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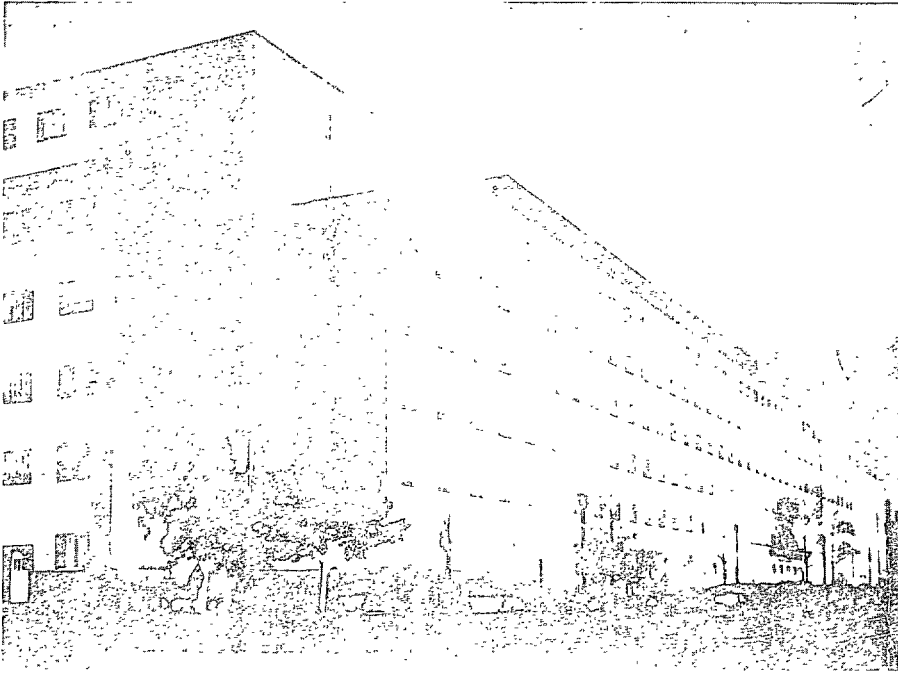
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THE GAO REVIEW

SUMMER 1974

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The GAO Building, 441 G Street, NW., Washington, D.C. President Harry S. Truman participated in the laying of the cornerstone in September 1951. During the dedication ceremonies he stated:

“Many people in the Government have wrongly considered the General Accounting Office a sort of bugaboo that keeps them from doing what they want to do. Many people outside the Government, when they think of the General Accounting Office at all, consider it a dry and boring subject. But the General Accounting Office is neither a bugaboo nor a bore. It is a vital part of our Government. Its work is of great benefit to all of us.”

**THE
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REVIEW**

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Why A Higher Priority Is Needed For Improved Government Reporting

Internal reporting in Government operations is costly and costs are increasing rapidly. Action is needed to improve existing reports that are needed and to eliminate those that are not needed. The following remarks were delivered by the Comptroller General at the National Archives and Records Service's Symposium on Value-Centered Reporting in Washington, D.C., April 1, 1974.

When it comes to the subject of Government reports, it is obvious that we are not so smart as we ought to be. We still have a lot to learn. Let us look, for example, at internal government reporting. This costs not just money but a lot of money. Here is the recent record.

1955. The Hoover Commission put the cost of internal Government reporting at 700 million dollars.

1966. The Post Office and Civil Service Committee figured the cost of internal Government reporting at a *billion* dollars.

1973. A study this year estimated the cost for internal reporting at about *2 billion* dollars.

If these estimates are good, over a 7-year period the cost of internal reporting has doubled. No doubt this cost will increase even more—unless a reasonable effort is made to get smart in this area and begin to reverse the trend.

Value-centered reporting means, to us at GAO, cost-effective reporting. A report should have a cost-benefit relationship. What is the cost of a report in terms of what benefits it will provide? If the benefits are minimal, the report should not be made. In the words of one expert, "there is nothing more wasteful than doing something efficiently which should not be done at all."

What does need to be done?

Federal managers today need to be more deeply concerned than they have ever been as to basic questions that should be asked about reports.

Are reports timely enough to be useful?

Are reports providing information necessary to making decisions?

Should certain reports be expanded? Cut back? Or discontinued?

Of course we all recognize that reports are needed for job planning, performance, monitoring, procurement, finance, personnel, and resources.

But we do not always recognize that reports consume the time and effort of managers and those at other working levels, and time is almost as vital a factor as money. In fact, the time required to read reports *is* money.

Mention of money in connection with reports brings to mind at once the subject of computers. Let me begin my discussion today on the subject of computers and reports.

Computers and Reports

I begin with a story. A certain research company acquired the biggest computer ever built. It was decided to ask the computer the most difficult question the researchers could think of. That question was: "Is there a God?"

So the researchers searched all the literature of religion to put information on this subject into the computer, from the Bible, the Koran, encyclopedias, and so on. Then they asked the question to the great computer: "Is there a God?" Shortly the following answer was typed out: "There is now."

As you are well aware, computers have had a tremendous impact on American society. I know of no other device that has so affected a civilization in such a short span, for it has been just over a quarter of a century since the first electronic computer was constructed.

The computer is undoubtedly the greatest producer of paperwork change. Computers can rapidly produce massive amounts of information. In the time taken by a conventional typewriter to produce a stack of papers

20 feet high, a large computer will produce a stack 7,200 feet high.

Because of this capability, we must ask ourselves, "Are the reports being generated by computers providing managers with information they can use?"

Now, much has been done with computers to provide effective service to lower and middle management. Those charged with managing inventories, for example, have far more extensive and up-to-date information than they did before the advent of the computer. The data provided to top management, however, often is too detailed or not in a format to be usable by those at the top.

The story is told by a GAO staff member of a visit to a government supply activity. While talking with the official in charge of the activity, he noticed that the official had a huge computer run on his desk. When asked what it was, the official said it was an up-to-date listing of every item in stock, including the quantity of each on hand. Asked how often he used it, the official said "Never, but I'm sure ready if I ever have to tell someone what we have on hand."

Obviously someone at the activity had to have and use such information, but the official wasn't at that level, so the detailed computer run was of little or no value to him. I fear that this may be all too typical of much of the data that is supplied to top managers. The data just isn't responsive to their needs.

Where does reporting by computers fail? In several areas. Here are some, according to some top managers.

- Formats are difficult to follow.
- Sheets are too big and there is too little information on a page.
- Reports often come with long addendums explaining dozens of abbreviations too complex to follow.
- Data is too voluminous and doesn't highlight pertinent information.
- Changes in the formats take 6 months to make.

Top managers need summarized information. Too often, I think, we have become mesmerized with quantity and the computer's capacity to produce it. We have not worked hard enough to produce quality information that top-level managers can really use.

Quality information means information summarized in ways that will point to the need for action. It also means information that is timely, easy to understand, and that bears directly on what the manager is trying to achieve.

GAO examined in detail several different types of computer-generated output at another government installation. We found, for example, that:

- Six copies of a 9,000-page report which gives the stock number, quantity on hand, and warehouse locations of about 900,000 stock items were prepared 6 times annually. There was no documentation on why this report was developed, what it was to be used for, or who authorized it.

Our discussions with the six people who received the report showed that:

- One stored it away for emergency use in the event of a disaster.

- Two used it as backup in the event their usual sources of data became unavailable.
- Two used it *occasionally* to locate selected line items.
- One had no use for it whatsoever.

GAO felt that, instead of preparing this report, magnetic tape files could be stored away for disaster security and remote terminals could provide location information.

The annual cost of this report—\$10,000.

Were the benefits worth the costs?

Computer-Output-Microfilm

A relatively new technology is computer-output-microfilm or C-O-M. C-O-M enables the computer output to be recorded on microfilm rather than on paper. The process is much faster and, due to the compactness of film, it occupies much less storage space.

Because the C-O-M process is fast, a single C-O-M unit often can service several computers. In the Norfolk, Virginia, area, 35 Federal activities use 164 computers. GAO made a review to determine whether Federal agencies were giving appropriate consideration to the benefits afforded by the C-O-M process and whether there was a potential for savings through the sharing of C-O-M facilities.

GAO found that promoting greater C-O-M use would produce substantial savings. For instance, at 8 Federal activities, 1.2 million pages (out of 4.1 million) of computer-generated reports being produced monthly on paper could be converted to microfilm at an

nual savings estimated at nearly \$1 million.

GAO also found that a number of Federal organizations were introducing C-O-M on an individual basis. This was resulting in (1) incompatible systems and (2) underuse of C-O-M equipment.

GAO concluded that, to realize the full benefits offered by C-O-M and to avoid unnecessary costs associated with piecemeal introductions of widely diverse systems, the service center concept appeared to have merit for areas having large concentrations of Federal activities.

GAO suggested in October 1972 that OMB, GSA, and other interested Federal agencies join with GAO in a study to determine efficient and effective methods for using this new technology. OMB and GSA agreed and were instrumental in establishing a steering committee in March 1973.

The Committee is sponsoring a pilot C-O-M service center at the Navy Publications and Printing Service in Norfolk and hopes to report on the results in January 1975.

It may be somewhat early to determine the extent to which reports on microfilm (C-O-M) will grow in the Federal Government. Most agencies will do well to explore its possibilities.

Financial Reports

Much financial information presented for top managers' use is ignored. They complain that the financial information they get:

—Is too voluminous.

—Takes too much study to understand.

—Does not relate specifically to the matters on which decisions are required of them.

—Does not answer some of their main questions concerning financial aspects of their operations.

As you know, GAO is responsible for approving accounting systems in the executive agencies. As we review the systems, we are increasingly concerned not only that the systems produce accurate data in accordance with prescribed principles and standards, but also that the information produced is accepted and used by operating managers. Ultimately actual use is the test.

Usefulness of Reports To The Congress

The Congress also is concerned about the usefulness of reports. In March 1972 the Chairman of the House Committee on Government Operations asked GAO to study and make recommendations for improving, or eliminating, recurring reports submitted to the Congress by executive departments and agencies.

We discussed 747 reports with 36 congressional committees and recorded their suggestions for modifying or eliminating reports. The committees identified 54 reports that could be eliminated. Thirty of these were required by law, 24 were nonstatutory; the committees also suggested improvements for 25 reports.

This was the third study of its kind in the last 15 years. The Senate and

House Committees on Government Operations completed similar studies in 1960 and 1965. These resulted in eliminating 48 reports and modifying 11 others.

Legislation introduced in the House in 1973 would require GAO to monitor various reporting requirements of the Congress and committees. It would require us to make recommendations for changes and improvements in these reporting requirements to make the reports more helpful to congressional users and to eliminate duplicative or unneeded reporting. The budget control legislation approved by the Senate on March 22, 1974, contains this same requirement.

Providing Budgetary and Fiscal Information To The Congress

Providing budgetary and fiscal information needed by the Congress is a responsibility we all have in common.

The Legislative Reorganization Act of 1970 requires that a standard budgetary and fiscal data system be developed for use by all Federal agencies. Responsibility for establishing and maintaining this system is given to the Secretary of the Treasury and the Director of the Office of Management and Budget, in cooperation with the Comptroller General.

Section 202 of the act requires the same officials to develop standard classifications for programs, activities, receipts, and expenditures of Federal agencies.

GAO is active in this project. Our main job is to act as the agent of the Congress to define congressional needs

for information and to insure that executive agencies consider those needs in developing, establishing, and maintaining the system.

Our work to date has shown that the Congress wants information on budget requests, authorizations, appropriations, obligations, and expenditures. It wants that information classified according to committee jurisdiction, responsible Federal organizations, Federal programs or subject area, rural and urban areas, and target groups.

The Congress wants information also on national estimates and socioeconomic information, such as the gross national product, consumer income, and cost of living indexes. Further, the Congress wants information on revenues and outlays by States and other political subdivisions.

We are continuing to define in more specific terms the Congress' requirements for budgetary and fiscal information. We are working cooperatively with OMB and the Treasury in their efforts to develop systems that will provide the information the Congress needs.

But, providing a system to serve the needs of all Federal agencies and the Congress presents an unprecedented challenge. Greater uniformity will be necessary than has ever before been achieved in accounting systems and other sources of information.

This is an ambitious project. It will require the cooperation of all of the agencies whose data will find its ways into the system. Moreover, the central financial agencies in the Joint Financial Management Improvement Program must play key roles in develop-

ing this system. Participation of all other Federal agencies—all of whom are partners in the joint program—is essential.

Congressional Efforts To Alleviate the Burden of Reports Required From The Public

The Senate Small Business Committee estimated in 1973 that private businesses pay between \$18 and \$50 billion a year to provide information required by Federal agencies. The need for coordinating these reports from private business in order to eliminate duplication and reduce paperwork costs led to the Federal Reports Act of 1942. The act gave OMB authority to review and approve agency requests for information from the public sector.

Alaska Pipeline Act

The Alaska Pipeline Act (Public Law 93-153) gave GAO responsibility for reviewing independent Federal regulatory agencies' plans and/or forms for collecting information. Prior to the new law, OMB had similar responsibility under the Federal Reports Act of 1942. The legislative history of the law identified seven agencies as "independent Federal regulatory agencies" but left the option open to include others. Since enactment four more agencies have been identified as being subject to the act.

GAO has responsibility for reviewing regulatory agencies' collection of information to insure that (1) required information is obtained with a minimum burden upon business enter-

prises, (2) unnecessary duplication in obtaining information already filed with other Federal agencies is eliminated, and (3) information is tabulated so as to maximize its usefulness.

However, unlike the authority previously vested in OMB, regulatory agencies make the final determination as to the necessity for collecting such information. The statute allows GAO only 45 days for its review. After that the agency may immediately proceed to collect the information in the manner proposed. GAO's responsibility covers new requests for information as well as identical or revised requests for information formerly approved by OMB.

GAO developed regulations to implement its new responsibilities and published them in the *Federal Register* on February 11. Comments received are being evaluated and final regulations will be published in the near future.

The statute also requires GAO to review all existing information-gathering practices of independent regulatory agencies to insure that needed information is obtained with a minimum burden on business enterprises and persons required to provide information. We are planning to have teams on site at the regulatory agencies by early spring to do this.

Individual's Right of Privacy

I should also mention at this point the widespread concern in the Congress over the lack of established standards and procedures governing the collection, storage, and dissemina-

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Using Analytical Experts in Auditing

As the scope of the auditor's work continues to expand, the audit staff increasingly will involve the service of experts since it is a basic audit standard that the auditors must collectively possess adequate professional proficiency for the tasks required. The author discusses some of the problems of integrating the work of GAO auditors with traditional backgrounds with that of experts in other fields.

Traditionally, auditors were trained accountants and did not stray very far from work directly related to financial matters and other work of accountants. Because the scope of auditing has broadened to include efficiency and economy of operations and effectiveness in achieving intended program results, auditors today are confronted with analytical problems and subject matters that go far beyond what a standard accounting education equips them for. This article relates some of the lessons we have learned about using experts in fields other than auditing, to help auditors deal with those problems for which they lack expertise. Recognizing that there is still much to be learned, I believe these lessons may be useful.

Before proceeding, it seems advisable to define "analytical experts." I

am using the term to mean persons—such as actuaries, statisticians, computer specialists, psychologists, and others possessing special skills—who devote their time to solving specific types of analytical problems not normally within the competence of auditors.

My definition does not include many of the college graduates GAO has recruited in recent years who have degrees in business administration, economics, public administration, mathematics, statistics, engineering, and the like. Most of these recruits have gone directly into auditing and have been trained as auditors. Although they have educational backgrounds different from those of accountants, they too encounter situations for which their training is inadequate.

Mr. Scantlebury is the director of the Division of Financial and General Management Studies, a position he has held since the establishment of that division in 1971. Previously, he served as manager of the Washington regional office. He is a CPA (Iowa and Wisconsin) and has been with GAO since 1956.

The NATO Bodies

International Secretariat	Allied Command, Atlantic;
International Military Staff	Anti-Submarine Warfare Research Centre
Military Agency for Standardization	Supreme Headquarters Allied Powers,
NATO Defense College	Europe
Advisory Group for Aerospace Research and Development	Allied Forces, Central Europe
Central Europe Pipeline System	Allied Forces, Northern Europe
HAWK Management Office	Allied Forces, Baltic Approaches
NADGE Management Office	Fourth Allied Tactical Air Force,
NATO Missiles Firing Installation	Central Europe
NATO Multi-role Combat Aircraft Development and Production Management Agency	Central Army Group, Central Europe
NATO Maintenance Supply Agency	Northern Army Group, Central Europe
NATO Integrated Communications System Management Agency	Second Allied Tactical Air Force,
NATO International Board of Auditors	Central Europe
SHAPE International School	Fifth Allied Tactical Air Force,
AFCENT School	Southern Europe
Allied Command, Channel	Allied Forces, Southern Europe
Allied Command, Atlantic	Allied Land Forces, Southern Europe
	Allied Land Forces, South-Eastern Europe
	Sixth Allied Tactical Air Force,
	Southeastern Europe
	Naval Forces, Southern Europe
	NATO (SHAPE) Programming Centre
	SHAPE Technical Centre
	SHAPE Centralized Training Facilities
	Infrastructure Projects

individually, has many opportunities to be of greater service. It can work to improve the knowledge within NATO of the Board's work and of the help it can be to NATO management at all levels. It can do this by not waiting to be asked but by taking the initiative in making contacts with management officials at all levels; committees, boards of directors, and financial officials both of NATO and of the nations' delegations. This can be done with respect to specific reports and their findings; it can also be done by explaining the Board's functions and how the scope of its reviews can be expanded to provide greater service to management. The Board can press harder for more positive action by responsible officials on the observations in its reports, and it should not hesitate to refer to the Council delays and disagreements concerning important matters.

In addition to exploring opportunities to enlarge and improve its services to other levels of NATO management, the Board should continually and critically look for opportunities to improve its own operations. It should continue to emphasize widening the scope of its audits when doing so offers reasonable prospects of improving the economy and effectiveness of NATO's operations. It should review and assess its technical performance in such areas as audit programme and work paper preparation and the use, need for, and effectiveness of review of its own work at all levels.

Now is a particularly appropriate time for the Board to build upon the solid foundations constructed over the past 20 years by preceding members

and staff. The changing political and economic conditions in the member nations have brought increasing demands and pressures from all delegations for more efficient and effective financial operations. The Board is in a key position to help meet these demands by responding to the challenges and opportunities now offered to it.

NATO International Board of Auditors

Christian Von Krogh,	Norway
Chairman	
A. Angioi	Italy
H. Dorn	Germany
Robert Drakert	United States
N. Ozsoy	Turkey

GAO Participation in NATO International Board of Auditors

Board Members:

Henry R. Domers	Mar. 1953–June 1954
Charles M. Bailey	June 1954–Oct. 1956
Robert H. Drakert	July 1970–

Deputy Board Members:

Thomas Nunnally	June 1953–Jan. 1955
Thomas E. Sullivan	Jan. 1955–Oct. 1956

Audit Staff:

Johan DeLeeuw	August 1973–
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The Atlantic Alliance

Belgium	Italy
Canada	Luxembourg
Denmark	Netherlands
France	Norway
Federal Republic of Germany	Portugal
Greece	Turkey
Iceland	United Kingdom
	United States

ing, primarily administrative job. As has been said, the Chairman tends to be the least among equals.

Conclusions

The NATO Board of Auditors down through the years has performed a valuable service for the NATO nations. It has met its primary responsibility as stated in its charter:

The primary function of the Board will be, by its audit, to enable the North Atlantic Council and, through their Permanent Representatives, the Governments of member countries to satisfy themselves that common funds have been properly used for the settlement of authorized expenditure.

Its infrastructure audits have resulted in the recovery by NATO of many millions of dollars which had been incorrectly charged to NATO common funds. On the other hand, these audits have also revealed large sums due to individual nations because of insufficient charges for work performed on NATO projects. The Board's audits and reports on NATO agencies and organizations have provided management with information and support leading to improved financial statement presentation; have led to improving internal control, including internal audit; and have been useful in pointing out opportunities for more effective management.

These have all been useful, worthwhile contributions. Nevertheless, the Board cannot rest on these accomplishments. Opportunities and challenges exist for greater services and for more effective use of resources—

both the Board's and NATO's. This paper has indicated some of these.

One of the most important resources is the technical staff. Board members come and go after short periods; technical staff members are relatively permanent. Probably the consequences of this have not been clearly recognized and acted upon. The staff's extensive knowledge and expertise should be drawn on more formally by the Board. Efforts should be made to involve the staff more in exploring and suggesting new ways to expand and improve the auditing and the reporting functions. Meetings involving both staff and members should be used to encourage exchanges of ideas and to help break down any remaining artificial caste barriers. The staff and members should be given the opportunity to continue their professional education through formal training programmes and other means. Fields that could be particularly appropriate include making management review-type and programme review-type audits; evaluation and use of the internal auditor's work by the external auditor; and acquisition of the basic knowledge concerning computers needed by an auditor. Although efforts to date have been unsuccessful for a variety of reasons, continuing thought should be given to providing incentives and rewards to those staff people whose performance is outstanding, who seek out and seize opportunities to improve, who enlarge and apply their professional knowledge, and who contribute more than just a satisfactory performance as measured by their job description.

The Board itself, as an entity and

respondence, travel orders, travel expense vouchers, etc.

Also, he is expected to read, or at least scan, appallingly huge volumes of minutes, directives, and decisions turned out daily by NATO's Council, boards, committees, working groups, etc. In addition, the Chairman is expected to, and does, carry a full load of audit assignments, comparable to that of the other Board members. Probably his most important responsibilities are preparing the semi-yearly audit programmes and assigning Board members and staff auditors to each audit. He also must insure that the Board's work is done quickly and efficiently and must control and be responsible for the discipline of the staff assigned to the Board.

In what might be thought of as the technical areas of his work, the Chairman has limited authority. Although he does assign audits to individual Board members, he has no control over a Board member's attendance either at the job site or in NATO headquarters. He cannot exercise any control over the performance or progress of an audit assigned to another Board member or visit it unless invited to do so by the latter. Neither he nor anyone else has the right to review other members' audit work papers, audit programmes, or any aspect of the audit except by discussion during the Board meeting at which the final report is presented for approval.

