oct. 21-22.

James A. Reardon, senior evaluator, spoke on "Implementing the Single Audit" before the Federal Regional Council, Region VIII, Denver, Sept. 21.

Norman G. Austen, evaluator, presented a symposium on "Auditing Computer-Based Systems" to representatives of the National Bureau of Standards, the Department of Commerce, other Government agencies, and various commercial ADP vendors, Gaithersburg, MD. Sept. 29.

Kansas City

Gary Billen, professional development coordinator, spoke to the cooperative education students at Rockhurst College on the benefits of obtaining work experience in a co-op program and opportunities in GAO, Oct. 12.

David A. Hanna, regional manager, discussed personnel system and organization changes with the personnel administration class at the

University of Kansas, Lawrence, Oct. 28.

Los Angeles

Victor Ell, assistant regional manager, attended the Executive Development Program at the University of California at Berkeley, Aug. 2-6.

San Francisco

Charlie Vincent, supervisory evaluator, talked to Navy meteorologists at Alameda Naval Air Station about the role of GAO, Sept. 15.

Art Davis, evaluator, taught an advanced cardiac life support class for medical personnel of the city and county of San Francisco on Oct. 23.

Seattle

Donald A. Praast, senior evaluator:

Spoke on "The Pacific Northwest Intergovernmental Audit Forum's Program for Dealing with Substandard CPA Audit Work" at a conference of the Midwest Intergovernmental Audit Forum, Lansing, MI, Oct. 6.

Under the aegis of the Pacific Northwest Intergovernmental Audit Forum, coauthored "Audit-

ing for Fraud—A Resource Guide," a comprehensive resource document for use by audit managers and field auditors on the subject of fraud and abuse, October.

Charles D. Mosher, audit manager:

As president of the Washington section (chapter) of the American Water Resources Association, led a leadership meeting of State section presidents at the 18th national association conference, San Francisco, Oct. 10.

Keith C. Martensen, senior evaluator:

Was appointed by the Director, Indian Health Service, Department of Health and Human Services, to the Director's Task Force on Contract Health Services, Oct. 20.

Served as a member of the Director's Task Force at meetings of the Claims Processing Subcommittee, Billings, MT, Oct. 27-28, and Steering Committee, Washington, Nov. 2.

Walter R. Eichner, evaluator, spoke on "Fraud Auditing" at the Seattle Chapter, Association of Government Accountants' annual Symposium on Financial Management, Oct. 28.

Thomas E. Birmingham, evaluator:

Was appointed as awards chairperson for 1982-83 by the Seattle Chapter, Association of Government Accountants, Sept. 15.

Served as facilitator for a workshop on "Theory Z Management" at the Chapter's annual Symposium on Financial Management, Seattle, Oct. 28-29.

W. Floyd Nichols, senior evaluator, completed a 2-year term as treasurer and member of the board of trustees of the Seattle Philharmonic Orchestra.

Washington

Eric Marts, evaluator, together with Patricia Cole, evaluator, participated in the U.S. Department of Education's Office of Vocational and Adult Education's Robotics Round Table Seminar, Washington, Aug. 19.

Eileen Larence, evaluator:

Is president-elect of the Northern Virginia Chapter of the American Society for Public Administration (ASPA).

Was appointed to serve on the National Membership and Chapter Development Committee of ASPA.

Annual Awards for Articles Published in The GAO Review

Cash awards are presented each year for the best articles written by GAO staff members and published originally in *The GAO Review*. The awards are presented during the GAO Awards Program held annually in October in Washington.

One award of \$500 is available to contributing staff 35 years of age or younger at the date of publication, and another is available to staff over 35 years of age at that date. Staff through grade GS-15 at the time they submit the article are eligible for these awards.

The awards are based on recommendations of a panel of judges designated by the Editor. The judges will evaluate articles from the standpoint of their overall excellence, with particular concern for

- originality of concept and ideas,
- degree of interest to readers,
- quality of written expression,
- evidence of individual effort expended, and
- relevance to "GAO's mission."

Statement of Editorial Policy

This publication is prepared primarily for use by the staff of the General Accounting Office (GAO) and outside readers interested in GAO's work. Except where otherwise indicated, the articles and other submissions generally express the views of the authors and not an official position of the General Accounting Office.

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