One area in which the Chairman has responsibility and the authority to go with it is in determining the semi-annual audit programmes. There have been attempts from time to time to

take this sole responsibility away from the Chairman and make it a combined effort by all the Board members. The reasons for the efforts to dilute or diffuse this authority include, perhaps, a member's wish to increase the time allotted to infrastructure audits as compared with agency reviews, or vice versa; a member's personal interest in seeing that a particular review is included in the programme; or even a member's desire that more jobs be programmed in the sunny south of Europe rather than in the sometimes wet and cold north. Fortunately, recent chairmen have held fast to this proper prerogative, rightly claiming that the legitimate concerns of all Board members can be made known to and considered by the Chairman while leaving undiluted his sole responsibility for the final product.

Board members have differing points of view regarding the Chairman's role. Sometimes the belief is expressed, for instance, that the position is an honorary one important for its social aspects (like being invited to official receptions and cocktail parties) and that it should be passed around from year to year so that as many as possible may share these questionable rewards. Sometimes it is looked on as a position which can be the focal point from which, with the cooperation and support of other Board members and the staff, continuing efforts can be made both to assess the past and to explore new or different ways of improving and enlarging the Board's service to NATO. Probably most often though, the office is recognized for what it is—an unglamorous, demand-

requires are lacking. He is hired on the international staff in a particular grade and he cannot move out of it while he stays with the Board. He can and does climb up the steps on the within-grade ladder but this is basically a routine, time-phased progression not affected by his performance so long as it is considered satisfactory. On the other hand, he has a kind of "no risk" job because the employment contracts with staff auditors are hardly ever terminated by NATO. (His home country may, of course, recall him or may cause his dismissal from NATO by withdrawing his security clearance.)

As a practical matter, the incentive to a staff man to advance or move up to another position in NATO is slight. Despite the wide knowledge concerning NATO's finances and its many operations acquired by many staff auditors, they are rarely, if ever, considered for positions of importance outside the Board. There is no doubt that some staff auditors could make useful contributions to NATO in other parts of the organization but this possibility has not been explored. When a top NATO official was asked about this by a Board member not long ago, he replied that it was obvious that auditors, who were experts in bookkeeping and in checking financial statements, lacked the capabilities to fill management-type positions. This is certainly not obvious, but the opinion may be widely held, to the detriment of NATO.

Probably the Board has been negligent in not perceiving the need for, and in not providing opportunities to, the staff auditors to continue to enlarge their professional knowledge

while they are on the staff. Although it is generally recognized that continuing education and training are needed in order to keep abreast of new developments in accounting and auditing and to meet the growing opportunities and the demands on the profession, little has been done in this regard. Staff men, of course, share the responsibility for this situation. Time, facilities, and money could be profitably invested, for example, in adding to the staff's knowledge of modern auditing practices in the fields of programming and working papers; with regard to the expanding scope of audits into programme or management reviews; and in the review of computerized accounting records.

The Chairman's Role

The Chairman has a number of duties, many of them administrative, and limited authority. The Board's charter says that he shall "direct the discussions of the Board and shall organize its work, ensuring in particular the allocation of tasks among Board members and the staff of audit assistants." The Board's own rules of procedure are more specific and list a number of duties the Chairman shall carry out. These include signing Board correspondence; convening meetings and presiding over them; insuring consistency in the Board's decisions and doing so by establishing appropriate records; representing the Board at NATO meetings; and maintaining contact with national administrations and national audit bodies. He spends considerable time signing routine cor-

differing professional relationships which the Board member will establish with him in planning, performing, and supervising the job. The Board member's participation sometimes may be nil, sometimes complete; either extreme may not be an unmixed blessing. Also, all of the present staff men have now been at NATO longer than a Board member's normal tour and their background knowledge, particularly in infrastructure matters, is often encyclopedic.

Whether the Board member recognizes this and draws on it or chooses to ignore it can also make life, and the performance of the job, easier or more difficult for the staff member. No wonder he is tempted to reflect that with the passage of a little time (3 years is not such a long time) the difficult or demanding or unreasonable member will be gone.

For his part, a Board member must also learn to adjust to different national traits and customs in the men assigned to him and to different levels of knowledge and competence reflecting their professional backgrounds and length of time with the Board.

The combined Board, when it sits as a body to accept and approve an audit report presented by one of its members, also faces unusual conditions created by the Board's charter and by practices and procedures resulting from conscious decisions or from the erosions of time. The Board relies absolutely on the responsible Board member for the thoroughness, professional competency, and good faith with which the audit has been done and the report prepared. The member

has absolute authority over the job and the extent of his participation in it. He decides, or leaves to the staff man to decide, the scope of the work, the preparation of the audit programme (if any), the requirement for working papers, and the content of the audit report. He determines whether or not to review the work of the staff man and to what extent.

Because there is no review of the audit by anyone other than the responsible Board member and no enforced requirements for working papers and audit programmes (other than recent requirements on infrastructure audits, and these requirements are enforced or not by the Board member) it is clear that the Board, and NATO, count on the professional pride, competence, and good faith of their colleagues, the staff auditors, and the other Board members—possibly on occasion to an unrealistic extent, because trust and faith should have a limited role in the audit process.

As has been stated, most staff men have been with the Board many years. During that time they have had very little NATO-offered opportunity to improve or enlarge the professional abilities they had when they arrived. (To the extent that their work has been confined to infrastructure audits, that lack has not been too serious.) Any increases in a staff auditor's body of professional knowledge have resulted from his ambition, his personal pride, his intellectual curiosity, and his sense of professional responsibility.

Material incentives to a staff man to do more than his job description

positive support in this area. The supreme commander of the major NATO military command, for example, has not only voiced his strong support of both internal and external audit but has issued a directive to his command making it clear that the audit function, the audit reports, and their findings should be regarded as valuable aids to better management. More important, he has backed this up by more prompt, objective consideration of the audit reports, which consequently are now being evaluated and responded to more cooperatively and quickly.

Among Board members and the staff, acceptance of the idea of internal audit is generally complete. Effective evaluation of the internal audit varies among Board members and staff, again reflecting backgrounds. However, adapting the Board's audit programmes to reflect the work done by the internal auditor and to use it wherever possible is still not a widely followed and accepted procedure. Throughout NATO the internal auditors and the external auditors (the Board) have an opportunity to substantially increase their usefulness and their roles as an aid to management. They should do this by going beyond the financial-type audits, which are essentially reviews of the accuracy and legality of financial transactions, into broader scope, management-type reviews.

Steps are being taken in this direction by the Board and by some internal auditors. As might be expected, some auditors are reluctant to venture into new fields. There is also some questioning in the organizations being audited and in the NATO committees

as to the auditors' authority and competency outside the boundaries of the traditional financial-type audits. The Board's charter seems to provide sufficient authority; competency does vary among auditors. Staff training is needed in the reasons for and the objectives of these wider scope reviews and in the procedures for attaining them. Also, auditors with experience in management-type reviews should be given preference in filling staff vacancies. Continuing effort and progress in the field of internal audit offer opportunities for more effective use of the Board's resources and better service to management.

The Audit Staff

In almost every Board meeting some consideration, either direct or indirect, is given to the technical staff's performance, its relationship to the Board and to its individual members, and the important part the staff plays in carrying out the Board's responsibilities.

Traditionally, all audit staffs, as they move from one assignment to another, have to learn to adapt to the varying requirements of different supervisors. The NATO Board of Auditors staff man probably has a more difficult task than most in this respect. Not only must he adapt to a new personality, reflecting different national traits and customs, each time he works for a different Board member, but he must adapt to the different accounting and auditing concepts and practices that the Board member brings to the job. The staff man must also learn to recognize and adjust to

financial statement presentation and financial management but short on actual, measurable savings. And to them the latter is the important, decisive measure.

On the other hand, advocates of agency audits point out that annual audits and certification of the financial statements of NATO organizations and budget entities are required by the Council and that the responsible committees and the nations rely on these annual audits and certifications. They also point out the usefulness to agency management, to responsible committees, and to the Council of reports which disclose situations which they might not otherwise be aware of; the opportunities these audits offer to gain greater economy and efficiency through improved financial management, including internal control and internal audit; and their usefulness in raising questions concerning the degree of attainment of agency and programme objectives. Also, as the Board has placed greater emphasis on agency audits and has gradually broadened their scope, its efforts have gained management acceptance and the usefulness of the reports has been acknowledged. Finally, they point out (as every GAO-er knows) that you can't put a dollar sign on many positive, beneficial results flowing from good agency audits and reports.

Internal Audit

Not many Board meetings take place without touching on internal audit and internal control either directly or indirectly. Because the meaning of the

word "control" in French includes "audit," the difficulties of explaining the differences between internal control and internal audit, and the need for the latter, are compounded. The subject comes up before the Board by direct reference in many reports; by requests from NATO authorities to comment on the need for an internal auditor in various organizations; and because of the Board's continuing interest in the subject.

Internal audit in NATO varies with the organizational unit and ranges from none to good. This does not necessarily indicate an absence of belief in the need for internal audit, but rather it reflects a wide span in the understanding of the function and acceptance of its cost. During the past 2 or 3 years, the Board has emphasized in its reports the need for competent internal audit and has also placed greater stress on evaluating the internal audit function of the entity under audit and of adapting the Board's audit in the light of the internal auditor's work and his findings.

In general, the reaction has been good. However, questions are still raised. Why do we need an internal audit if we also have an external audit (the Board of Auditors) which is mandatory? And why do we need an internal audit when we have a financial controller? Not only is the need for internal audit raised by such questions, but also the need for a continuing effort by the Board to explain the function, safeguards, and benefits that should flow from internal audit.

On the other hand, the Board has on numerous occasions received strong,

of the scope of these audits. However, with the passage of time and with changes in the makeup of the Board and the audit staff, these differences are narrowing. Probably some of the reports issued in the past few years which have broken new ground have also had an effect on Board and staff thinking, especially as some managements have welcomed their wider scope.

Board meeting discussions of the Chairman's programme of audits to be performed in the next 6-month period reveal the members' thoughts and opinions on the relative importance of audits of NATO departments and semi-independent agencies and organizations on the one hand, and infrastructure audits on the other.

This has been a matter for discussion and disagreement among Board members for some time, at least since separate NATO boards for infrastructure and agency audits were combined some years ago. It is important because, among other things, it bears on the apportionment of staff time between the two major segments of the Board's work; on the assignment of individual auditors and Board members to a particular audit, taking into consideration its relative importance; and on the capabilities to be looked for in future additions to the staff. (As concerns new Board members, no opportunity has been offered to introduce such a refinement in capabilities into the present charter's broad requirement of "a thorough knowledge of and experience in auditing and the examination of government financial operations.") And, of course, this mat-

ter is directly related to measuring the return to NATO on its investment in time and money in making an audit.

Differences of opinion in this area are understandable when you consider the preferences of Board members for one type of audit or the other because of their backgrounds and capabilities; the possible interest of a member's home country in emphasizing monetary recoveries; the insistence by some countries that infrastructure audits be given preference because so many old projects are unaudited; the interest by particular countries or NATO committees in a certain NATO organization; and the backgrounds and uneven capabilities of the audit staff which must do the work.

In a way, infrastructure advocates seem to have the better of it because most of the staff time is absorbed by infrastructure work. The advocates point out that with a hard-pressed staff it is important to consider that an infrastructure audit takes 2 weeks while an agency audit may take 6, 8, or more. As a consequence, they note, far more infrastructure reports are issued each year than agency reports (the old "numbers game") although they do not emphasize that many infrastructure reports are of a standardized, routine type which are relatively easy to prepare and process.

Finally, it cannot and should not be overlooked that infrastructure audits have resulted in NATO's recovering very substantial sums and that the audits continue to do so. In the eyes of the "Infrastructureurs," agency audit reports are long on recommendations and suggestions about improving fi-

similar or comparable situation arises.

It was recognized that both the members and staff needed a guide and explanation for auditing infrastructure project accounts and an outline of the expected audit coverage. After some discussion it was decided to go ahead with such a project, and the Board now has a booklet which states the broad objectives of the audit and the main points to be considered in planning and making it. Also, it provides guides and explanation, particularly for the newer man, for the records, reports, and terms used in NATO with respect to infrastructure matters.

Audits of NATO Departments and Agencies

During Board meetings every audit report other than those on infrastructure projects is brought up for individual discussion and for full Board approval. These reports cover the entities listed on page 25.

Besides approving the audit reports, the Board issues a financial certificate for each entity audited. This is worded as follows and rubber-stamped on the financial statements and signed for the Board by its Chairman.

Financial Certificate

The International Board of Auditors for NATO certifies, subject to the observations in its report, that:

- (a) the Financial Statements are correct and in accordance with the books and records;
- (b) the financial transactions reflected in the statements are in conformity with the rules and regulations, the budgetary provisions and other applicable directives;

- (c) the securities and monies on deposit and on hand have been verified by certificates received from the depositaries, or by actual count.

The reports and the audits they cover are tailored to the organization under review by the responsible Board member and the assigned staff man. Apart from the minimum requirements of the financial certificate quoted above, the audit team receives no guidelines or instructions on scope, objectives, audit programmes, work-paper preparation and review, and overall supervision of the job. As might be expected, audits and reports vary tremendously as to objectives, scope, and content. They reflect not only the differences among the many NATO organizations but also the audit team's concepts, and these vary widely.

After approval by the Board, these reports are sent to the NATO Council, through its Chairman, the Secretary General; to the chairmen of responsible committees and boards; and to the appropriate military commanders. The organization under audit makes comments to the Board and the committees, and the report, the organization's comments, and the Board's response are usually discussed at a meeting of the responsible committee or board. The latter then informs the Council of its final position on the audit report's observations. The Board may take any disagreement to the Council for resolution.

The discussions of these reports at Board meetings have indicated rather wide differences of opinion concerning the proper objectives (other than the mandatory ones) of these reviews and



U.S. Secretary of State, Dr. H. Kissinger; Secretary General of NATO, Mr. J. Luns; and SACEUR, General A. J. Goodpaster, at NATO ministerial meetings in Brussels, December 1973. NATO photo.

audits of infrastructure projects which the Chairman has decided should be approved *en masse* by the Board. These comprise most of the current infrastructure audit reports. They are routine in the sense that they do not raise new questions of principle or controversy (after all, infrastructure audits have been made for over 20 years). Because they contain no observations (findings), or only routine observations, they do not require individual attention. Other reports may raise questions not previously raised or resolved, may bring interesting information bearing on the project to

the Board's attention, and may call for Board decisions on particular matters. The Board considers these individually. In doing so during the past few years, it became obvious that there was a need to codify the Board's past decisions on innumerable matters, including cost sharing of project costs; the acceptability of certain construction costs as NATO costs; the application of overhead; and the handling of taxes and duties. This has now been done and it provides a ready reference for new and old staff members and Board members and eliminates much individual research each time a

could not compel a sovereign nation to respond to its observations, the Board limited itself to periodically following up an unanswered letter with another "invitation" to the delinquent country to reply. Frequently, three or four of these reminders would go out over several years and nothing more would be done. The effects, of course, were bad. The host countries, for several reasons, might not be in any special hurry to respond, and the Board's relaxed approach did not spur them on. Also, host countries might reasonably conclude that the Board itself did not attach much importance to its findings in view of its seeming indifference to resolving them. And the effect on the Board's staff, on the men who had dug out the findings and believed in them, was bad when it appeared that the Board wasn't much interested in pressing for their resolution.

While this situation is still far from perfect, it has improved. Not long ago a newly named Chairman simply sent each ambassador to NATO a list of the old, unanswered correspondence with his country and requested his help. The responses were fast, favourable, and effective. Conditions improved almost immediately. But that experience has proved that the Board must show by its followup steps that it is at least as interested in getting prompt, positive action on its observations as it is in writing them for the record.

Each year the Board sends the Council a report on the results of its audits of all infrastructure projects during the preceding year and cumulatively to

date. In its latest report the Board advised the Council that 94 reports had been issued and that during the year approximately \$2,918,000 had been recovered by NATO and about \$286,000 in addition to that claimed had been found to be due to member countries.

The report contained a great deal of statistical information showing such things as number of audits; relation of projects and monies authorized to audits made; projects finally certified by the Board; and recoveries made. It also brought particular problems or difficulties to the Council's attention. These usually concern long-outstanding controversies which have not been resolved or policy matters which the Council may have to decide. The Board has no authority to compel a member nation to accept its observations. If agreement cannot be reached, the controversy is referred first to the responsible NATO committee and ultimately, but rarely, to the Council.

Finally, when (1) all observations have been cleared, (2) the project has been technically accepted by NATO, and (3) the total financial charge against NATO common funds has been agreed upon by the host nation and the Board, the latter issues a certification to the host country. It states that, as the result of the Board's audit " * * * the final charge to common infrastructure funds * * * amounting to * * * is correct, subject to the final decision to be taken in respect to the question of taxes." (The qualification refers to a long-outstanding problem.)

At every regular Board meeting a number of reports are presented on

audit of a project. The Board must await word from the host country that the work is completed or substantially completed; all payments are made; the financial accounts kept by the member country are in order and ready for audit; and, ideally, the technical inspection of the project has been made. Then, when the Board tentatively schedules the audit for a particular date in its next 6-month programme, the host country is informed and must accept that date before the audit may begin.

All this takes time, frequently years from the date a project has been authorized or the work begun. Consequently, and for other reasons which add to the delay, infrastructure audits are still uncompleted for projects authorized in the mid-1950s. (Reference is sometimes ruefully made to the audit team which on its arrival at the audit site learned that the financial records had been inadvertently destroyed; the people who were familiar with the financial or technical details of the project had retired or died; and the project no longer was part of the NATO infrastructure.) Normally, there is no great financial incentive for a country to have its projects audited because, more often than not, NATO recoveries result.

The initial audit (often there are several) is made by a staff auditor and a member of the Board who has been requested by the Chairman to be responsible for it. The normal infrastructure audit takes about 10 working days at the site plus a few days to write the report.

The staff auditor is expected to, and

does, carry the load. The Board member, inasmuch as he is responsible to no one in the Board's organization, including the Chairman, decides how much he will take part in planning the audit; whether or not he will visit the audit site, and for how long; whether he will perform any audit work during the audit; and to what extent he will review the audit report, which is almost always drafted by the staff man.

In any event, the audit report is presented to the full Board for its approval as the responsible Board member's report, and his colleagues rely on him for the adequacy of the work done and for the accuracy, completeness, and fairness of the report. In essence, a Board member's involvement in a particular audit may reflect his total workload, the kinds of audits he prefers, customs in his home country which constrain a top official's participation in routine audit work, the location of the work and the season of the year, and his sense of responsibility to NATO and to his colleagues.

All reports must be approved by the Board. After approval, the infrastructure reports are not distributed outside the Board. That portion of the report which contains observations (findings) requesting adjustments of the charges to NATO or which requests additional information is sent to the host country. Unfortunately, further long delays had until recently ensued at this point. The record shows that many such requests remained unanswered for several years. The responsibility for this must be borne partly by the Board.

Apparently on the assumption that it

Board Meetings

Because the Board's meetings are a key element in its work, some description of what goes on in them is a good way to learn something about how the Board actually works and how NATO is audited. (What follows does not, of course, represent the happenings in a single, actual Board meeting but is rather a representative, selective sampling of meetings, issues, and discussions of the past several years.)

Board meetings are held, usually once a month, in a conference room with facilities for simultaneous translation. The members speak in English or in French into microphones and the interpreters (seated behind a glass panel at one end of the room) provide simultaneous translations in French and English which the listener selects by means of a switch connected to his headset.

In the past few years the Board membership has included (in alphabetical order in the English language, since that is the designated official order at NATO) representatives of Belgium, the Federal Republic of Germany, Italy, the Netherlands, Norway, Portugal, Turkey, the United Kingdom, and the United States. Recently, Board members have been about evenly divided in choosing between English or French as the language in which they prefer to speak and work.

Board members are expected to read all reports prior to the Board meeting, and a Board member may request that any report be brought up for discussion. During a recent year the Board issued 124 reports. Of these, 94 were

infrastructure reports and 30 were reports on NATO organizations. As can be seen, a careful study of the Board's reports can, and does, absorb a substantial part of a member's time.

The normal Board meeting agenda breaks down into three parts: (1) review and acceptance of infrastructure reports, (2) review and acceptance of audit reports on NATO departments and agencies, and (3) discussions of matters of special interest or which require Board decisions, such as unresolved controversies with member nations or with NATO committees; matters having to do with the technical and administrative staffs; and proposals concerning the practices, procedures, and scope of the audits and reports.

Because a large part of a Board meeting is devoted to discussion of infrastructure audit reports and related infrastructure matters and because infrastructure audits absorb most of the staff's audit time, some explanation of the Board's efforts in this area should be given.

Infrastructure Audits

Infrastructure projects are the construction of NATO's fixed military installations, such as airfields, depots, missile sites, communications systems, military headquarters, pipelines, etc. They are built with NATO funds, each member country bearing a preagreed share of the total cost of all projects during a particular year or group of years.

The Board must, in reality, be invited by the host country to start the

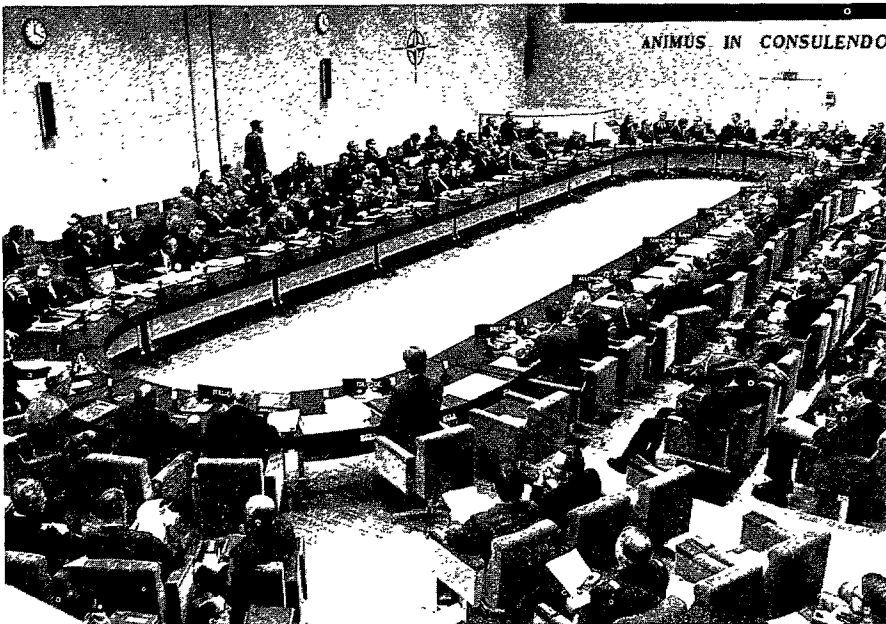
dures; its decisions and rulings; and often more important, the motives and reasons behind them. Partly because of his role in an organization whose Board members come and go every 3 years, the Principal Auditor is a very important and influential member of the organization.

The Administrative Staff

The successful accomplishment of the Board's mission would be impossible without the dedicated service of the administrative staff of 10. These secretaries, stenographers, typists, and other office people perform the duties usually associated with such positions and reflect NATO's international flavour, with representatives at the present time from Belgium, France, England, Ireland, Scotland, and Wales.

Their responsibilities are heavy not only because of the international make-up of the Board and the unbelievable mass of printed matter produced by NATO daily—all of which has to be scanned and relevant parts filed and collated for the use of present and future Boards—but also because they must display a high degree of initiative as Board members and staff auditors are away a good part of the time.

As is frequently the case in an audit office, the administrative staff's work is sometimes overlooked and underrated (consider, for example, transcribing a report draft, handwritten in anything from old-German script to American scrawl, in either French or English) but its importance to the Board and to NATO should not be underestimated.



The main Council room at NATO headquarters in Brussels. NATO photo.

years and generally are renewed. For example, at the present time five of the auditors have served from 11 to 13 years.

An auditor's starting base salary is 659,520 Belgian francs a year, or \$16,488 (40 BF=\$1). In addition, a married man receives an expatriation allowance (20 percent of the base salary); a head of family allowance (6 percent of base pay); an allowance for children (24,000 BF a child); and a contribution by NATO to the employees' fund, described below, of 14 percent of the base salary (92,300 BF). At the top of his grade the staff auditor is paid 875,928 BF (\$21,898) plus the above emoluments. The salaries of most NATO employees are free of income taxes, both Belgian and home country. Again, the United States is an exception because U.S. employees pay Federal and State income taxes on their salaries.

Instead of a pension plan, NATO has created an employees fund to which each employee contributes 7 percent of his salary and NATO contributes 14 percent. This money is invested and when the employee leaves he receives, tax free, the 21 percent contributed plus any interest earned, plus or minus any capital gains or losses.

The charter states that the auditors shall be qualified in auditing and preferably shall be government officials seconded by national audit bodies or former officials from such bodies. They are required to have proficiency in the two official NATO languages, English and French. Travel is an important factor in an auditor's life and in his

family's. Typically, during 10 months of the year he may spend about 40 percent of his time away from Brussels. The infrastructure audits (see later description) which comprise the major portion of the audit workload usually last 2 weeks. The agency and budgetary audits may run from 2 to as many as 8 or 10 weeks.

The Principal Auditor

A key figure in the Board's organization and in its day-to-day operations is the Principal Auditor. According to the charter he "shall help the Chairman in his task." The incumbent of this post (which carries a grade level above that of the 10 staff auditors) has been with the Board for more than 18 years and has been performing this seemingly simple duty since the position was established. However, this simple duty is, in fact, one of the most important for carrying out the Board's responsibilities.

The Principal Auditor plays a key role, working closely with the Chairman in preparing the semiannual programmes of the audits to be performed and in assigning staff auditors to each job. He has the major responsibility for compiling and analyzing the multitude of statistics which go into the Board's annual reports to the Council. He acts as a buffer between the Chairman and the administrative and technical staffs. He is the liaison man between the Board and the various NATO infrastructure, budget, and other committees, and with the delegations. Finally, he is a unique source of information about the Board's background: its past practices and proce-

and in every instance it is provided that they be audited annually on behalf of the Council by the NATO International Board of Auditors, which is required to certify the financial statements and issue annual reports.

The Board's Organization

The Board's organization is unique among audit bodies. The charter provides for a rotating board of five full-time members each representing a different NATO country and each normally serving a 3-year term. As openings occur, the country which has not had a member for the longest time has the first opportunity to take the vacant place.

Members are appointed by the NATO Council, to which they are solely responsible, and are paid by their own countries. The charter provides that members:

* * * shall preferably be high ranking government officials or former high ranking government officials of the national audit bodies of member countries or in any case high ranking government officials or former high ranking government officials having a thorough knowledge of and experience in, auditing and the examination of government financial operations. They should have a good knowledge of one of the two official languages of NATO and an ability to work in the second. They shall have been security cleared by their own governments.

The Chairman of the Board is appointed by the NATO Council upon nomination by the Secretary General, who acts after having received the Board's advice. His term runs for 1 year and he may be reappointed. The way this works in practice is that the full Board meets at the call of its doyen (the senior member in point of

service) and by secret ballot selects its candidate from among its members. (All Board decisions are by a majority vote of the members present, with the Chairman having the deciding vote in the event of a tie.) Upon receiving the name of the Board's nominee, the Secretary General, if he is in agreement, informs each of the 15 permanent representatives of his intention to recommend to the Council appointment of the proposed Board member. If no objection is voiced by any of the delegations within a specified time (usually 15 days), the proposed appointment is considered to have been approved by the Council.

The Audit Staff

The technical staff men (there has not yet been a woman staff auditor or a woman Board member) are now known simply as "auditors." Until recently they were called "audit assistants," a title to which there had been long-standing objection. There are 10 auditors, those at the present time coming from Belgium, Canada, the Federal Republic of Germany (2), Italy, the Netherlands, Turkey, the United Kingdom, and the United States (2). They are NATO employees, with NATO contracts, and are paid by NATO.

The status of the two U.S. members is different; they are at NATO for a limited time, are paid by the United States and continue as members of the GAO and the State Department. Under special arrangements, NATO reimburses the United States for a portion of their salaries.

The contracts usually run for 3

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Auditing the North Atlantic Treaty Organization

How the audit function in NATO is carried out. The author of this analytical description has been a member of the NATO International Board of Auditors since 1970 and has served as Chairman of this Board for 2 years.

How do you audit the North Atlantic Treaty Organization? The answer is not unlike the answer to the question: How do you audit the U.S. Government? You don't. You audit the parts.

NATO came into being 25 years ago. It comprises 15 nations (counting France) and has many parts. The list on page 25 identifies the major ones. Most of these organizations include all the NATO nations; others are made up of lesser numbers of NATO countries which contribute to all of an organization's costs and which operate it according to broad policy guidelines and procedures prescribed by NATO, under whose aegis the organizations are chartered.

An example of the latter is the Central Europe Pipeline System, which is

directed and operated by the eight NATO countries which use the system or in which the system is located. These countries pay all the net costs of the system. Another is the HAWK Management Office comprising the seven NATO countries which are authorized by NATO to produce, improve, provide logistic support for, and use the HAWK missile system and which themselves pay all costs and expenses. An extreme example is NAMMA, the NATO Multi-role Combat Aircraft Development and Production Management Agency, comprising only three NATO countries whose objectives are to develop and produce a newly conceived aircraft.

The charters, financial regulations, etc., of these organizations are granted or approved by the NATO Council,

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tion of information on private citizens by various Federal departments and agencies. There is considerable legislation pending that would affect current information-gathering practices by the Government. We should all recognize our responsibility for the protection of stored information and of the individual's right of privacy.

Improving Reporting and Reducing Paperwork

The executive branch is striving to improve reports management and reduce costs. In August 1970 the President launched a Government-wide project to analyze paperwork requirements, discard reports failing rigorous standards of need, examine information control systems, and develop alternatives to traditional reporting methods.

A report issued by OMB in June 1972 showed that Federal departments and agencies reported savings which exceeded goals set. OMB's report pointed out that efforts to improve Federal reporting should not be limited to periodic projects. A committee was appointed to explore what actions should be taken to achieve continuing improvement and control of Federal reporting. In May 1973 OMB issued Circular A-40, revised, which puts the committee's recommendations into ef-

fect. The circular provides that the management of Federal reporting will be a continuous function performed at all levels within the executive branch and will include:

- Coordination of public, inter-agency, and internal reporting.
- Implementation of effective controls for all reporting, including objective cost effectiveness evaluation of reporting requirements.
- Definition and assessment of reporting needs in planning all new programs and major policy implementations.

Conclusions

So we all see today how necessary it is that we in the Federal Government:

- Analyze the adequacy of our management information systems, reporting pipelines, and individual reports.
- Identify and compute reporting costs.
- Inquire into the need for usefulness, timeliness, and actual use of reports.

Our principal objective must be to find ways to eliminate or integrate existing reports and to simplify or otherwise improve formats.

This can only be done with the active support of all Federal agencies.

quate and for which they will need the assistance of analytical experts.

Another type of specialist or expert not included in this definition is the subject-matter specialist; i.e., the staff auditor who, after long association with a particular subject, such as Government procurement, develops invaluable expertise in his subject-matter field.

Analytical experts may be either in-house experts or outside experts employed temporarily to meet a particular need. In-house experts are full-time employees who help staff auditors cope with specific types of problems. In GAO, most of these in-house experts are staff members of the Financial and General Management Studies Division and many of them have learned auditors' techniques and processes and can work with staff auditors with a minimum of familiarization with the work involved.

The outside experts hired for specific tasks usually require more familiarization because they often do not understand how auditors work and are more attuned to advising program administrators than to auditing the programs. When we use outside experts, it is frequently desirable to use in-house experts to define the problem in analytical terms and to specify well-defined tasks to which the outside experts can contribute without completely understanding the assignment.

Recognizing When Experts Can Help

Perhaps the auditors' biggest obstacles to using experts is the inability to

recognize when they can help. Admittedly, there are many situations in which auditors recognize the need for expert assistance and there are many services experts can render that auditors accept and understand; for example, using statistical sampling, getting a printout of selected data from a computer, or making an actuarial computation of a pension plan's soundness.

However, there are still many situations in which auditors do not always recognize how experts can help them. These include the use of regression analysis, chi-square, and similar mathematical techniques; use of mathematical models to solve audit problems; and use of techniques for evaluating computer system efficiency. In those situations in which auditors do not recognize the need for expert assistance, we have a dilemma. Auditors frequently plan their work before seeing whether experts can help them. Yet, experts cannot be expected to be helpful unless their assistance is sought early in the planning stages of the audit. For example, if statistical sampling is to be used in an audit, orderly planning is necessary for an efficient sampling plan. Selecting a sample for audit cannot be done haphazardly or judgmentally if statistical inferences are to be drawn about the universe. Instead, the sampling plan must be worked out in advance using firm audit objectives and a clearly defined universe of audit interest as the basis for the plan.

The same is true of most of the other services experts can render. If audit planning does not provide for using the expert, his ability to help the audi-

tor is severely limited, if not eliminated entirely.

The question then is how to get the expert involved during planning. This is a tough problem to deal with, being somewhat like the old chicken-and-egg controversy. How is the auditor to know when he needs expert help? And what kind of expert should he call upon?

In GAO we are approaching this problem in two ways. First, we are giving courses that increase the auditors' awareness of situations in which an expert can help. Second, we have assigned personnel to establish liaison between experts and the audit staff.

Increasing the Auditor's Awareness of When To Use Expert Assistance

A good method of seeing that an expert—and the right kind of expert—is brought in at the planning stage of an assignment is to increase the auditor's awareness of useful analytical techniques and of situations in which they can be used. This does not mean that the auditor must acquire the skill to use the techniques himself but, rather, that he must recognize when they can be used advantageously.

That this increase in awareness works effectively is demonstrated by the current situation in statistical sampling. Most, if not all, auditors recognize when to use statistical sampling, but it still takes an expert to design the most efficient plan. Thus, in GAO most statistical-sampling plans are developed or at least reviewed by our expert statisticians. The impetus to use statistical sampling, however,

comes from the auditors, not the statisticians.

For areas that auditors recognize less readily than statistical sampling (statistical designs and analyses, evaluation measures and designs, computerized mathematical models, or simulation), we are acquainting auditors with these methods through 1- to 4-week courses. In these courses, and in special publications, we are using case studies to demonstrate how the methods have helped in specific audit situations.

Establishing Liaison Between Auditors and Experts

We have organized our staff of experts in what we think is a sound manner for providing efficient and responsive service. Our approach to such service has varied according to how difficult it is for the auditor to recognize when a particular type of expertise is needed. If we think the auditor can recognize the need, liaison is fairly informal, and we rely primarily on the auditor to seek the expert's assistance. If we believe the auditor may not recognize the need for assistance, liaison is more formal, including assignment of specific members of our staff to interface with specific audit divisions.

Because auditors now recognize the need for statistical sampling, we do not have to have much formal liaison in this area. We receive several hundred requests a year for statistical-sampling assistance.

The need for actuarial help is probably the next easiest to recognize. Auditors seem to understand fairly well the functions of an actuary and

to recognize when actuarial assistance can help. However, unlike statistical-sampling help, which usually requires only a few hours, actuarial help usually requires considerable time. This is because the actuary must examine, in depth, the pension, insurance, or other plan involved and the characteristics of those covered by the plan.

Determining when assistance of the computer staff can help is a more difficult matter. As a general rule, we encourage the auditor to seek help from an expert whenever the entity being audited uses a computer. The expert's job is to recognize when work done by or controls built into the computer can supplant ordinary audit techniques. In some cases, he may suggest special techniques needed to cope with a particular computer system.

Some computer work is relatively simple for experts with appropriate skills. For instance, it is relatively easy to use computer retrieval packages and programing to get data from computer files. Other tasks are far more difficult and time consuming—for instance, evaluating and increasing the efficiency of computer systems by using software and hardware monitors.

To provide expert assistance, we in the Financial and General Management Studies Division have staff members who possess a wide variety of computer skills. We are fortunate also to have staff members in each regional office and in some other GAO divisions who assist staff auditors in audits involving computers.

Our computer assistance staff receives requests for assistance from all other GAO divisions and meets month-

ly with automatic data processing staffs of other divisions to share experiences and to keep everyone posted on new developments. However, the state-of-the-art in the computer field is changing so rapidly that much remains to be done before maximum use can be made of computers in audit work.

Systems analysis is the most difficult area for identifying when expert assistance will help. Because so many different areas of expertise are involved, auditors may have difficulty determining when to use certain techniques, even though they may have some idea of them. To deal with the problem, we have assigned a team of systems analysts to work with each GAO division which can use our help. Most of these analysts are experienced auditors who have taken graduate-level analytical courses. They can work with the staff auditors as they plan assignments to see what form of systems analysis may make the job more productive or get it done faster. These analysts can use other staff members or experts to assist them if the occasion demands.

To decide the best approach for solving a specific audit problem, the analysts discuss audit situations with more specialized staff experts and thus identify the methods and the persons needed. Sometimes several staff members brainstorm a situation.

To coordinate our audits, representatives of all the expert groups attend regular meetings. The objective here is to get the right people assigned promptly to the assignments that need them the most. This is particularly important in those complex

audits requiring the assistance of more than one type of expert because the experts often have to coordinate their efforts.

The role of GAO regional offices must also be mentioned. A number of the regional offices have staffs experienced in computer science, statistics, and analytical techniques, which greatly increases GAO's ability to do special analytical work.

I would like to pay tribute to the GAO auditors who have taken special training in statistics, systems analysis, computer science, and actuarial science. We would be lost without them. With certain outstanding exceptions, experts often do not readily grasp the auditors' objectives or problems. People trained by GAO have one foot in both camps. They understand auditors and their problems, and they understand the experts and their problems. By being able to get the two groups to understand each other, they have produced results that would not otherwise have been possible.

Reviewing the Expert's Work

We try to have staff auditors work closely with experts if the experts are not familiar with GAO policies. The purpose is to see that the factual support compiled by the expert is properly documented and meets our standards for evidential material. Supervisory review of the expert's work must be performed by someone who possesses sufficient expertise of his own to fully comprehend what the expert has done and why. Consequently, the supervisor may call in other experts

to help him make the review if he himself does not have appropriate skills.

In addition, we often have scientific conclusions reached by experts subjected to peer review by other—usually outside—experts to ascertain whether there is a consensus on the matter in scientific circles.

Referencing the Expert's Work

Auditors frequently are unable to reference the expert's work. The auditors cannot follow the expert's math, do not understand the rationales for their techniques, and cannot interpret some of the terminology used in their work papers. Therefore, we have an expert's work referenced by someone else with comparable expertise. An auditor trained as an expert is particularly valuable for such work, since, in addition to his technical capability, he has been carefully schooled in our standards of referencing.

Using Outside Experts on Assignments

Most of our in-house experts soon become familiar with GAO's auditing and reporting policies. Effectively using outside experts on audit assignments becomes difficult, in some cases, if the experts are not familiar with those policies. We have had the following problems in using outside experts.

1. They have not felt the same need for documentation that we have

felt; therefore, their support for their positions has not met GAO standards.

2. They have tended to concentrate on areas involving their greatest interest and have not accumulated data on other aspects of the assignments that we have considered necessary.
3. They have not been accustomed to writing in nontechnical language and an experienced GAO report writer often has had to rewrite their reports.

Although the experience of the Financial and General Management Studies Division is limited, I have concluded that using an outside expert is not desirable unless an experienced GAO staff member works with the expert. This, I believe, is most likely to insure usable results.

Conclusion

Much has to be learned about melding the work of auditors and experts in other fields. My contacts with others in the accounting profession lead me to believe that we in GAO are leading in this trend and that others are just beginning to experiment with it. However, we are far from having reached the optimum in using expert help, and if we want to do our work as easily, yet as effectively as possible, we must continue to expand our capabilities to use other disciplines. The areas of interest to the Congress are so broad and what the Congress looks to GAO for is so diverse that we cannot respond appropriately unless we do expand this capacity. I view this process of melding the talents of auditors and experts in other disciplines as the major challenge in auditing in the next decade.

An Experimental Project In Simulation: The Mock Audit

An innovative approach in preparing first-year staff members to carry out their duties as GAO auditors.

The Washington regional office has adopted a new framework for enhancing the growth potential of its first-year staff members. In an effort to improve the quality of internal staff development, an experimental project using simulation was conducted at a recent training seminar.

A major objective of this experiment was to integrate classroom training with actual work experiences. This integration would serve as a means of improving or reinforcing the new employee's capability of performing his functions as an auditor—namely, gathering and analyzing management data for ultimate presentation in written reports to Federal agencies, and most importantly, to the Congress.

Objectives

The experiment was designed to accomplish the following objectives: (1) provide new employees the opportunity

to demonstrate their auditing abilities in a simulated work environment, (2) enable them to visualize an audit assignment from the outset through completion, (3) highlight any shortcomings in their performance as a group and as individuals, and (4) provide instantaneous feedback on shortcomings, hopefully to prevent them from arising during an actual audit assignment.

Format

The experiment involved a re-creation of a review performed by regional office staff members. Using an abbreviated audit program, the staff was divided into teams, each composed of an acting supervisor and two or three staff assistants.

The team member with the most practical experience in GAO was designated the supervisor. His main tasks were to plan the audit, insure the

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proper delegation of work tasks among the other team members, and prepare a report of the audit findings with appropriate recommendations.

A vital ingredient of this project was the need for competent role players. The assistant regional managers together with some supervisory personnel played the roles of agency officials. It was their task to provide specific information on request during the interviews conducted by the respective teams.

Experiment Results

The success of this project can be judged from its effectiveness in creating a simulated work environment and from the feedback data of the respective team members.

Integration

The experiment achieved realism in a classroom setting by incorporating many facets of human relations and communication normally encountered by GAO auditors. The following table correlates some of the emotional reactions experienced by the teams with the appropriate phases of an audit.

Feedback

The projects' impact on the team members was determined by analyzing their critiques. Certain key questions with their related responses are presented below.

Question: How do you feel the project will help you on future audit assignments?

The project provided an increased sense of responsibility, a chance to visualize the entire review process, an opportunity to improve interviewing skills and analytical ability, and a setting for developing effective teamwork.

Question: What was the most important aspect of the project?

It offered a realistic audit environment and a sense of completion; placed heavy emphasis on the need for effective planning; improved skills, confidence, and professional attitude; learned to form recommendations and defend them; and forced people to work under pressure.

Question: Do you approve of the simulation approach to training auditors?

Correlation of Emotional Reactions with Specific Audit Phases

<i>Reaction</i>	<i>Audit phase</i>
Confusion	Planning
Frustration	Executing
Hostility	Interviewing
Relaxation	Agreeing on course of action
Defensive posture	Defending course taken
Satisfaction	Reviewing
Fulfillment	Drafting report of findings

This approach is the best way to learn what is expected of the auditor, provides greater classroom participation, illustrates the tasks and problems new employees may encounter, and forces people to work independently and still grow as a cohesive working unit.

Question: Did you visualize the project before attending and were your expectations realized?

The project was extremely more challenging than anticipated and provided great motivation; demanded more original thought than foreseen; visualized a make-believe job, but it

became quite real and the subject matter was such that it could be accepted as an actual audit assignment.

Conclusion

The team members demonstrated a positive attitude and preference for this mode of training. Everyone considered the project very challenging and expressed a strong inclination toward participating in similar projects.

Each of the above objectives was achieved. Most importantly, this training vehicle proved very successful in integrating classroom training with practical auditing experience.

Training Without Instructors

Two first-year staff members write their impressions of the innovative training session conducted at the Washington regional office and described by Mr. Muldoon in the preceding article.

Skepticism . . . confusion . . . frustration . . . hopefulness . . . discouragement . . . sheer determination . . . ecstasy of accomplishment . . . relief. These ingredients of most GAO audits were crammed into only 5 days.

This training session for first-year staff members was very unorthodox since there were no instructors. The audit of the Civil Service Commission retirement plan, conducted a few years ago by the Washington regional office, was chosen as the subject of our simulated audit. With the aids of only the assignment authorization (Form 100) and the audit program, we were to conduct our audit within 1 week, including administrative duties and writing the report. Later, we were to return for a half-day session to reference another group's report and to answer referencers' comments on our report. This complete assignment demonstrated the majority of steps that are performed in any audit from the receipt of

the Form 100 in a regional office to the issuance of findings and recommendations.

The first day we were divided into audit teams of three or four people. The senior in each group was the person who had been with the office the longest. The first-year staff conducted the fieldwork. Assistant regional managers, audit managers, and supervisory auditors in the regional office played the roles of the upper echelons of the regional office, GAO headquarters staffs, and personnel of the various agencies involved.

Since a few of the role players performed the original review, they could control the direction of our fact finding during any point of our project. This is parallel to our regular audits where agency personnel are knowledgeable in their fields and we are "in the dark" during much of the investigative work. Consequently, the audit proved to be very challenging.

Miss Combs and Miss Moore joined the Washington regional office in June 1973. Miss Combs received a bachelor of science degree in business administration with a concentration in accounting from the University of Maryland. Miss Moore received a bachelor of science degree in economics at Madison College in Harrisonburg, Virginia.



Karen J. Kastner and John P. Hunt, Jr., team members, interview Roy B. Karadbil, playing the role of an agency official.

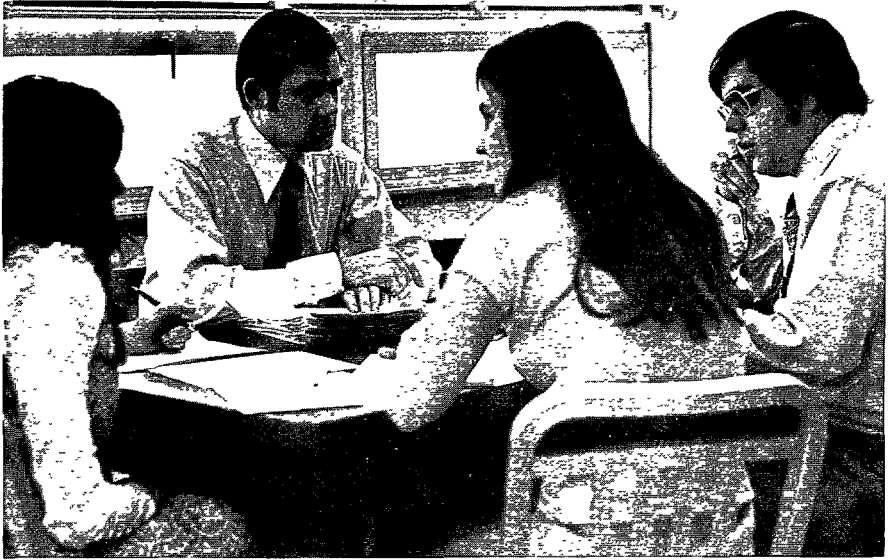
We found that our attitude and ability to communicate with peers and with agency representatives directly affected the success of the simulated audit and would apply equally to our actual assignments. Agency personnel's first impressions of us influenced the whole working relationship of the agency with the GAO staff. More important, that impression will carry through for all future contacts between GAO and that agency.

Since we had not been exposed to this type of training, we were apprehensive and skeptical. After the first day, we were convinced the project was impossible. When we accepted the seeming impossibility of the session as the "bait," we were inspired to meet the challenge. We came to appreciate all the planning that went into the design of this training session and felt compelled to do our best on the project. Competition was almost always self-generated. As the pieces of the

complex case study began to fit together, we experienced the full range of emotions that are scattered throughout every audit.

This audit emphasized the importance of proper supervision, delegation of duties, and the discipline necessary to perform GAO audit work. After determining the main objectives and the scope of our audit, we needed to decide the direction of our efforts in relation to our time constraints. We learned the importance of each person's pulling his own weight on the audit and the need for an open mind. Therefore, we further impressed upon ourselves the idea that the auditor must strike a balance between taking the initiative and listening to other people's suggestions. Our individual efforts would reflect on the whole team.

The idea of a total teamwork concept was again brought out when an agency role player informed us that a GAO audit, which we did not know



Team members participating in the simulated audit discuss audit objectives. From left: Janis E. Combs, William W. Caywood, Jr., Joan B. Hawkins, and Gary L. Johnson.

existed, had recently been performed on a major phase of our review. By this experience, we learned the value of planning and of thorough background research into the area to be investigated.

Since our role players were actually regional office supervisors, we felt the audit was an excellent opportunity for everyone involved to gain impressions of the others that we might be working with on future assignments. The supervisors could observe the areas where teams were having difficulties. Supervisory responsibilities to new staff members can be strengthened in these weaker areas.

Feedback from peers and supervisors made the training session more realistic

and valuable. In one instance, a role player pointed out areas in which we might have tried a different approach. We talked with the other first-year staff members about the different types of supervisors we had worked with and the various jobs and working situations we had been exposed to. These different experiences have tremendous bearing on our development in GAO.

Since this simulated audit was without formal instruction, it was refreshing and challenging. We thought of many ways to summarize the value of this training session but could find none better than one very brief statement: It was a completely unique and realistic experience.

Prescriptions, Opinions, and Representations By Professional Practitioners Under the Food, Drug and Cosmetic Act

The purpose of this article is to selectively explore the meaning of the exemption for prescription drugs from the detailed labeling and advertising requirements of the Federal Food, Drug and Cosmetic Act and other areas where the practitioner's judgment and representations have been brought under the penumbra of this act.

Prescription drugs are exempt from the detailed requirements for the labeling and advertising of drugs as set fourth by the Federal Food, Drug and Cosmetic Act. To meet the exemption and not be considered misbranded, the drug *must be dispensed upon prescription by a practitioner licensed by law to administer such drug*. This seemingly clear and antiseptic statement of the law and others have been expanded and interpreted to: regulate practitioner-patient relationships, limit the practitioner's ability to avoid liability by claiming his representations are his professional opinion, and establish criminal liability for misrepresentations of professional opinion.

Misbranding and the Prescription Drug

Failure to dispense a prescription drug as required—upon a written prescription by a practitioner licensed by law to administer such a drug—is deemed to be an act which results in the drug being misbranded while held for sale.

The courts have held that the provisions of the act requiring a prescription are sufficiently clear and definitive to constitutionally support a criminal charge for misbranding. The courts have also held that dispensing means much more than to sell. It also can mean to weigh out, pay out, distribute,

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regulate, manage, and control.

The statutory scheme provides a method of controlling the dispensing of prescription drugs. If drugs are dispensed outside this scheme, the dispenser is in violation of the law.

What is a prescription and from whom is it required?

Webster says that a prescription is the act of prescribing, the thing prescribed, a written direction for the preparation of medicine, or a recipe.

In *Brown v. United States*, 250 F.2d, 745, a doctor appealed a conviction for dispensing amphetamines to a Federal agent disguised as a truck driver without giving him a prescription, without physically examining him, without prescribing a dosage, and without any attempt to acquaint himself with the physical condition or needs of the man.

In affirming the conviction, the court indicated that an act which is for protection of the people from dangerous products must be construed broadly, that the "dispensing" with a prescription requirement was not limited to a druggist but included a licensed physician, that a prescription was something more than a written paper, and that it required the existence of a bona fide doctor-patient relationship.¹ The defendant appealed this decision to the

¹ In *Duncan Drug Stores v. United States*, 362 F.2d 835, a drug company druggist appealed a conviction for refilling a prescription for a potentially harmful drug without authorization by the prescriber. The original prescription itself was not valid since there was no doctor-patient relationship in its issuance, but the court said the pharmacist was protected in that respect, and the initial authorization was valid on its face.

Supreme Court, which refused to hear the appeal.²

In *DeFreese v. United States* 270 F.2d, the court was faced with the sale of benzedrine to Federal agents posing as truck drivers. The sales were made by a physician and his wife. They were convicted of dispensing prescription drugs without a prescription. The argument was made that the prescription requirement applied only to dispensing by a pharmacist and its scope did not include physicians. In addition, the section only encompassed sales by pharmacists at the retail level. The defendants attempted to distinguish the *Brown* case on the basis that their interpretations of the act had not been made to the court and that the quantities of drugs sold in the *Brown* case were so great that it was obvious that they were not for treatment or retail sales.

The court made major purpose arguments regarding the basis for the Durham - Humphrey Amendments, which incorporated the requirements for a prescription, and concluded that these purposes—protecting the public from abuses in the sale of potent prescription drugs and relieving retail pharmacists and the public from burdensome and unnecessary restrictions on the dispensing of drugs that are sold for use without the supervision of a physician—could not be accomplished if the defendants' interpretation was accepted.

With regard to what constituted a prescription, the court pointed out that, in a standard pharmacology text, the definition of prescription included

² 356 United States 938.

more than the written order to the pharmacist. It included directions for preparation and use and was a summary of the physician's diagnosis, prognosis, and treatment. " * * * it brings in focus on one slip of paper the diagnostic acumen and therapeutic proficiency of the physician * * *."

The court went on to apply *Brown v. United States* and required a bona fide doctor-patient relationship. In *DeFreese v. United States* 270 F.2d 737, the court made note that "Dr. DeFreese did not give Sumrall [a Federal agent] a physical examination nor did he consider Sumrall as a patient."

The court rejected the defendant's second contention, concluding that "dispensing"³ cannot be interpreted to apply only to retail selling, since to do so would not be consistent with the commonly accepted meaning of the term and would carve out an unwarranted exception to the statute. DeFreese appealed this affirmation of his conviction but the Supreme Court would not hear the case.⁴

Misbranding Charge and Medical Opinion

The point developed here is how far the practitioner and his products are insulated from misbranding charges, under the detailed labeling requirements of the act, by his asserting that

³ In a 1964 case, the 5th Circuit, dealing with the meaning of "dispense," interpreted Federal Food, Drug and Cosmetic Act, section 503 (b) (1), and also refused to limit dispensing to sales. *Palmer v. United States* 34 F.2d 4, 8.

⁴ 362 United States 809.

his claims reflect a segment of medical opinion, even though there are contradicting opinions. Since the issue is one of professional opinion, can he be guilty of misbranding and can his products be condemned as misbranded?

This inquiry begins with an often-cited Supreme Court opinion, *American School of Magnetic Healing v. McAnnulty* 187 U.S. 94. This 1902 case, predating the first Federal Food and Drug Act, laid down the principle that the court would not deal with issues of effectiveness of treatment which were a mere matter of opinion and, as such, could not be proved as a fact to be a fraud. The case involved an appeal from a dismissal on demurrer. The School requested an injunction to restrain the Postmaster General from implementing an order in which he stated that the School was using the mails to conduct a scheme or device for obtaining money by means of false and fraudulent pretenses. The School's business included the giving of treatment and advice, by letter, to afflicted people. The School's actions were based on the proposition that:

* * * the mind of the human race is largely responsible for its ills and is a perceptible factor in treating, curing, benefiting, and remedying thereof, and that the human race does possess the innate power through proper exercise of the faculty of the brain and mind to largely control and remedy the ills that humanity is heir to, and [complainants] discard and eliminate from their treatment what is commonly known as divine healing and Christian Science and they are confined to practical scientific treatment emanating from the sources aforesaid * * *.

The court concluded that:

As the effectiveness of almost any particular method of treatment of disease is, to a more

or less extent, a fruitful source of differences of opinion, even though the great majority may be of one way of thinking, the efficacy of any special method is certainly not a matter for the decision of the Postmaster General within these statutes relative to fraud. Unless the question may be reduced to one of fact as distinguished from mere opinion, we think these statutes cannot be invoked for the purpose of stopping delivery of mail matter.

While the court reversed the action by the Postmaster, it specifically qualified its decision as not prohibiting the Postmaster from showing in fact that the School's business conduct was fraudulent.

The Federal Food and Drug Act

In 1915 the Supreme Court was faced with the issue again. This time the case arose under the 1906 Federal Food and Drug Act, as amended in 1912, which defined a drug as being misbranded.

"If its package or label shall bear or contain any statement, design or device regarding the curative or therapeutic effect of such article or any of the ingredients or substances contained therein which is false and fraudulent."

The case, *Seven Cases of Eckman's Alternative v. United States* 239 U.S. 510, involved an appeal from a decision against a claimant's demurrer to the Government's position that the statements on the label—that the drug was effective as a preventive for pneumonia and could cure tuberculosis—were false, fraudulent, and misleading since the drug could not prevent pneumonia. There was no substance known at that time which could be relied on as an effective treatment or cure of tuberculosis. Using Ameri-

can School of Magnetic Healing for support, the claimant attacked the constitutionality of the act, contending that it was a deprivation without due process and did not permit the laying of a definite charge. The court concluded that the attack was incorrect and that the Congress had excluded from the ambit of the act " * * * the field where there are honest differences of opinions between Schools and practitioners." Whether a claim was false or fraudulent under the act was to be determined from whether the statements were intended to deceive, which intent could be derived from the facts and circumstances. Specifically dealing with curative claims, the court held that the act applied and

That false and fraudulent representations may be made with respect to the curative effect of substances is obvious. It said that the owner has a right to give his views regarding the effect of his drugs. But state of mind is itself a fact and may be a material fact, and false and fraudulent representation may be made about it; and persons who make or deal in substances, or compositions, alleged to be curative, are in a position to have superior knowledge and may be held to good faith in their statements.

The 1912 misbranding section was also brought into question as it relates to medical opinion in *United States v. Dr. David Roberts Veterinary Company* 104 F.2d 785, an appeal which affirmed the doctor's conviction. Dr. Roberts, a veterinarian, was convicted of misbranding various remedies he sold to cure worms in livestock and poultry, bots in horses, and a series of dog ailments. A number of veterinarians testified for the Government that Dr. Roberts' product had no value

in treating the claimed animal afflictions and that the opinions they expressed were a consensus of the profession. Dr. Roberts and another practicing veterinarian testified to the contrary. Dr. Roberts said he knew his products worked because he tested them. His testimony included an admission that not all worms could be cured by his remedies. The other veterinarian said that the ingredients of Dr. Roberts' remedies had been used and some were beneficial in treating some of the claimed afflictions.

The appeal was premised on the hypothesis that a veterinarian should not be convicted just because he advocates a theory of medicine which has not been endorsed by the profession. The court dismissed the contention on the belief that the distinction between frauds and things which were not frauds was clear, although the concept was difficult to define. Essentially, the distinction was one of fact to be found by the jury or judge from the circumstances of the case, which included, as admissible, factual evidence statements regarding the consensus of opinion of the profession. The court stated:

The owner has a right to give his views regarding the effect of his drugs but he must be mindful that the statute condemns every statement that may mislead or deceive. If an article is not the very thing that the statement indicates it to be, it is misbranded and if the drugs are worthless, he cannot escape by hiding behind the phrase 'doctors say'.

The Federal Food, Drug and Cosmetic Act

Technological advancement, decisional law, and changes in the Food,

Drug and Cosmetic Act have further qualified the leverage that the American School of Magnetic Healing was able to provide to avoid the consequences of misbranding. The courts have recognized that questions which were previously only subjects of opinion have been answered with certainty by application of scientifically known facts.⁵

Testimony of experts regarding test results and experiments have been held to be factual data to rebut claims hiding behind the veil of medical opinion. Testimony of experts as to the consensus of scientific opinion is relevant factual evidence to be considered in determining whether a product is misbranded, as is even general testimony of the therapeutic value of the product.⁶ All of these are facts to be presented to the trier of fact and given such weight as the trier decides.

The act declares that a drug or device is misbranded if its labeling is false or misleading in any particular. Nonexistent today are the requirements of intent to deceive, the requirements of the fraud order in American School of Magnetic Healing.⁷ The act requires no proof of guilty knowledge or wrongful intent.⁸ By congressional action this section changes the application of American School of Magnetic Healing and " * * * completely puts to rest any

⁵ *United States v. 7 Jugs, etc.*, of Dr. Salisbury's Rakos 53 F. Supp. 746.

⁶ *Research Laboratories Inc. v. United States* 167 F.2d 410.

⁷ *United States v. 47 Bottles more or less Jenasol R. J. Formula 60*, 200 F. Supp. 1.

⁸ *United States v. Kaadt, et al.* 171 F.2d 600.

remnant of a requirement to prove fraud in order to sustain a finding against a claim of effectiveness as a fact * * * so that under the present law what Congress has done is to permit a claim of effectiveness as a fact.”⁹ Not only does effectiveness become a question of fact, but the mere failure to disclose a contradictory body of opinion makes a product misbranded and may make the responsible professional guilty of misbranding.

The regulations (21 CFR 1.3) state:

The existence of a difference of opinion, among experts qualified by scientific training and experience, as to the truth of a representation made or suggested in the labeling is a fact (among other facts) the failure to reveal which may render the labeling misleading if there is a material weight of opinion contrary to such representation.

The act itself now incorporates this refrain:

If an article is alleged to be misbranded because the labeling is misleading, then in determining whether the labeling is misleading there shall be taken into account (among other things) not only representations made or suggested by statements, work, design, device, or any combination thereof, but also the extent to which the labeling fails to reveal facts material in the light of such representations or material with respect to consequences which may result from the use of the article to which the labeling relates under the conditions of use prescribed in the labeling thereof or under such conditions of use as are customary or usual.

In the new drug area the professional practitioner has little hope of putting forth a product as something other than a drug to avoid the requirements of the law. His technical asser-

tions and label qualifications are not accepted if in fact the product is recommended for use in the treatment or mitigation of disease.

In *United States v. Nutrition Services Inc.* 227 F. Supp. 375, a corporation and its officers, as well as a medical doctor, director, were enjoined from distributing a product called Mucorhian. Defendants claimed that their product was not a drug but a non-toxic food for special dietary uses. However, the defendants represented their product as a substance safe and effective in the treatment or mitigation, cure, and prevention of cancer as well as other diseases.

The court found as a fact that the product was represented as an antibiotic and was not generally recognized among qualified experts as safe and effective for use in the treatment or mitigation and prevention of cancer as well as other diseases for which it was recommended. As a matter of law, it was found to be a drug, a new drug, and an antibiotic. As a result, it was held to be adulterated and misbranded by failing to meet the requirements for a new drug and the certification requirements for an antibiotic.

In this case the practitioner claimed that his product was not a drug but a food product, a synergistic agent. His claim was not accepted. In his testimony he talked of cures; this and the claims made for the product were sufficient to classify the product as a drug. Since it was not recognized among qualified experts as being safe for use under the conditions prescribed, it was also determined to be

⁹ *United States v. Diapulse Manufacturing Corp.* 299 F. Supp. 162.

a new drug. The preliminary injunction was granted.

As can be seen, the practitioners' opinions held little weight. The fact that it was recommended for use in the treatment of cancer made it a drug and the mere absence of a body of expert opinions as to its safety for use subjected the product to the new drug requirements.

The courts and drug law have come a long way from American School of Magnetic Healing.

The Professional Practitioner and the New Drug Provisions

The practitioner's problems in the new drug area begin with his participation in the filing of a new drug application or the filing for an investigational new drug exemption to the new drug requirements. The practitioner must be aware of what constitutes a new drug.

The act defines a new drug as:

Any drug the composition of which is such that such drug is not generally recognized among experts qualified by scientific training and experience to evaluate the safety and effectiveness of drugs, as safe and effective for use under the conditions prescribed, recommended, or suggested in the labeling thereof, except that such drug not so recognized shall not be deemed to be a "new drug" if at any time prior to the enactment of this Act it was subject to the Food and Drugs Act of June 30, 1906, as amended, and if at such time its labeling contained the same representations concerning the conditions of its use; or

Any drug the composition of which is such that such drug, as a result of investigations to determine its safety and effectiveness for use under such conditions, has become so recognized, but which has not otherwise

than in such investigations, been used to a material extent or for a material time under such conditions.

This definition encompasses many old as well as new drugs in that it includes¹⁰

- use of new components,
- a new combination of recognized drugs,
- a new proportion of a drug in combination,
- a new use, and
- a new condition of use.

Illustrative of the data requirements for a new drug application are

- full reports of investigations which have been made to show whether or not such drug is safe for use and whether such drug is effective in use;
- a full list of the articles used as components of such drug;
- a full statement of the composition of such drug; and
- a full description of the methods used in, and the facilities and controls used for, the manufacture, processing, and packing of such drug.

The investigational new drug also requires the submission of substantial data to include¹¹

- complete chemical and manufacturing information,
- results of preclinical investigations including animal studies,

¹⁰ 21 CFR 130.1(H)

¹¹ W. J. Garfas, M.D. and A. Welch, "The IND Procedure: Assuring Safe and Effective Drugs," *FDA Handbook of Total Drug Quality*, p. 36.

practitioner license as defined by State law.

Dispensing under the act encompasses more than just selling. It includes in its sweep the practitioner who is responsible for the party violating the terms of the exemption by selling without a prescription. The term "dispense" means more than retail sales. It encompasses all transactions in which a prescription drug changes hands and does not meet the requirements of the act. It ranges from the doctor who gives away free samples of prescription drugs to the pharmacist who refills a prescription without authorization.

In the area of medical opinion and misbranding, the courts and the Congress have taken the proposition that a claim representing a medical opinion cannot be dealt with in the judicial arena and have so limited the proposition to the point where the mere failure to disclose a significant body of contradictory medical opinion may be sufficient to support a misbranding charge. In the new drug area, the existence of opinions by qualified parties that a drug is generally recognized as safe and effective is not enough to qualify it as a new drug. The drug is subject to the totality of FDA's controls over the manufacturing and distribution of new drugs.

This course of development had to occur. With the technological growth of the drug industry, opinions became more diverse and the public could not take the risk of leaving itself open to the claims of any charlatan who was willing to hide behind the veil of a tenuous medical opinion. Yet, the

courts are not, and have not been, in a position to decide what is or is not a good medical opinion.

The Congress has taken the problem and reduced its impact by establishing FDA, providing it with the expertise to deal with the problems, constructing the definitions in the act to weigh the area in the public's favor, and doing away with requirements for showing fraudulent intent.

The courts, on the other hand, have in the interim periods reduced much of the area of opinion to levels of fact to be dealt with by the trier of fact. When intent was required to support a misbranding charge, the courts allowed the opinion to be examined from the standpoint of the intention of the person making the claim. An examination on a factual level was to determine whether there were other medical opinions representing consensus of the medical community.

The new drug provisions of the act are expansive. They require the submission of a magnitude of reports and studies regarding testing, clinical experience, manufacture, and distribution. The practitioner may be involved at many levels in providing the basic inputs for this data. The definition of a new drug is also expansive and incorporates many seemingly old drugs. Drug growth today and in the future will be controlled under the new drug provisions.

The cases examined illustrate that there is no way around the data requirements of the act and implementing regulations. The practitioner is being held responsible for the veracity of his inputs by being subject to criminal

- description of the investigations to be undertaken,
- information regarding the training and experience of the investigator, and
- copies of all informational material supplied to each investigator.

The above requirements show that the practitioner will be deeply involved in providing input to the technical data required by FDA before the product can be used. The only way a new drug is going to get on the market is through the new drug procedure,¹² either by application for new drug status or qualification as an exemption. Both require the submission of substantial qualifying evidence.

The new drug area opens the professional practitioner to some risk of criminal prosecution if the data he submits is fraudulent or otherwise contains an intentional misstatement. He may face the charge under 18 U.S.C. 1001, which states:

Whoever, in any matter within the jurisdiction of any department or agency of the United States knowingly and willfully falsifies, conceals or covers up by any trick, scheme, or device a material fact, or makes any false, fictitious or fraudulent statements or representations, or makes or uses any false writing or document knowing the same to contain any false, fictitious or fraudulent statement or entry, shall be fined not more than \$10,000 or imprisoned not more than five years, or both.

G. Rosner, in an article, "Criminal Liability for Deceiving the Food and Drug Administration,"¹³ develops this

¹² *Turkel v. FDA* 334 F.2d 844, 379 U.S. 990 and *Dr. Rutherford, et al.*, American Medical Association, 379 F.2d 641.

¹³ *Food, Drug and Cosmetic Law Journal*, August, 1965, p. 446.

theme by discussing two indictments in which a doctor and a drug company each pleaded no contest and were sentenced and fined accordingly. One case involved falsification by a doctor of test results submitted to FDA by a drug company as part of a new drug application. The other involved a material distortion of test results reported by the company to FDA as part of an amendment to a similar application. Rosner appropriately draws the conclusion in his article that "honesty is the best policy" when dealing with FDA.

Conclusion

The exemption of prescription drugs from the detailed labeling requirements has been construed very narrowly in order to provide the greatest protection to the public. Drugs not properly labeled are permitted into channels of distribution only when they specifically meet the requirements of the act. While some of the court interpretations appear on the surface to be beyond the common meaning of words, the courts have done this to close any possible gaps between the requirements and the exemption. They have made it clear that a practitioner can be subject to the sanctions of the act whether he is a pharmacist, a medical doctor, dentist, or chiropractist. The requirement for a prescription goes beyond the pharmacist. It requires that the practitioner have established a doctor-patient relationship. Moreover, the doctor-patient relationship presupposes that the examination is within the scope of the

sanctions outside the act. However, of more importance is the impact on the manufacturer's ability to market its products if FDA revokes a new drug application because the data is inadequate, misleading, or false.

Need for Congressional Oversight

Referring to the Comptroller General's report on *Research and Demonstration Programs to Achieve Water Quality Goals: What the Federal Government Needs to Do* (B-166506, Jan. 16, 1974), Senator Brock of Tennessee stated:

This report again emphasizes the dire need for us to constantly monitor the programs we have established. We must determine if they are working, how well they are working, if they are achieving their goals, and whether the taxpayers' dollars being spent on them are being spent efficiently. We must be concerned with efficiency if we are going to maximize the impact of our limited resources.

Congressional Record
Feb. 28, 1974

My First 20 Years In GAO

The author sketches an outline of his 20-year career as a GAO professional staff member together with some of his experiences and rewards.

My interest in a GAO career started at Fort Monroe, Virginia, in 1954, when another private in Uncle Sam's Army shared a GAO recruiting brochure with me. Since I was about to complete the required 2 years of military service, I was evaluating the career opportunities I might choose in addition to returning to a career with my prior employer—a public accounting firm. I was stationed only a few hours away from the GAO headquarters, and I visited with officials of the then Division of Personnel, now Office of Personnel Management. A few months later I chose GAO, completed my active military service, and returned to my home in St. Louis, Missouri.

St. Louis Office

Whether we have been in GAO 1 year, 20 years, or 40 years, we probably all remember our first day when we raised our hand, were administered the oath, and were welcomed to GAO. My welcome took place in the St. Louis

regional office (now a suboffice of the Kansas City regional office).

GAO's policy was, and still is, immediate assignment to an audit. So, after 1 day in the regional office, I was assigned to an audit at the main post office in St. Louis. My initial task was to observe and test check the inventory of postage stamps being taken by employees of the postal service. Do you remember those days? A letter was mailed for 3 cents, and you received both a morning and afternoon delivery of mail to your home.

With the St. Louis office, I received opportunities to review cost accounting in Veterans Administration Hospitals, audit Government employee payroll records, evaluate the operating income and expenses of federally supported housing projects, and audit the reasonableness of contract prices negotiated by Government procurement officials with private companies.

During my 4 years in the St. Louis office, Arnett Burrow (now an assistant regional manager, Kansas City re-

Mr. Deibel, audit manager with the Los Angeles regional office, has previously contributed to *The GAO Review*. He is a graduate of Washington University in St. Louis and is a CPA in the District of Columbia and in California.

gional office), probably contributed the most to my career. In 1957 I was assigned as the senior, under Arnett, on an audit evaluation of the price of a negotiated contract for the manufacture of airplanes. This was one of the first audits by GAO in which a thorough understanding of the learning curve theory was crucial. I came to appreciate Arnett's dedication to his work. Today, Arnett is still one of the leaders in GAO in the application of this theory.

Primarily because of Arnett's fine leadership and with the able assistance of William Schoengerdt, whose mathematical background was invaluable, the members of our audit team were honored by the Comptroller General for our work on this assignment and I received a Meritorious Service Award. More importantly, the Justice Department recovered \$1 million under the False Claims Act and a civil penalty of \$474,000.



The Meritorious Service Award was presented by Smith Blair, Jr., then director of the European Branch, now the director of GAO's Office of Congressional Relations.

Congressional Assignment

In late 1957, I was selected by the regional manager to assist the Senate Labor Rackets Committee. That assignment gave me the opportunity to receive first-rate, on-the-job investigative training. Many of my tutors went on to important positions in Government: among others, the late Senator Robert F. Kennedy. One of my tutors was Paul J. Tierney, who served on the Interstate Commerce Commission, and another was Carmine Bellino, now a leading financial investigator for the Senate Watergate Committee.

The assignment with the Senate Committee had the routine (tracing receipts and disbursements through the accounting records), the unexpected (arriving at my temporary office in Indianapolis one day to find the newspaper reporters demanding my comments on a union matter that was *not* under investigation by the Committee), and the bizarre (serving a subpoena on a union official who, together with his two "assistants," were carrying weapons in shoulder holsters).

The assignment gave me an understanding of how congressional committees function, provided me the opportunity to testify before our elected representatives, such as the then Senator John F. Kennedy, and gave me the opportunity, during my visits to Washington, D.C., to meet with officials in our own headquarters.

On June 30, 1958, at the conclusion of my testimony and assignment with the Committee, the Chairman of the Committee, Senator John L. McClellan bade me farewell with these words:



Senate Labor Rackets Committee staff. From left, Charles Mattox, Robert F. Kennedy, Paul Tierney, Carmine Bellino, and the author.

“The Chair on behalf of the committee personally wishes to thank you for the splendid service you have rendered, the assistance you have given us, and the competency of your work.”

The friendships and impressions made during that assignment have endured over the years. For example, in 1973 one of the Committee’s investigators wrote a book “The Fall and Rise of James L. Hoffa.” The author, Walter Sheridan, saw fit to mention a number of us from GAO who contributed to that portion of the Committee’s investigation.

European Duty

During my visits in Washington,

D.C., I expressed an interest in joining our European office. Through the assistance of John Thornton, director, Field Operations Division, and after discussion with the then Assistant Comptroller General Frank H. Weitzel, I was selected to go overseas.

From the summer of 1958 through December 1962, I was assigned to our European headquarters office. This afforded me the opportunity to reside in Paris, France. As many of my GAO friends are aware, there is, in my opinion, no greater city.

Overseas duty with our European office meant assignments in many of the countries in Europe, and in Pakistan, Turkey, Morocco, Libya, and Tunisia.

Perhaps the most challenging assignment was the audit of a claim by a British company against the U.S. Government in connection with the construction of our embassy in London. Our State Department and the construction company were unable to negotiate a settlement of the cost to incorporate 400 changes to the basic contract. The company took our Government to court and GAO was called upon to evaluate the reasonableness of the contractor's cost claim.

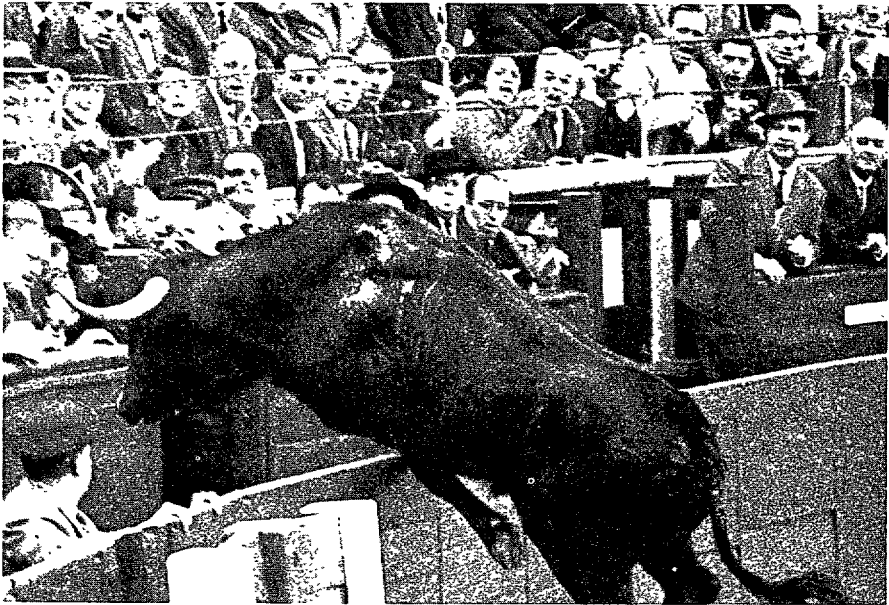
The audit team consisted of 12 auditors or about one-third of the European office staff. With London as our control point, our team worked nights, weekends, and holidays to meet a deadline set by the U.S. Court of Claims.

As a result of that audit, I received GAO's Superior Performance Award

based on the recommendation of Lloyd Smith, then European Branch director and now director of Internal Review.

So that one does not think that European duty is all work, let me hasten to add that duty in Spain had its lighter moments. During an assignment in Madrid, we went to the bullfights a number of times, including one that resulted in a picture in the Paris edition of the *New York Herald Tribune*.

An overseas assignment also has its anxious moments. In Pakistan I awoke one morning to find that the government had changed hands. There was a tank in front of the hotel to keep the peace. On another occasion, I arrived at the downtown subway stop in Paris, and upon reaching the street level, I looked down a row of tanks



Bullfight incident in Madrid. No one was injured, but there were many surprised spectators, including the author in upper right section.

and armored personnel carriers. The French military was assembled in case certain agitators attempted to parachute into Paris from Algeria.

To close the European chapter, one must give credit to the United States Steamship Lines. If a staff member will take the time, sailing across the ocean is an adventure that will not be forgotten.

Los Angeles Regional Office

After Europe, my career led to Los Angeles. In my 11 years in the Los Angeles regional office, I have been involved in 33 reports to the Congress, 12 letter reports signed by a GAO official in Washington, and 17 reports to Congressmen and to top officials in the western part of the United States.

Assignments bring interesting and rewarding experiences far beyond the thrill or satisfaction of having "your" report issued to the Congress or a multi-million dollar accomplishment report issued. In late 1962 our audit team evaluated the utilization of passenger- and cargo-carrying vehicles at a Naval air station in San Diego. In subsequent years, a segment of that audit was developed into a case study and became a part of the training program for new employees of GAO.

In early 1964 my overseas background provided me with a trip to Mexico City to survey the chronology of events during the construction of our Embassy. In 1965 our audits of activities of the Atomic Energy Commission, which are usually located a few miles from Las Vegas, Nevada,

took me to an atoll in the Pacific Ocean.

I have been privileged to have been associated with a number of audit teams which helped break ground in the Comptroller General's desire to advise the Congress whether Federal programs are meeting their objectives. One of GAO's earliest efforts was a combination of the staffs of the Los Angeles office and Richard Woods, assistant director, Resources and Economic Development Division, in a review of a manpower training program. We concluded that the Department of Labor program was not meeting the congressional objectives. Our report was received by the Congress and others with great interest.

In 1966 and 1967 our efforts were in high gear as we dealt with the objectives of community action programs, programs for preschool children, and programs for high school boys and girls. Some of these reviews carried special recognition for the audit teams, and two Superior Performance Awards for the author.

An unusual analysis of one of our reports to the Congress was carried by the press. Our audit team had studied the operation of a legal agency funded to help the poor. The story in one newspaper pointed out that the agency violated its grant, while another newspaper headlined its story: "Agency given clean bill."

Such efforts reached their peak in late 1967 when Congress directed GAO to study the "War on Poverty." Over one-third of our Los Angeles staff assisted in the effort, and together with the staffs of other regional offices, the

Washington staff, and consultants, produced 60 reports to the Congress including one overall report which is considered a classic in the annals of GAO.

Finally, the breadth of my 20 years' experience enabled me to witness a "first" recently. We visited the National Aeronautics and Space Administration's Flight Research Center. In keeping with Office policy, we had, over the years, established a good rapport with officials of the Center, notwithstanding that our audit efforts had been directed at disclosing problems. These officials invited us to watch the first flight of an experimental aircraft touted as the forerunner of space shuttles.

Other Activities

In *The GAO Review* for the summer of 1973, two of our New York regional office staff members remind us that one very important role of the manager is to teach. While the teaching effort is best accomplished in the day-to-day audit assignments, a staff member can do much more to assist others.

Such efforts started for me in 1957 when I was asked to spend 3 weeks in Washington assisting our new staff members. Perhaps the names of a few of that class will indicate its quality: Gregory Ahart, Manpower and Welfare Division director; Louis Lucas, assistant regional manager, Boston; Dominic Ruggiero, assistant regional manager, Los Angeles; and Loy Shuler,



Congratulating the pilot, minutes after he landed experimental wingless airplane at NASA Flight Research Center, Edwards Air Force Base, California.

General Counsel's Legal Reference Service's chief.

Since arriving in Los Angeles, I have participated in training programs for all levels of staff. For about 2 years I served as professional development coordinator, staff manager, and recruiting manager. I have also participated in numerous faculty and student seminars. My GAO experiences have enabled me to speak before Federal Government Accountants Association and National Association of Accountants meetings and to represent GAO at numerous meetings of professional organizations.

My career with GAO has provided many opportunities for furthering my education and auditing expertise. I have benefited from a program at Harvard as well as courses sponsored by GAO, the Civil Service Commission, the California Society of CPAs, the University of California, the National Contract Management Association, and the International Business Machine Corporation.

As a result of my GAO career, I am

serving a 4-year term on the Los Angeles County-Torrance Civic Center Commission. Our commission recently completed a \$3 million city hall and expects to move forward soon on a \$9 million courts building. To round out my career to date, I have participated with our Los Angeles regional office teams in softball, basketball, golf, and bowling.

Hopefully the newer staff member has been fitting his or her early experiences and professional development into the story woven by this article. Perhaps many will be able to look back at 20 or 30 years of their career and find that it has been equally rewarding. Yet the width of GAO's responsibilities, including those that will come in the future, provides many challenges for the author as he continues his career.

One final thought: Skim the Comptroller General's annual report to the Congress; it provides the best available recap of what the 5,000 men and women of our Office are doing to carry out the objectives of GAO.

strued as a part of the entire statutory scheme and harmonized with every other part or section and that effect should be given to every word, clause, and sentence of the statute so that no part will be rendered inoperative or ineffective.

Although the rule is subscribed to in concept, it fails as a particularly useful tool for, as Mr. Justice Frankfurter explained with particular reference to statutes:

Unlike mathematical symbols, the phrasing of a document, especially a complicated enactment, seldom attains more than approximate precision. If individual words are inexact symbols, with shifting variables, their configuration can hardly achieve invariant meaning or assured definiteness. Apart from the ambiguity inherent in its symbols, a statute suffers from dubieties. It is not an equation or a formula representing a clearly marked process, nor is it an expression of an individual thought to which is imparted the definiteness a single authorship can give. A statute is an instrument of government partaking of its practical purposes but also of its infirmities and limitations, of its awkward and groping efforts.¹

We leave to academic argument the theoretical problem of whether a legislature, composed of people with varying intentions, can have a collective intent, for it is generally accepted that statutory language is properly to be construed in light of the intent of the legislature in enacting the provision. When language is ambiguous and may have various meanings, an examination of the legislative intent is particularly useful for it may circumscribe the limits of meaning that may be

legitimately ascribed. The resource materials for inquiry into statutory intent may be categorized as intrinsic or extrinsic. Intrinsic aids derive their meaning from the internal structure of the text of the statute, while extrinsic aids are the information which comprises the background of the text.

Intrinsic Aids

The intrinsic aids for determining the legislative intent behind particular statutory language are commonly referred to as the canons of construction. Among the more useful canons are: specific provisions' control over general provisions, the mention of one thing implies the exclusion of another, and penal statutes are to be strictly construed.

It is not the purpose of this article to provide a substantive discussion of the canons of construction. We will let it suffice to say that they do exist and can be quickly found in the well-indexed and well-annotated treatise by J. G. Sutherland, entitled "Statutes and Statutory Construction" (4th ed. rev., C. D. Sands, 1972), which is available in the GAO library.

There are two important things to be recognized about the canons. First, they are not rules of law in the ordinary sense but aids to understanding the use of statutory language that amount to little more than generalizations of experience and probability as to the legislative use of language. They are easily susceptible of abuse, for one can find a canon to lead to most any result. To give them undue weight may well defeat rather than reveal the

¹ F. Frankfurter, *Some Reflections on the Reading of Statutes*, 47 Colum. L. Rev. 527, 528 (1947).



Attorney Leslie L. Wilcox (seated) surrounded, left to right, by attorneys Victor B. Goddard, Douglas Faulkner, and Brian Harris in the treatise alcove of the library to find what "Sutherland" says on statutory construction.

legislative intent. Secondly, use of most any of the canons generally leads one to the extrinsic aids, as most carry the caveat that the particular canon should not be used if its application will lead to a result contrary to the intent behind the statutory language.

Extrinsic Aids

Resort to the extrinsic aids is generally the best way to insure that a statutory provision is correctly interpreted. Although there are several extrinsic sources of insight into legislative intent behind particular statutory

language, including the long-time interpretation of the particular language by the agency charged with its administration and reference to related statutes and public policy, the most reliable source, and that which can most appropriately and effectively be used by our audit staff in particular, is the legislative history behind the particular enactment.

How Legislative History is Made

Legislative history usually begins with the introduction of bills or joint

resolutions in the Congress. Within the constraints of the rules of each House of Congress, the subject matter of bills and resolutions is virtually unlimited. A glance in the *Congressional Record* at the measures being considered or introduced on any given day will disclose a fascinating array of the concerns of the American people on whose behalf their representatives introduce legislation.

Though the subject matter of legislation may be unlimited, the chances of enacting into law any of the thousands of bills introduced in each Congress is as minimal as the subject matter is limitless. For example, of the 22,969 bills and joint resolutions introduced in the 92d Congress, only 607 were enacted into public law.

The Committee System

As the Houses of Congress are organized by the majority party, so are the committees. It is generally accepted that the committees are the working organisms of the Congress, since it is only through organization on a subject matter basis that individual members can combine to work their will on bills or resolutions. Though members of committees all play their individual roles in the legislative process, it is usually the chairman who has the power to decide which bills referred to his committee have any chance of eventually carrying the words "Act" or "Public Law."

Hearings on bills provide a useful indication of the source and strength of support of any particular legislation, although, as will be discussed

further, records of hearings must be viewed with great discretion as a source of reliable legislative history.

As the subject matter of legislation that may be introduced is almost limitless, so also is the right of any individual to testify on any particular measure, whether in support or opposition, limitless. Except in investigative hearings where testimony is under oath, a witness before a congressional committee can say practically anything he or she likes—unless the chairman of the committee or subcommittee restrains the form of expression or the length of testimony. But, because members realize the importance to the witness of having a place to tell his story and the importance to the Congress of knowing public opinion, committees are generally very tolerant of the appearance of witnesses, however little their expertise on the subject matter of legislation may be.

The next step toward enactment of a bill is that of being reported from the committee. Again, the committee chairman is all powerful in this process. Whether or not Senator X's bill ever appears on the committee agenda for discussion in executive session and is subsequently reported to the floor is largely for the chairman to decide.

The Floor

Of the minority of bills introduced that reach the stage of being reported to the full body, majority party leaders who schedule what will go to a vote must determine whether they are ever debated or even considered.

Once reaching the floor, a bill is again "managed" by the committee

chairman. This is nearly always the case with major legislation, although a chairman may, for various reasons, decide to abdicate his role as floor manager to another member of the committee.

During floor debate on legislation, the statements of the floor manager and known proponents of the bill carry the most weight as to the intent of otherwise obscure language.

If the bill Senator X or Congressman Y introduced at the beginning of the session finally gets through one House, then, of course, it must be nursed through a similar maze of procedures in the other—with the added difficulty that the proponent on one side of Capitol Hill will have to depend largely on a colleague on the other side to insure success there.

When, finally, a bill has become an act and is approved on both sides of the Capitol, it still may have a long way to go if the House and Senate versions disagree. This is particularly the case with major legislation on which there are sharply diverging views, such as the Federal Election Campaign Act and the various civil rights acts and amendments to them. On such measures it is necessary to convene a conference committee, made up of majority and minority members of the originating committees and selected by, of course, the chairmen. Sometimes no serious or fundamental disagreement separates the views of the two Houses, and a single meeting of a conference committee can dispose of the differences and the measure can be speedily approved, as reported from conference, by both Houses.

Often, however, the differences are matters of deep and important concepts of principle and it is exceedingly difficult to reconcile different versions of the legislation. In that case the conference committee may meet many times and patiently disentangle the varying positions and at last come to a conclusion the committee can recommend to each House. It sometimes happens that no agreement can be reached and the bill never becomes law. Or it may happen that one House or the other, or both, may refuse to accept the compromise of the conference committee and the bill dies—perhaps to be resurrected in the next Congress.

But if the bill survives conference and approval of the conference report, it is still not a public law. Down at the other end of Pennsylvania Avenue, the President will have the bill to sign or veto. We all know from recent experience that, when the President and the majority of the Congress are in fundamental disagreement on matters of policy, a Presidential veto can undo months of legislative perseverance and that it is rare to find the Congress able to muster the necessary two-thirds vote of each House required to override a veto.

Now, if the bill that was introduced long ago has finally become the law of the land, we will have the legislative history to study when we must determine as exactly as possible what the Congress meant when it enacted a piece of legislation. Appreciation of some of the political reasons for the existence of the law and knowing something about the machinery which

produced it are preconditions for finding the elusive legislative intent.

How To Determine Congressional Intent

The legislative history of a statute is the entire body of information before the Congress at the time the statute in question was enacted. This is evidenced by reports made by committees in charge of the legislation, hearings held by those committees, remarks made in the House or Senate during floor debate, and recorded actions of the Congress and the President relating to the measure.

The Senate and House committee reports contain the findings of fact and the analyses and recommendations of the committees in charge of the legislation. If the measures approved by the House and the Senate disagree, a conference report will explain how the disagreement was resolved.

The debates are contained in the *Congressional Record*. The *Congressional Record* will also report the introduction of or amendments to all bills or resolutions and may contain the text of bills, resolutions, committee reports, and Presidential messages. It is published after each daily session of the Congress and is permanently bound and paginated at the end of each session.

Transcripts of hearings held by a committee on a bill or resolution contain the statements of interested parties concerning the proposed legislation. However, the transcripts are printed only at the request of the committee

and therefore may not always be available.

A listing of all actions taken on a measure can be obtained from the "History of Bills and Resolutions." This is a part of the *Congressional Record Index*, which is issued about every 2 weeks and permanently bound with the *Congressional Record* at the end of each session. The "History of Bills and Resolutions" lists under the applicable bill or resolution number references, by page, to floor action, debates, House and Senate reports, conference reports, and Presidential action.

In searching a legislative history for the meaning of a particular provision, the researcher must not only locate statements which will in differing degrees explain the provision but must also determine what value or weight may be accorded to any particular statement. There is conflict among authorities concerning the value or weight which may be properly accorded to a particular source of legislative history, and circumstances surrounding statements within a source may greatly affect the reliance which may be placed on a particular statement. The following comments outline the general value of particular sources of legislative history and a procedure for most efficiently locating pertinent information in legislative histories.

The best place to start in researching a legislative history is with the law itself. The *United States Statutes at Large* is a chronological arrangement of the laws exactly as they have been enacted and provides a permanent collection of the laws of each session of



Antoinette Friedman, Attorney, left, and James E. Masterson, Assistant General Counsel, right, use the raw material of a legislative history to find the answer to a legal problem.

the Congress. No attempt is made to arrange the laws according to subject matter or to show the present status of an earlier law that has been amended. However, the number that was assigned to the bill or joint resolution at the time that it was first introduced is shown in the *Statutes at Large* in the margin next to the enacting clause of the bill. This number is essential to successfully tracking down all the history of a particular statute.

After identifying the bill number, the next step is to locate the reports of the House and Senate committees on that bill. The section-by-section analysis contained in the committee reports is the most fruitful and authoritative part of the legislative history.

This analysis contains the committee's explanation of the language presented for floor action. If the language as reported by the committee is identical to the language as finally enacted and the analysis and floor action on the section adequately explain its meaning, the search for legislative history need go no further.

Often, however, the section as originally reported from the committee is amended before enactment and the reason for the change must be located. It speeds research to look to the language that was first reported in the second body to consider the measure. If that language is the same as reported by the committee in the first body, the change occurred in the sec-

ond body either in debate on the floor, or, if a conference was held on the measure, in conference. If the language first reported in the second body is not the same as reported by the committee in the first body, then the change was made in debate on the measure in the first body.

If acceptable legislative history is not found in the section-by-section analysis, then the rest of the committee reports should be scanned. If no answer is found in the committee reports, then it is necessary to look to the floor debates.

Although floor debates may aid the determination of legislative intent, the researcher should be cautious as to the value he accords statements by individual Members of Congress. A number of Members of Congress may speak on a bill prior to its enactment, but the greatest reliance for the purpose of determining legislative intent should be placed on the words spoken by the members of the committee which reported the measure to the floor. It is generally accepted that the committee spokesmen afford the most acceptable history.

If the legislative history still has not yielded the congressional intent, one may need to resort to hearings held on a bill. Hearings are a valuable source of information for the Congress in enacting legislation and, as such, play an important role in the legislative process. However, the usefulness of hearings for legislative history purposes will vary greatly from one hearing to another. Furthermore, authorities disagree on the value that may be accorded hearings in determin-

ing legislative intent. A single statement by one witness, regardless of his importance or competence, should not be solely relied upon as a basis for congressional action. A witness before the committee is a spokesman for a particular point of view. That spokesman's point of view may or may not have been subscribed to by the Congress in acting on the measure.

In addition, hearings are often very voluminous and locating statements pertinent to a particular issue can be a very difficult task. A method that can save considerable time is to identify at the outset the person most likely to be the one responsible for the inclusion of the matter being researched. A list of all the witnesses and their capacities before the committee is usually printed in the hearings. Once this individual is identified, it is a simple matter to check the index for his testimony and proceed from there.

Although the foregoing involves research of a simple legislative history, the procedure is the same for more complex searches. A more difficult research task is presented by a provision which the legislative history indicates has been carried forth from previous bills that were not enacted. In this case the meaning of the language may have to be traced to the legislative history of the bill in which the language first appeared.

A similar research problem is presented by a provision—usually in an appropriation bill—that has been in the law for a number of years. Usually the explanation of the provision may be found in the history of the enactment that first used this language. The

quickest way to locate the appropriate legislative history is to trace the section back through the *Statutes at Large*. When the place where the language first appeared has been located, note the bill or resolution number and research its history. However, in these cases, the diligent researcher must remember that, although language used by one Congress usually means the same thing to other Congresses—that is not always the case and a subsequent Congress may have intended a different interpretation of the same language.

Another common problem arises when a Senate or House bill is substituted for a companion bill that was originally introduced in the other body. Much of the legislative history will be found by reference to the proceedings on the bill not adopted. The chronology in the "History of Bills and Resolutions" will supply the information sought because all bills and resolutions for the session are included in the "History of Bills and Resolutions," regardless of whether or not they were enacted.

GAO's Legislative Digest Section

GAO staff members in Washington are most fortunate to have for use complete legislative histories of most of the enactments with which they will be concerned. The Legislative Digest Section has on file legislative histories of enactments starting with the 68th Congress. In recent years the Section has compiled histories of every public

bill that has been introduced. Included in those histories are copies of all the source materials herein discussed, together with related news reports from magazines and newspapers.

It is common knowledge among people who work with legislative histories that our histories are among the best in Washington. It should be added that, in the form presented, much of the material that is included in those histories is virtually unobtainable from other sources. Thus, extreme care should be taken in using them. If it is necessary to take any document from the histories, and this should *only* be done to make additional copies, take pains to replace the document in exactly the same sequence as it was found. Also, please remember that legislative history files are available *only* to GAO personnel. We might wish to be generous with our friends who do not work for GAO, but, in the best interests of the Office and those it serves, we cannot risk damage or loss of this treasured resource by others who may not recognize its importance.

A final word about the Section's staff. These people know their jobs as well as any group in GAO. They can be most helpful and they welcome the opportunity to assist audit staff members in any way they can.

Knowledge of legislative history is essential in determining whether agencies of the Government are performing as the Congress intends. However, many times an interpretation of legislative history may be the only way to make the decisions and recommenda-

tions we are called upon to make daily. Thus, the ability to examine and interpret legislative materials is an essential element in the successful performance of the responsibilities we all share.

Who Achieves Goals

Achievement of goals comes through the performance of *people*. People create service; people make profit possible; people produce; people control expenses; people persuade, lead, convince; people learn about and respond to their community; people have skills, ideas, suggestions. In short, people move the business, and it is the potential power of individual employees that the supervisor works with.

Bailey Markham

"Just Between You and Me,"

Bell Magazine

November-December 1973

Linear Programing—An Audit Technique

How linear programing can be used as a problem-solving technique.

Quantitative management techniques have been receiving more and more coverage in professional publications and course materials in business schools during the past several years. Such techniques as linear programing, program evaluation and review technique, queuing theory, models, and economic order quantity analysis are valuable tools for the auditor and have a great potential for use by GAO staff as well as other auditors.

These techniques are currently used to a limited extent, but their potential use is limited mainly by a lack of understanding of the techniques and how they can be applied to various audit areas. As we have found with the use of computer-assisted audit techniques, it is not necessary that the audit staff know how to apply quantitative techniques. Rather, they should have the ability to identify potential uses for these tools and then solicit the aid of a specialist to solve the problem.

One technique which could be applied to many of our reviews is linear

programing. This tool can be used by an auditor to determine whether a proper allocation of scarce resources had been used to generate the least cost product mix to meet specific requirements. In industry, linear programing can also be used to determine the mixture of products which will generate the greatest profit.

Several requirements must be met before linear programing can be applied to a problem: (1) the auditor must have an objective which he wishes to determine—to minimize costs, (2) alternative courses of action must be available—one of which will achieve the objective, (3) available resources must be in limited supply, (4) variables in the problem must be interrelated, and (5) objectives and limitations must be capable of being expressed as linear equations or inequalities. These five requirements, although somewhat technical, are actually common sense and should become clearer when discussed below.

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An Example

Linear programing could be applied in an audit to determine if a government agency has purchased the optimum number of trucks (in terms of cost) to haul material from a remote site (subcontractor plant, for example) to a distribution terminal. Assume the following:

1. The agency has the option of purchasing two types of trucks (A and B) for hauling material from the remote site to the terminal.
2. Type A trucks cost \$3,000 and type B trucks cost \$10,000.
3. The amount of material to be carried is 30 tons per day, and agency officials state that the combination of trucks purchased must carry at least this amount of material daily.
4. Type A trucks are capable of carrying 1 ton of material per day, while type B trucks can carry 3 tons.
5. One employee is required to drive and load type A trucks, while type B trucks require two employees. The agency has positions for 30 such employees.
6. Agency maintenance and parking limitations restrict acquisition to 20 type A trucks and 10 type B trucks.

In order to use linear programing to solve this problem, the auditor would have to first define the variables. In this problem, the variables are the number of type A trucks to be purchased (x) and the number of type B

trucks to be purchased (y). The next step would be to set up a table of formulas indicating the objective function (in this case, cost minimization) as well as the various constraints (items 3 through 6 above) which have to be considered. The table for this example would be as follows:

Objective function:

Minimize \$3,000x plus \$10,000y

Constraints:

1. $1x + 3y \geq 30$ tons
2. $1x + 2y \leq 30$ employees
3. $x \leq 20$ A trucks
4. $y \leq 10$ B trucks

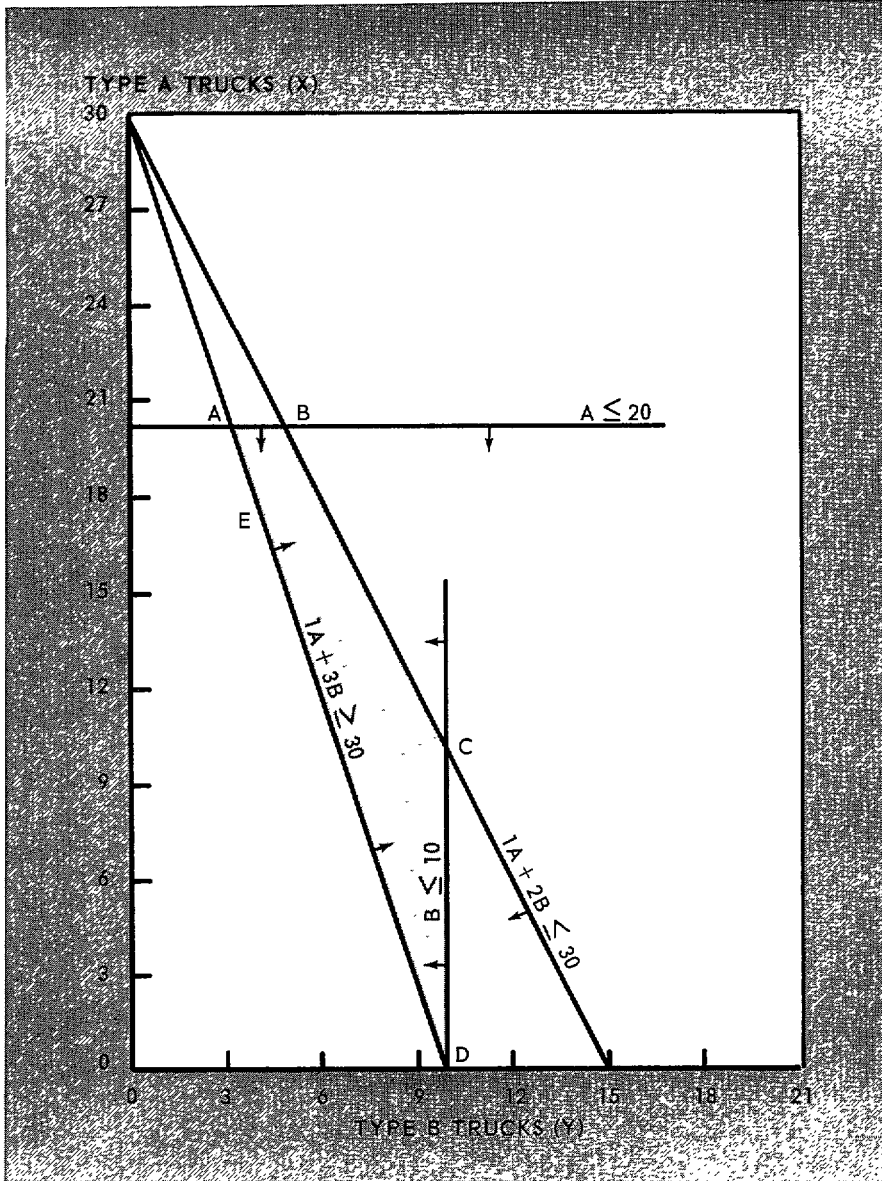
The objective function indicates that the auditor wishes to determine the minimum number of type A trucks (at \$3,000 each) and type B trucks (at \$10,000 each) which should be purchased to satisfy the requirements of the agency. The constraint formulas are explained as follows:

1. Some combination of type A trucks (which can haul 1 ton of material per day) and type B trucks (which can haul 3 tons of material per day) must be purchased to haul at least (equal to or greater than) 30 tons per day.
2. The number of employees required to operate type A trucks (1 per truck) plus the number required to operate type B trucks (2 per truck) must be equal to or less than 30.
3. The number of type A trucks purchased cannot exceed 20.
4. The number of type B trucks purchased cannot exceed 10.

LINEAR PROGRAMING

A linear programing solution to a problem such as discussed above can be solved by either the graphic, algebraic, or simplex method. The latter two methods are somewhat complex

and are usually better solved by an operations research specialist either manually or by using a computer program. The first method is relatively simple and is shown below.



As shown by the graph, the following was accomplished:

1. The axes were labeled with the variables in the objective function (x and y) and values were assigned to the axes.
2. For each formula, a point is indicated on each axis indicating the maximum number of each variable which could be purchased assuming that the other variable is not purchased. For example, in the formula $1x$ plus $3y \geq 30$, 30 type A trucks would be required to haul 30 tons of material per day, and 10 type B trucks would be required. The two points are then plotted on each axis and a line is drawn connecting these two points. For the formula $x \leq 20$, 20 is a limit on the number of type A trucks which can be purchased, and the constraint line for this formula is simply extended from the point of limitation. The remaining constraints are plotted in the same manner.
3. Arrows must then be drawn along each line indicating whether the line indicates a minimum constraint (such as the formula $1x$ plus $3y \geq 30$) or a maximum constraint (such as the formula $1x$ plus $2y \leq 30$). For minimum constraints, the arrows should point away from an axis, while the maximum constraint must point toward an axis.
4. An area must then be determined within which a feasible

solution can be obtained. In the above problem this solution must be along the lines or within the boundaries of points A, B, C, D, which is indicated by the shaded area.

5. Since the optimum purchase point is at or near the extreme points of the shaded area (points A, B, C, or D), the next step would be to compute the cost of purchase at each point.

The computations are as follows:

Point A

20 type A trucks @ \$ 3,000 =	\$ 60,000
3.34 type B trucks @ \$10,000 =	33,400
	<u>\$ 93,400</u>

Point B

20 type A trucks @ \$ 3,000 =	\$ 60,000
5 type B trucks @ \$10,000 =	50,000
	<u>\$110,000</u>

Point C

10 type A trucks @ \$ 3,000 =	\$ 30,000
10 type B trucks @ \$10,000 =	100,000
	<u>\$130,000</u>

Point D

0 type A trucks @ \$ 3,000 =	-
10 type B trucks @ \$10,000 =	100,000
	<u>\$100,000</u>

As indicated above, point A would be the least expensive alternative; however, it is obvious that this alternative is not possible, since it is impossible to purchase a fraction of a truck. The nearest alternative to point A is point E. This alternative provides for:

18 type A trucks @ \$ 3,000 =	\$ 54,000
4 type B trucks @ \$10,000 =	40,000
	<u>\$ 94,000</u>

The amount of material which can be carried per day is 30 tons, the number of drivers required is 26, and the total trucks purchased is 22. All requirements are met, since point E is within the constraint boundaries.

The problem discussed above is a simple application of linear programing. Complex problems involving profit maximization or cost minimization can be solved as well by using these techniques. The above example could be expanded to consider other variables, such as employee costs related to each alternative. This example, however, was kept simple in order to illustrate the ease with which such a problem can be solved.

Other Examples

The following are several more examples where linear programing could be applied. In a case where an auditor has to evaluate an agency or a subcontractor's choice of ingredients for an end product, jet propulsion fuel for example, linear programing could be a useful tool. In a case with propulsion fuel, several ingredients which have varying effects on propulsion could be available. The different ingredients would of course vary in cost and have varying effects on the end product. In such a case, linear programing could be used to determine the least costly combination of ingredients considering the minimum propulsion requirements for the end product.

A third example could involve an evaluation of the number of different combinations of employees necessary to

accomplish a certain task, for example, the least costly mix of engineers and common laborers for a construction project. In this example, the output of the crews would vary depending on the proportion of engineers to laborers. Time constraints (minimum period for completing the work) could also be introduced into this example. Given the outputs of the different combinations of workers and the time constraints for completion of work, the auditor could determine the most economical combination for completing the job on time.

A fourth example may involve a case where an auditor wishes to evaluate the type of machinery necessary for construction of certain parts (such as aircraft parts at a rework facility). Various types of machinery may be available for the various stages of production, some being more effective than others and some requiring less manpower. Considering the various alternatives, some combination would provide the least cost alternative and linear programing could be used to determine this alternative.

Summary

In summary, linear programing has great potential in reviews performed by GAO or any other audit group. The requirements for applying such a technique are that the auditor must have an objective to minimize costs.

The following must also be present: (1) alternative courses, one of which will achieve the objective, must be available, (2) available resources must

be in limited supply, (3) variables in the problem must be interrelated, and (4) objectives and limitations must be capable of being expressed as linear equations or inequalities. As mentioned above, the application of linear programing and other quantitative management techniques in our audits is mainly limited by a problem in identifying opportunities for their use.

Accountability

It is important, therefore, that the legislative auditor carry out his responsibility in part by auditing the agency's system of accountability—finding out whether internal audit is on top of its job, whether management has the information it needs to prevent cost overruns, whether it has the analyses to justify additional funding, and so on. This concept is fundamental in that it places the emphasis on accountability at the point of primary responsibility; namely, the agency head or the President.

Elmer B. Staats

Comptroller General of the United States
GAO 50th Anniversary Lectures—1971

A View From Other Side Via the Congressional Fellowship Program

A Congressional Fellow from GAO on Capitol Hill describes his experiences and observations on how GAO could better assist the Congress.

From November 1972 through August 1973, I had the privilege of observing and participating in the activities of the Congress through the Congressional Fellowship Program. This was the second year that GAO participated in this unique program. This article provides some insight into my experiences during the program and offers some observations on ways in which GAO might do a better job in assisting the Congress.

Since the purpose of the program was explained in an article by Samuel W. Bowlin in the Winter 1973 issue of *The GAO Review*, I won't dwell on this subject. However, a brief refresher is probably in order.

Purpose of the Fellowship Program

The program is sponsored by the American Political Science Association and is designed to equip political

scientists, journalists, and Federal agency personnel with a better understanding of the national legislative process. Since 1953 the program has provided over 500 Fellows a first-hand view of the Congress.

Each year the program includes approximately 40 to 50 Fellows. The political scientists and journalists (about 15) are supported by the Association with funds received from foundation grants. The remaining Fellows participate in the program through affiliate arrangements. The Civil Service employees are supported by the Civil Service Commission; other affiliate congressional Fellows have been supported by the Asia Foundation, the Commonwealth Fund, and the American Friends of the Middle East. In addition, the program will soon include young medical doctors in a special health policy section funded by the Robert Wood Johnson Foundation.

Mr. Bogar is an audit manager in the Procurement and Systems Acquisition Division. He is a graduate of Susquehanna University (B.S. degree in accounting) and has been with GAO for 11 years. He received a GAO Meritorious Service Award in 1966 and is a member of the Federal Government Accountants Association.

Program Schedule

The program begins early in November with a 3-week orientation period that includes seminars with numerous legislators, executive agency officials, and members of the press covering a wide range of topics relating to the Congress and public policymaking. During this time Fellows also begin exploring individual office assignments. Negotiations are conducted by the individual participants with congressional offices of their choice. Fellows begin work in the House or Senate offices in December. They serve in each House of the Congress for approximately 4½ months. A continuing series of seminars is scheduled during the entire year to supplement the intern experience.

With that brief background, let me describe my experiences in the program.

House Assignment

One of the more trying times on the program is selecting a list of prospective Congressmen and then talking with them to determine which ones would like to have you work for them. I spoke with 12 Congressmen or their staffs and decided to work for Congressman Ed Forsythe of New Jersey. The proposed assignments he outlined seemed interesting and I had a favorable reaction to him during our discussions.

Congressman Forsythe was elected to the Congress in November 1970 in a special election. He is a member of the Education and Labor Committee and



Representative Forsythe of New Jersey (left) discusses senior citizens' problem with the author.

the Merchant Marine and Fisheries Committee. I had daily contact with the Congressman, who has an open door policy and would take time to talk whenever I requested it.

The main project I accomplished was to examine into the problems of senior citizens in the Congressman's district and to propose legislative solutions to these problems. The project took a great deal of time and I was completely free to plan and accomplish it. In doing this, I made two week-long trips to the district and talked with many State and local officials and senior citizens. On behalf of the Congressman, I spoke before several senior citizen groups and visited senior housing communities, convalescent homes, and public housing developments. I learned first hand the problems of being a politician as I attempted to field a variety of gripes about "the way Washington was being run." I summarized my efforts in a report to the Congressman, and he is working on legislation to deal with the problems presented in the report.

My other duties were primarily to handle some of the legislative issues that were raised by constituents. This included getting information from almost every Federal and New Jersey agency, meeting with staff members of various House Committees, and working with legislative counsel to draft bills. The issues I dealt with were varied and included taxes, flooding along certain New Jersey rivers, cutbacks in the Office of Economic Opportunity programs, food stamp programs, education assistance for migrant worker

children, mass transportation, ocean pollution, and prescription drug prices.

Senate Assignment

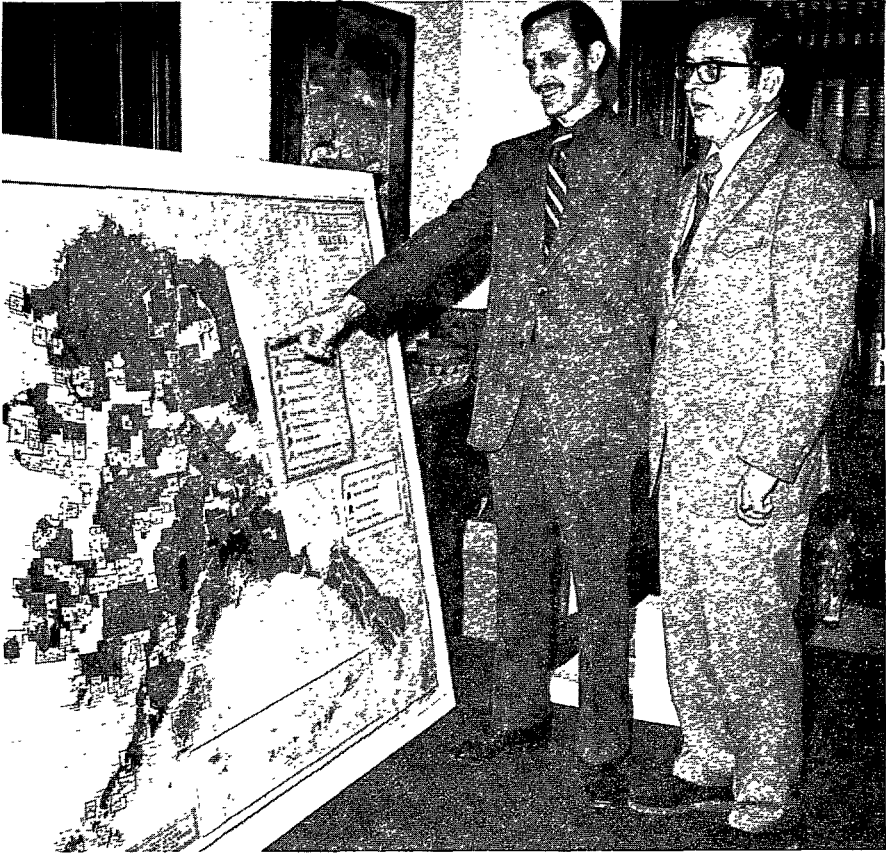
In mid-April I switched from the House to the Senate and once again had to deal with the problem of finding a new boss. As I recall I talked with about six Senators or their staffs and with two Senate Committees—the Appropriations and Government Operations Committees—before deciding to work for Senator Ted Stevens of Alaska. In my discussions, the major thing my potential employers and I looked for was common interests.

The Senator was appointed to the Senate in December 1968 by the Governor of Alaska and was reelected in November of 1972 for the term ending January 1979. Senator Stevens is a member of the Appropriations, Commerce, and Post Office and Civil Service Committees.

He was particularly active during my tenure with him in fighting for legislation to enable the trans-Alaska pipeline to be built. He was a leader in the floor debate which led to the successful passage of S. 1081 which advocated the early delivery of oil from the North Slope of Alaska.

My primary duty for the Senator consisted of gathering and organizing vast amounts of material on the trans-Alaska pipeline and the energy crisis in preparation for the Senate debate on the Alaska pipeline bill.

In preparing for the floor debate on this issue, which is of primary importance to Alaska, I wrote speeches, news releases, and letters to Members of Con-



Senator Stevens of Alaska talks over a project with the author.

gress and others asking for their support and organized the material which the Senator used during the 7 days of debate on S. 1081. I also handled many of the calls to the office from the news media and various organizations asking for information on the trans-Alaska pipeline.

During the debate in July 1973 on the pipeline legislation, the Senator obtained the privilege of the Senate floor for me and I acted as his "data bank" of information on the pipeline. Being

on the floor and making a small contribution to the floor debate was the highlight of my tour with Senator Stevens. The icing on the cake was the fact that the Senate approved the bill and a key amendment introduced by Senator Stevens.

Other Program Benefits

Aside from the benefits of working directly for a Congressman and a Sena-

tor, I had the privilege of exchanging information with 43 other Fellows—26 from the Federal Government and the remainder from the private sector. Three were from foreign countries—Afghanistan, Bangladesh, and Great Britain.

Another benefit was the frequent meetings we had with Congressmen, Government officials, and others. For instance, these meetings included open discussions with Melvin Laird, then Presidential Counselor, Senator Hubert Humphrey of Minnesota, and radio and television correspondent Joe McCaffrey.

Observations on Ways To Improve GAO-Congressional Relations

The Congressional Fellowship Program was an eye-opening and rewarding experience. The program provides the opportunity for a unique, inside look at the Congress and its operations.

What have I learned that would be helpful to GAO in its relationship with the Congress? Several things come to mind. I suppose some of these observations have been brought to the attention of most of us during our GAO careers, but they came into sharp focus for me during the Fellowship Program and warrant repeating. We need to:

—Improve communications between GAO and the Members of Congress on a formal and informal basis.

I have sometimes observed a reluctance on our part to contact Members of Congress and clarify their present and future needs for

information. Too much reliance is placed on obtaining their views second hand through the *Congressional Record* and hearings. Much important activity of which we should be aware takes place that does not get recorded in these documents.

—Emphasize dealing with Members of Congress on a personal basis.

One area in which this can easily be done is through our response to congressional requests. It is important that we visit with the Congressman who prepared a request before we start the assignment and before we finish it. One Senator mentioned that he initiated a request to GAO and that he had no contact with the GAO operating staff until the job was completed. Certain important matters, not apparent in his written request, were not covered during the review.

I know from first-hand experience that these requests are often written by congressional staff members who have little knowledge about the subject they are asking GAO to investigate but, at the same time, often have information available which would be helpful in conducting our review.

—Give more consideration to the timeliness of the information we give to Members of Congress.

While on the program, I initiated requests for information from various agencies. Admittedly, the time frame was sometimes tight, but, in some cases, a 1- or 2-day delay in receiving the information

rendered it useless.

—Continuously make the Members of Congress aware of what we can do for them.

Unfortunately, some Members, and I believe them to be few in number, still picture GAO as an organization of bookkeepers laboring over mountains of ledgers. We need to change this image.

What do these observations mean? They mean that, without close communication with Members of Congress,

we may not be doing the kind of work they want us to do.

Although some of the above comments are negative, most Congressmen I dealt with held GAO in high regard and consider our organization to be a valuable arm of the Congress. There is no doubt that a continued awareness of some of our shortcomings will result in improved assistance to the Congress. GAO's continued participation in the Fellowship Program should also add to the Congress' understanding of our role.

Declining Responsibility

Most of the work in the world today is done by those who work too hard; they comprise a "nucleus of martyrs." The greater part of the remaining workers' energy goes into complaining. Employees today seldom become emotional about their organizations or its output; they are only interested in getting ahead. And many organizations are killing their employees with kindness, undercutting their sense of responsibility with an ever-increasing permissiveness. This is a fatal error, for where responsibility ends, performance ends also.

Vice Admiral Hyman G. Rickover

Before House Committee on Appropriations
June 19, 1973

Comptroller Or Controller?

Over the years, these terms have been used interchangeably and luke-warm controversy has sometimes erupted as to which is correct. The term "Comptroller General" was given to the head of the General Accounting Office by the Budget and Accounting Act, 1921. A predecessor official bore the title Comptroller of the Treasury.

The Fall 1973 issue of *Armed Forces Comptroller* carried an interesting article entitled "The Role of the Comptroller (Controller)?" by Lt. Col. F. R. Bowie, USMC (Ret.) which included the results of some of his etymological research into these two words. Following is an excerpt from this article, reprinted here with permission.

The word, controller, apparently derives from the Latin *contre-rolle*, or one who checks against another. There has been some speculation that it was a roll, such as a muster roll, payroll, or other document that was checked against. However, this seems to be discounted, since the Latin antecedent for roll is *rotula*, diminutive of *rota*, or wheel. It would seem that the title originally designated an official who checked on other officials; and this would appear logical, considering the corruption that developed during the later days of the Roman Empire.

When Caesar led his Legions into Gaul, he apparently took his *contre-rolle* with him; for in Ancient French, the word, *contre-rolle* appears. Webster's Third New International Dictionary states that this meant "copy of an account, or counter register." It would seem logical, then, that the *countre-roller* was again an official who

checked against the accounts of another. The French seemed satisfied with the spelling, for *contre-rolle* held forth through Middle French.

It's hard to believe that a shift in the wind could cause the entire English-speaking world to misspell a word; but it seems that, indirectly, that's what happened. In the fall of 1066, William, Duke of Normandy, had assembled a large army for the invasion of England but was unable to sail due to unfavorable winds. On September 27th, the wind shifted; and on the 28th, he crossed the Channel. Harold, King of England, meanwhile, had been busy repelling other invaders from Norway and Scotland. When he heard of William's landing, he immediately set out on a forced march of some 200 miles to engage the Normans, meeting them about 10 miles NW of Hastings. William won, creating the classic example of the feigned retreat and subsequent slaughter of the pursuing foe; went on to be crowned King of England and to build the Tower of London.

Sir Frank M. Stenton, in *Anglo-Saxon England*, stated that Hastings was "one of those battles which in rare intervals have decided the fate of nations." It also ultimately led to the misspelling of *controller*; for within 100 years, the English had picked up the word. Murray's "New English Dictionary" refers to an English publication dated 1292 in which the word appears and is spelled *contre-roullour*. The name and the game were pretty much still the same—the *countre-roullour* being someone who checked on another. This spelling evolved into *controller* and was used widely for over 200 years.

This job of checking on accounts, as would be expected, fell on the scribes of the day; they were the *controllers*. As

seems to be the nature of scribes; they sought to improve the status of their positions. They reasoned that their title, *controller*, was incorrectly spelled, being based on the Middle French (MF) verb, *contre*, against. They further reasoned that it should derive from the MF verb, *compte*, which meant account or count. Whether the scribes felt they knew French better than the French, or were trying to change the function of the position, is unknown; but in any event, they stand guilty of a pedantic version of folk etymology. In 1551, the word, *comptroller*, appeared in another English publication.

Most etymologists regard the spelling, *comptroller*, as an artificial creation; and if the scribes were trying to change the profession to one other than "checker," they failed; for in 1780, still another work stated:

'When the treasurer is taken away, the comptroller might as well be taken away also, because a comptroller is hardly necessary where there is no treasurer.'

It also seems that even among the *controllers/comptrollers*, they couldn't agree on the spelling; for in England, they ended up with the Controller of the Navy and the Controller of the Stationery Office, but the Comptroller General of Patents. Even to modern dictionaries, the major differentiation between the two spellings was that the first meaning of *comptroller* was a keeper of accounts in a royal household, while the *controller* was defined as

the chief accounting officer of a large corporation or business. Perhaps the scribes gained some prestige through the ultimate association of the *comptroller* with the royal household.

With the colonization of North America, it was logical that offices and titles would also immigrate. It seems, however, that the early business enterprises did not initially grasp the controller concept; for in 1729, one of the first, if not *the* first, attempts at incorporation was made. The attempt failed; but in 1732, the same group "prayed for the countenance" of the Colonial Assembly "in putting them into a politic capacity as a society." (Bradshaw and Hull, *Controllership in Modern Management*, Richard D. Irwin, 1949.) The offices provided for were: a moderator (president), a clerk, and a treasurer. No mention is made of a controller at this point.

The Continental Congress, on the other hand, first created the Office of *Controller* by the Act of September 26, 1778, replacing the Treasury Office of Accounts (established by the Act of April 1, 1776) with a Comptroller, Auditor, Treasurer, and six Commissioners of Accounts. Through the years, the office of comptroller was to be reorganized and modified until the Budget and Accounting Act of 1921 abolished the various offices of comptrollers and auditors and established the General Accounting Office with its Comptroller General.

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Proposed Transfer Of GAO's Transportation Audit Functions

Legislation has been introduced in the Congress affecting the powers and duties of GAO. One title provides for transferring responsibility for the detailed audit of the Government's transportation payments to the executive branch. The following statement prepared by GAO staff members explains the background and nature of the proposed change.

Legislation¹ currently pending before the Congress would, among other things, amend the Transportation Act of 1940, authorizing the Director of the Office of Management and Budget to designate an agency or agencies of the executive branch to be responsible for the audit and settlement of payments for freight and passenger transportation services performed for Federal agencies.

This audit work is now performed centrally in the General Accounting Office in Washington, D.C. It is done after payment by the agencies to the carriers and is the only audit made by the Government to determine the cor-

rectness of such charges. The GAO audit also includes recovering overcharges; settling transportation claims; reviewing, evaluating, and reporting on the transportation activities of Government agencies; and assisting the agencies to improve their effectiveness in these activities.

What Other Functions Have Been Transferred From GAO?

The detailed transportation rate audit is the sole remaining centralized audit still performed by GAO. The proposed transfer of this responsibility is in line with the policy that has been actively pursued since 1950 to modernize and streamline the accounting and auditing functions of the Federal Government. The following are major changes made since enactment of the Budget and Accounting Procedures Act of 1950 and other laws which have resulted in transfers of functions or operations from GAO, in the legislative branch, to the executive branch.

¹ At the recommendation of the Comptroller General, Senator Ervin introduced on February 19, 1974, two bills in the Senate on behalf of himself and Senators Ribicoff and Metcalf. S. 3013 is entitled "General Accounting Office Act of 1974" and S. 3014 is entitled "Accounting and Auditing Act of 1974." Title VIII (Audit of Transportation Payments) of S. 3013 is the subject of this statement. Companion legislation (H.R. 12113 and 12114) was introduced in the House by Congressman Holifield.

Discontinuance of Detailed Accounting Records in GAO

Prior to 1950, GAO devoted considerable effort to keeping detailed appropriation and other accounting records for financial transactions of executive agencies. This work duplicated similar records in the Treasury Department and the operating agencies. Following the clarification of accounting responsibilities in the Budget and Accounting Procedures Act of 1950, the Comptroller General discontinued GAO's detailed accounting operation in 1950 by abolishing the Accounting and Bookkeeping Division, which was then maintaining 500,000 ledger accounts. Since then the accounting records have been kept at the point of primary responsibility—summary central accounts in the Treasury and detailed operating accounts in the individual agencies.

Elimination of Post Office Accounting in GAO

Prior to 1950, GAO performed the administrative accounting and reporting work of the Post Office Department in a field office in Asheville, North Carolina. The Post Office Department Financial Control Act of 1950 transferred these functions to the Post Office Department and made it responsible for developing and maintaining its own accounting system. As a result of this transfer, the GAO Postal Accounts Division was abolished—in 1950—and 900 employees were shifted to the Post Office Department.

Elimination of Check Reconciliation in GAO

Before 1956, Federal checks were

paid by the Treasury Department and then GAO performed the detailed work of reconciling those payments with the checks issued. These two operations were merged in 1956. GAO discontinued its reconciliation work and since then the Treasury Department has paid the checks and reconciled the payments as a single integrated operation using high-speed electronic equipment.

Transfer of Indian Tribal Branch

In 1965, the personnel (43), records, equipment, and applicable funds of this GAO branch were transferred to the General Services Administration. For many years, by reason of GAO custody of financial records pertaining to Indian matters, this branch prepared special reports for the Department of Justice for use as counterclaims or offsets in connection with suits against the United States filed by Indian tribes. This operation was transferred to GSA under the Federal Property and Administrative Services Act of 1949 as being more appropriately an executive branch function.

Federal Salary Tables

For many years, GAO prepared and published salary tables for the information and guidance of Government officers and employees concerned with preparing, certifying, and paying payrolls for civilian Government employees. This function was transferred to the Civil Service Commission in the executive branch in 1965.

Prescribing Standard Forms

In 1967, responsibility for prescribing standard accounting forms relating to fiscal operations, formerly carried out entirely by GAO, was reassigned (by agreement) among those agencies having basic responsibilities for the areas associated with the forms. As a result, this responsibility for prescribing a large number of these forms was assumed by executive branch agencies, including the Treasury Department and the General Services Administration.

Why Is Transfer of Transportation Rate Audit Proposed?

As in the case of other operations, over the years GAO has greatly improved the efficiency of its centralized audit of transportation payments. Procedures have been modernized and streamlined and new techniques have been devised to efficiently audit the large volume of transactions and related documents. As a result of these improved procedures, the number of employees engaged in this work has declined from 1,100 in 1962 to about 400 at the present time. Efforts at further improvements in efficiency and effectiveness are continuing.

The basic reason for proposing the transfer of this operation is that by its very nature it is a function of the executive branch; almost all of the transportation costs of the Government are incurred by executive branch agencies in the course of carrying out their operations. This being the case, the responsibility for determining that the payments made are technically correct

belongs to the branch of Government that obtains the transportation services. This is true for all other types of services and it should apply to transportation.

The detailed transportation audit function is simply not consistent with the general purposes, objectives, and responsibilities of GAO as they have been modernized over the past 25 years. Its primary emphasis is now on assisting the Congress in its legislative and oversight work and evaluating the efficiency, economy, and effectiveness of executive agency management performance. Responsibility for the detailed audit of transportation expenditures should be vested in the executive branch, subject to overall review by GAO in the legislative branch. This change would conform this large area of Federal expenditure to the same concept of executive management control subject to GAO postaudit that applies to all other categories of expenditure.

It is therefore proposed that the responsibility for auditing transportation payments and the related settlement of claims be transferred to the executive branch. GAO would make audits from time to time as to how well this function is performed as it does for other categories of expenditure and operations. It would also serve in an appellate capacity to enable carriers to request the Comptroller General to review executive agency actions on their claims.

What Were The Recommendations Of Previous Transportation Rate Audit Studies?

The specialized audit of transporta-

tion payments was born in the Office of the Treasury Auditor for the War Department in 1906 when a special board was established for the purpose of maintaining a central transportation tariff file for all Treasury auditors. The audit has evolved from that beginning to the highly specialized, centralized transportation audit performed by GAO today. The legislative history of laws dealing with the transportation audit shows that two main objectives have been overriding in all considerations to date. One was to enable the Government to pay its transportation bills promptly, without verifying the correctness of rates assessed by carriers until after payment. The other objective was to eliminate the multiple rate audit activities of the Government by centralizing the entire responsibility. Three major studies of the transportation audit have addressed these issues within the last 18 years.

The 1955 Hoover Commission on Organization of the Executive Branch of the Government, Subcommittee on Transportation, noted the success of AEC and TVA in the preaudit of transportation charges. The Subcommittee felt that the detailed postaudit could be eliminated if DOD and GSA preaudited military and civil bills, respectively, combining this preaudit with their payment functions. The Subcommittee did not address the question of transferring the postaudit, however.

The full Hoover Commission rejected the Subcommittee's recommendations, noting that the AEC and TVA preaudit was relatively simple, since limited types of cargo and routings were involved. The diversity of mili-

tary and other civil shipments, both according to commodities and locations, makes the audit a highly technical and complex job; the Commission believed that preaudit would increase payment delays. Also noted was the uneconomical duplication of tariff files and insufficient supply of qualified technical rate auditors which would be required.

The Hoover Commission thus recommended that GAO retain the postaudit rather than requiring DOD and GSA to preaudit transportation bills. The question of transferring the postaudit was not considered.

The Joint Agency Transportation Study, conducted under the sponsorship of the Joint Financial Management Improvement Program and completed March 6, 1970, was an exhaustive and voluminous study which produced new concepts and systems designed for better conduct of the Government's transportation business and included extensive study of GAO's technical audit of transportation payments. The report compared alternative methods of handling the audit with present operations and recommended that the central GAO audit and settlement role be continued. Contingent recommendations were that GAO:

- Continue emphasis on systems development, with the objectives of attaining maximum audit coverage through automation.
- Minimize manual reviews of individual transactions.
- Continue concern with transportation audit development efforts in industry and Government, moni-

tor the effects of these efforts on its postaudit role, and assist agencies to undertake the audit effort wherever this is efficient and economical.

The Joint DOD-GAO Transportation Audit Study, completed in March 1972, was conceived and undertaken to determine the feasibility and desirability of transferring to DOD the audit and settlement of DOD transportation payments now performed by GAO. This study group concluded, in summary, that there was no overall advantage to DOD or the Government as a whole for splitting up the audit this way. Therefore, it was not considered to be feasible or desirable to effect such a transfer.

This study group also advocated emphasis on the systems approach to improve the audit function and stated that, "If a computerized audit system can be developed which would provide for the integration of shipping, billing, payment, and audit processes, the feasibility and desirability of transferring the audit should be reexamined." The computerized audit system, now partially in operation, should be fully on line by the end of 1975; this will remove the last major obstacle to the development of a fully integrated automated system.

The findings and recommendations of these three study groups were concerned with the rate audit procedures and technology available at their respective times. The situation is rapidly changing, however, as a result of continuing development of automated rate audit systems.

When Should the Rate Audit Be Transferred?

It is proposed that the transfer to the executive branch be made not later than July 1, 1976. By that time GAO expects to have completed and fully tested a computerized transportation audit system. The project is planned for piecemeal implementation, so that staff requirements will decrease over an extended period of time, with the final segments to be operational by December 1975.

GAO is currently involved in a study with the Military Traffic Management and Terminal Services to determine the feasibility of producing an ADP tape which would permit a computer sort of all military bills of lading. The data tape would provide a major portion of the required input for the computerized transportation audit system. It would eliminate the need for original transportation documents to be sent to GAO and would be used to streamline and facilitate the processing and audit of military transportation payments. It is estimated that implementation of the program will begin in January 1975.

GAO has also commenced a program of spinning off certain carefully selected portions of the transportation audit to the appropriate operating agencies because they involve special circumstances, such as contract services or computer processing. Examples include the Military Airlift Command contract payments, civil agency payments made at overseas finance centers, the Military Sealift Command Government bill of lading traffic, and GSA outbound motor carrier shipments

from Federal Supply Service depots. The spinoff of other suitable categories of the rate audit will be pursued as identified and the circumstances are appropriate.

GAO is also studying the feasibility of developing and utilizing a formula based on fully allocated costs for computing transportation charges by ADP methods on Government freight shipments. This is a very complex matter and a significant departure from the long-established freight rate system consisting of individual rates, each designed to serve the needs of a particular customer, maintain some marketing relationship, or meet some individual competitive situation. If it can be developed and implemented, this method will greatly simplify traditional transportation billing and audit approaches.

It should be noted that these projects will all contribute to streamlining the audit of transportation payments. They are necessary in order to develop and maintain the audit function at a highly efficient level of operation. These efforts should be continued regardless of the agency responsible for the audit.

How Will the Rights of GAO Employees Be Protected in the Event of a Transfer?

GAO will strive to fully protect its employees' rights in the event of a transfer. The streamlining projects described above will result in a need for fewer personnel; however, every effort will be made to ensure that normal staff turnover from employee-initiated separations and retirements will ab-

sorb the necessary staff reductions without endangering the jobs of those who wish to remain. Actually, because of a very high retirement rate and the dearth of trained transportation audit personnel available as replacements, GAO believes that it may have some difficulty having enough employees to do this work in spite of decreasing staff needs.

All agency/employee relationships are governed by the rules and regulations of the U.S. Civil Service Commission. Additionally, the pending legislation provides that the transfer of personnel to the executive branch should be without reduction in classification or compensation for one year after the transfer. Beyond this, GAO's management recognizes a responsibility for the well-being of its employees.

What Will Be GAO's Future Role in Transportation?

GAO will continue to have a vital role in transportation. It will have continuing responsibility for the overview of administrative policies, practices, and procedures of the executive branch or agencies assigned the audit responsibility.

GAO would retain some transportation audit technicians in order to have the necessary expertise to use in this review function. These rate technicians would be generalists, having experience in all transportation modes and in all phases of transportation.

GAO would specifically retain the functions of collection, compromise, or termination of transportation debts that are referred to GAO by other

agencies. GAO would also continue to render decisions and guidance to disbursing and certifying officers and heads of departments or agencies of the Government in advance of payment

for transportation expenditures, and to claimants who request the Comptroller General to administratively review settlements involving questions of law or fact.

How To Use Objectives

If objectives are only good intentions they are worthless. They must degenerate into work. And work is always specific, always has—or should have—clear, unambiguous, measurable results, a deadline, and a specific assignment of accountability.

Peter F. Drucker

In *Management* (1973)



The Watchdog Reports

The following items from past issues of The Watchdog, the monthly newspaper of the GAO Employees Association, Carl C. Berger, editor, are republished for the benefit of GAO's present staff.

Delmore Appointed Assistant Director

February 1956

John R. Delmore, Audits, has been appointed as an assistant director of Audits effective January 29. The announcement of the appointment, approved by Comptroller General Joseph Campbell, was made by Ellsworth H. Morse, Jr., director of Audits.

A graduate of Marquette University, College of Business Administration, Mr. Delmore is a certified public accountant of the State of Wisconsin. He joined the Division of Audits in August 1954 and has been in charge of several housing audits since January 1955. These include FHA, PHA, and most of the other constituent agencies of HHFA, as well as the National Capital Housing Authority.

Prior to his service with the GAO, Mr. Delmore was controller of Henry Disston & Sons, Inc. (of Wisconsin). Previously he was associated with the public accounting firm of Arthur Andersen & Co. in Milwaukee.

Zuckerman Becomes Assistant Director

February 1956

Irving Zuckerman was made an as-

sistant director of the Accounting Systems Division of GAO on January 29. He will be assigned to the Defense Department.

Mr. Zuckerman joined the staff of Accounting Systems in September 1951 and has conducted important systems survey work in Japan, Okinawa, Formosa, and the Philippines.

He has performed effective co-operative systems developmental work for the Division and the Treasury Department and the component agencies of the Department of Defense. His participation in the development of a new financial control system for the Army Ordnance Corps has been a particularly significant contribution to the Program to Improve Accounting in the Federal Government.

Smith Blair, Jr.

March 1956

Comptroller General Joseph Campbell today announced the appointment of Smith Blair, Jr., as director of the European Branch GAO, to succeed Charles M. Bailey who will complete his 2-year tour of duty as director in June 1956.

Mr. Blair has been in charge of in-

investigative work of the European Branch since July 1954 and has been with GAO since March 1952. Prior to becoming associated with GAO, Mr. Blair was with the Federal Bureau of Investigation.

Mr. Blair is a graduate of Washington College of Law, class of 1941, and is a member of the U.S. District Court for the District of Columbia and the U.S. Supreme Court.

Dinner Honoring Frese

May 1956

Over 500 government and private industry leaders in the field of accounting gathered together to pay honor to Walter F. Frese, director, Accounting and Auditing Policy Staff, GAO, who will serve on a 1-year appointment as visiting professor in the Harvard Graduate School of Business Administration starting July 1.

The appointment stems from "the mutual benefits to be gained from effective relationships between the GAO and the nation's universities and colleges," according to Joseph Campbell, Comptroller General of the United States.

In his remarks to the dinner group meeting at the Mayflower Hotel on May 5, Mr. Campbell stated: "In our work together, Walter Frese has shown himself always a person of utmost good taste, in so many ways—never taking unto himself the credit for the labors and ideas of those under his direction.

"Time after time he has reached far, in insisting that, not he, but the men and women around him, within and without our own office, deserved all the

praise for a particular accomplishment . . . a true professional (Mr. Frese) knows that in our kind of effort there is no place for personal vanity—no room for self-glorification at the expense of fine and able people."

In thanking the assemblage when he was presented with a wrist-watch, Mr. Frese gratefully noted that he appreciated the honor bestowed on him, but that the credit should go to his associates and to the members of the different agencies that cooperated so wholeheartedly.

35th Anniversary of the General Accounting Office

June 1956

It is a great privilege to join with you in commemorating the 35th Anniversary of the Budget and Accounting Act which established the General Accounting Office.

During this relatively brief span in the life of our Government, GAO has acquired high stature and distinctive character measured by the public service which it has rendered. This, in turn, is a tribute to its loyal and capable staff because we know that, in the final analysis, an organization is judged by the people who make it up. Many who have gone before us, as well as the present staff, have contributed to the maturity of viewpoint upon which our present actions are based.

A review of the impressive record of accomplishments in the first 35 years suggests a guiding principle for the future. Simply stated, it may be said that continued progress will require us to change as the world around us

changes and that leadership will be retained only by those who foresee the necessity for changes and accomplish them in an orderly manner. It is this constant searching for new ideas and means of improving our work which will continue to keep us in the vanguard in our field of endeavor.

I am deeply appreciative of the part that each of you has played as a member of the team in the past. It imparts great confidence in our future.

Sincerely,
Joseph Campbell
Comptroller General
of the United States

**Investigation Duties Assumed by
CAAD, DAAD**

July 1956

Effective July 1, the Office of Investigations no longer continued to exist as a separate organizational entity, according to an announcement by the Comptroller General Joseph Campbell. The duties, work in process, and personnel are being transferred to the Civil Accounting and Auditing Division and the Defense Accounting and Auditing Division, as the work load dictates.

The investigative duties will be carried out in the respective divisions under the general supervision of the directors of the divisions. In each division there will be a chief of Investigations who will also be an assistant director of the division and will be responsible to the director for the supervision of investigative matters.

Regional offices of Investigations and Regional Audit Offices are being

consolidated. The combined offices will be designated as GAO regional offices. In each regional office there will be an investigator-in-charge who will be responsible to the regional manager for the supervision of investigative matters.

**Brasfield Assumes Frese's Duties;
Krieger—Regional Manager, Chicago**

July 1956

Comptroller General Joseph Campbell has announced that Karney A. Brasfield, assistant to the Comptroller General, will, in addition to his present duties, assume the responsibilities of Walter F. Frese, as director, A & A Policy Staff, during the period the latter is on leave of absence.

Mr. Frese is at Harvard University Graduate School as visiting professor of Business Administration for the year, though he will be available to the office on a consulting basis.

Mr. Campbell, also designated Hyman L. Krieger as regional manager, Chicago regional office, the Field Operations Division, effective August 1st.

GAO Far East Branch Set Up

July 1956

Comptroller General Joseph Campbell has announced the establishment of a Far East Branch in GAO.

In accordance with Comptroller General's Order 2.35, dated June 14, a Far East Branch has been established with headquarters in Tokyo, Japan, under the supervision and direction of a di-

rector responsible to the director of DAAD.

The Far East area will embrace all military activities situated in and

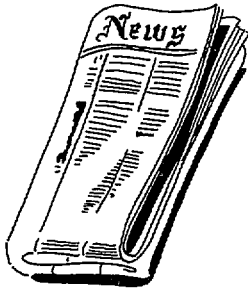
around Japan, Formosa, Philippines, the Marianas, Cambodia, Laos, Viet Nam, Thailand, and west as far as, and including, Pakistan.

First Management Scientist

The first management scientist was that long-forgotten Italian who, very early in the Renaissance, invented double-entry bookkeeping. No other management tool designed since can compare with it in simplicity, elegance, and utility. Double-entry bookkeeping and all its offsprings and variations is still the only truly universal "management science," the only tool of systematic analysis that every business, and indeed every institution, uses every day.

Peter F. Drucker

In *Management* (1973)



News & Notes

Due Professional Care

Included in the Comptroller General's auditing standards for governmental activities, published in 1972, is the standard that due professional care is to be used in conducting an audit and in preparing related reports.

This standard was initially included in the statement of generally accepted auditing standards promulgated in 1947 by the Committee on Auditing Procedure of the American Institute of CPAs. In 1952 the AICPA published the *CPA Handbook* and the chapter on professional standards included an excellent paragraph on what due care by an auditor means. The Securities and Exchange Commission quoted it recently in an order entered against a large public accounting firm and it is reproduced here as a reminder to GAO staff members of how important this standard is.

On the negative side of care there is the avoidance of negligence and the kind of laziness that is satisfied with a task only partly done or performed by rote in a reverie more appropriate to an assembly bench than to an audit examination. On the positive side there are the requirements that each person engaged in an examination must be aware of the purpose of what he is doing, must understand and perform with mental alertness, inquisitive-

ness, and a sense of responsibility, even those tasks which may appear to be routine, and must respond diligently by further inquiries or examinations to circumstances indicating them to be necessary. The auditor should carry out his examination with an attitude of healthy skepticism which seeks corroboration of explanations offered for matters that have aroused questions in his mind, particularly when those explanations come from persons who could have personal reasons for diverting further inquiry. Care is required even when personal acquaintanceship with the client or its employees and their unquestioned reputation in the community for the highest standards of righteousness and probity, may appear to justify complete reliance on them. In such cases it is desirable to keep three facts in mind:

1. An independent examination is a check on representations of management however honest and competent that management may be, and reliance on managerial virtues is not a check.
2. Banks sometimes make character loans, but there is no such thing as a character audit.
3. Defalcations are nearly always perpetrated by old and trusted employees of good reputation.

GAO Auditor Helps Inspect Food

A recent inspection at a privately operated Washington State grocery warehouse resulted in the largest warehouse seizure in the history of the

Food and Drug Administration. At first, the FDA inspector said that he did not think the rodent evidence observed indicated a serious problem. However, *Christina Stoffel*, the GAO auditor of the Seattle regional office who accompanied him, insisted that the evidence indicated a need for a more exhaustive inspection. The inspector decided to return to the warehouse the next day and make a more in-depth inspection.

This inspection led to seizure of \$1.5 million in food products after FDA found thousands of pounds of food contaminated by rodent excreta pellets, rodent hairs, rodent nesting materials, and even one mouse. FDA had inspected this warehouse several times in the previous year and found evidence of rodent activity; yet it was not until GAO accompanied the FDA inspector that official action was taken against the firm.

Both as consumers and fellow auditors, we're proud of you, Christina. Keep up the good work!

In the National Archives

Cliff Diehl of the Washington regional office wrote the following brief but interesting account about an official visit to the National Archives in the March 1974 regional office newsletter, *The Ledger*:

As a result of the 4-day fire at the Military Personnel Records Center in St. Louis in July 1973, GAO was requested by a member of Congress to review fire protection measures at all federally owned records centers. While we have learned a lot about fire safety equipment and procedures there have been other side benefits. For example, most

people think the National Archives is a place where only dusty, 200-year old records are kept. While this is true to some extent, there are many interesting records and artifacts—as we discovered recently.

Imagine the reactions of the audit staff, when on a recent tour we were escorted into a security area and shown the rifle used by Lee Harvey Oswald in the assassination of President Kennedy, the movie camera which filmed the tragedy as shown in *Life Magazine*, FBI reports on Oswald's association with the Russians, and a section of curbstone from Dallas with a possible ricochet mark—used as an FBI exhibit. While being conducted through this area it seemed that our escort was trying to lead us to the exit, while the archivist in charge of the area—probably excited at having some “guests”—wanted to show us all the “goodies” he had stashed away in file cabinets and safes.

On subsequent tours, we also saw many other diverse items, such as pay records for soldiers in the Revolutionary War and the War of 1812. In another room—which was “off limits” we saw something of current interest. By looking through a window we saw crates on which the following notice was posted—“This box to be opened only by Richard M. Nixon or H. R. Haldeman.”

We also found some other interesting and informative materials—off in a dusty corner in the same room as the Kennedy artifacts were the exhibits (books, movies and photographs) obtained by the Congressional Committee on Pornography. CSA officials explained that this data could not be “exposed” to us as it had no relationship to fire safety.

GAO Performance

The Chairman of the Senate Committee on Agriculture and Forestry, Herman E. Talmadge, recently wrote to the Comptroller General about GAO's performance in these words.

While I suppose that GAO is best known for its “cops and robbers” activities, such

as the investigation of the Russian wheat sale, I have been more significantly impressed with the management and evaluation services which your staff has provided my Committee. The indications are that these activities will provide the Congress and the public with more reliable evaluation of agency performance, while improving government efficiency and saving millions of dollars.

Questions for Alligator Fighters

George S. Odiorne, Dean of the College of Business and Professor of Management at the University of Utah, writes on managing bad luck by objectives in the *Michigan Business Review* for March 1974. He ends his article with some provocative questions, as follows:

"When you are up to your rear end in alligators, it is hard to remember that your objective is to drain the swamp." This delightful saying is the creed of the anti-planner. He loves the alligators for they force him to remain alert, keep his adrenalin flowing, and draw the pity and admiration of others. But here are some questions for the alligator fighters:

- Did you enter the swamp-draining project without knowing there were alligators? Why?
- Is there no better way to drain a swamp other than wading into it? Perhaps a boat would help or an engineering approach.
- What have you learned from this experience that will make the next swamp-draining project more rational, sane, and alligator-free?

Federal Drug Procurement

In testifying before the Monopoly Subcommittee of the Senate Committee on Small Business on February 20, 1974, the Comptroller General, *Elmer*

B. Staats, provided the following estimate of what the Federal Government spends on prescription drugs.

It is estimated that direct Federal expenditures and reimbursements for prescription drugs amounted to about \$1.6 billion in fiscal year 1973—an increase of more than \$44 million over the expenditures in fiscal year 1972. This amount includes about \$252 million in direct drug purchases by Federal agencies and reimbursements of over \$1.3 billion under federally sponsored health programs, such as Medicare and Medicaid.

Views on Exercise

The Washington regional office newsletter for April, 1974, contains the following commentary on exercise by *Chip Breen*:

Before anyone rises 45 minutes earlier than normally for that exhilarating 3-mile Monday morning jog, perhaps we should consider the following details unearthed during a recent GAO tour of the U.S. Army Research Institute of Environmental Medicine. The number of incidents of dog bites is significantly higher among the jogging set than among their better rested colleagues. Joggers are more prone to orthopedic injury. Added to this, the scientific director of the Institute refuses to say jogging is beneficial to the individual jogger. The cholesterol level in the blood, a concern of many well-rounded executives, cannot be proven to be significantly reduced through this masochism. He also indicated these facts, dog bites excluded, can be generalized to most forms of exercise. The only consolation is he cannot prove exercise is harmful and concedes if it makes an individual feel good, do it.

GAO Laws

The Legislative Digest Section, Office of the General Counsel, has available

changes and additions through January 1973 to the publication, "Legislation Pertaining to the Functions and Jurisdiction of the General Accounting Office." The original compilation of laws from 1921 through January 1971 may also be obtained by calling code 129, extension 4633 or by writing to the Legislative Digest Section, Room 7016, 441 G Street, NW., Washington, D.C. 20548.

Youth Advisory Committee

The Youth Advisory Committee of

GAO, which was reconstituted earlier this year, consists of 27 staff members, each under 30 years of age and within the grade range of GS-7 through GS-12. The committee provides a forum for young GAO professionals to express ideas and opinions on topics of interest as well as to make recommendations to top management for improving GAO policies, procedures, and work environment.

The first meeting of the reconstituted committee was held in Washington on May 2 and 3.

Members

Edward A. Tomchick	Procurement and Systems Acquisition Division
Lawrence A. Kiser	Logistics and Communications Division
Warren Smith	Federal Personnel and Compensation Division
Paul D. Lacy	Manpower and Welfare Division
Marjorie A. Hrouda	Resources and Economic Development Division
Ronald L. Berteotti	General Government Division
John W. Lainhart, IV	Financial and General Management Studies Division
Jacquelyn A. Goff	Office of the General Counsel
Charles W. Woodward, III	Transportation and Claims Division
Jonathan M. Bensky	1st-year rotation pool
Charles B. Hessler	International Division
Charles R. McCreery	Office of Personnel Management, Office of Administrative Planning and Services,
	Office of the Comptroller General,
	Office of Federal Elections,
	Office of Energy and Special Projects,
	Office of Policy,
	Office of Program Planning, and
	Office of Internal Review

Martin G. Landry
Jane E. Whitehead
Robert C. Wuori
Terence J. Davis
Mark J. Ables, Jr.
Bob J. Jones
John L. Brummet
Jerome E. Matzen
Emi Nakamura
Ngaire E. O'Connell
Paul A. Latta
Paul A. Puchalik
William M. Zimmerling
Stephen J. Jue
Martha L. Moore

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Hearings & Legislation



BY JUDITH HATTER

Assistant Chief, Legislative Digest Section

Export-Import Bank Credits Involving Communist Countries

On April 2, 1974, the Comptroller General appeared before the Subcommittee on International Finance of the Senate Banking, Housing and Urban Affairs Committee to discuss the GAO opinion concerning "national interest" determinations made by the President under section 2(b)(2) of the Export-Import Bank Act, as amended. This act prohibits financing by the Export-Import Bank (Eximbank) in connection with the purchase or lease of any product directly by a Communist country or in connection with the purchase or lease of a product to be used in, or sold or leased to, a Communist country except when the President determines the transaction would be in the national interest.

The General Accounting Office concluded that the waiver provision of section 2(b)(2) may be properly exercised only as to individual transactions which the President determines to be in the national interest and that a blanket determination signed by the President on October 18, 1972, that it is in the national interest for Eximbank "to guarantee, insure, extend credit and participate in the extension of credit in connection with the purchase

or lease of any product or service by, for use in, or for sale or lease to the Union of Soviet Socialist Republics," leaving it to the Bank to pass upon individual transactions, did not satisfy the waiver provision.

Opinions by the General Counsel of the Eximbank and the Attorney General conclude that blanket Presidential determinations by country meet the requirements of the law. (Other participants: Messrs. *Dembling, Moore, Wray, Zappacosta, and Bowlin*)

Energy Research and Development Appropriation

Congressman George H. Mahon of Texas had the following explanation of the Special Energy Research and Development Appropriation Act, 1975 (H.R. 14434) when it was debated and passed by the House of Representatives on April 30, 1974.

This bill is a unique product of six of the subcommittees of the Committee on Appropriations and demonstrates that the House through its committee system possesses the flexibility and capability to meet urgent situations in a timely and responsive manner.

In consultation with the leadership of the House, the Appropriations Committee decided several months ago that it was imperative to move as quickly as possible on energy research and development funding.

By doing this, money would be available at the beginning of the fiscal year on July 1 so that progress on energy research and development could proceed as rapidly and efficiently as possible.

Also, by providing these appropriations in a single bill, rather than in six bills as would otherwise be the case, we could gain an overview of the thrust of the Federal energy research and development effort.¹

Commodity Shortages

On April 29 the Comptroller General testified before a joint hearing of the Senate Commerce and Government Operations Committees to discuss a GAO report, "U.S. Actions Needed to Cope With Commodity Shortages."

Mr. Staats pointed out that the ability to monitor and forecast future commodity positions is essential if potential shortages are to be foreseen and averted. He also discussed the short supply decisionmaking system, the impact of export controls, the implementation of short-supply controls, and long-run planning and policy formulation efforts. (Other participants: Messrs. *Milgate, Ferri, Wilson, Sawyer, and Griffith*)

Federal Information Collection

Phillip S. Hughes, assistant comptroller general, appeared on April 24 at an inquiry into corporate disclosure and collection and tabulation of information by Federal agencies held by a joint meeting of the Subcommittee on Budgeting, Management, and Expenditures and the Subcommittee on Inter-

governmental Relations of the Senate Government Operations Committee.

Mr. Hughes discussed GAO responsibilities relating to the collection of information by Federal regulatory agencies under section 409 of Public Law 93-153; commented on disclosures in Senate Document 93-62, "Disclosure of Corporate Ownership"; and outlined the approach to the GAO review of the Federal Trade Commission's Line of Business Report in light of these new responsibilities. (Other participants: Messrs. *Bell, Heyl, and Sperry*)

Foreign Assistance

On March 25, at hearings before the Subcommittee on Foreign Operations of the Senate Appropriations Committee on the Foreign Assistance appropriation bill for fiscal year 1975, *J. K. Fasick*, director, International Division, highlighted GAO's recent work concerning foreign assistance and delineated the following questions which need continued attention: (1) When should congressional assistance be stopped? (2) Is the coordination of family planning, health, and nutritional programs adequate? (3) What improvements are needed in Export-Import Bank operations? (4) Has AID moved expeditiously in using the fixed-cost reimbursement approach to development assistance projects? (5) Are inconsistencies in overseas allowances sufficient to warrant corrective actions? (Other participants: Messrs. *Hylander, Conahan, Duff, Milgate, Redell, Zappacosta, and Blair*)

¹ *Congressional Record*, Vol. 120 (Apr. 30, 1974), p. H3351.

Postal Service Operations

On April 30, before the Subcommittee on Postal Facilities, Mail and Labor Management of the House Post Office and Civil Service Committee, *Victor L. Lowe*, director, General Government Division, presented a comprehensive discussion of the direction and importance of the Postal Service's modernization effort and described the results of the audit work performed by GAO in this area. (Other participants: Messrs. *Landicho, Anderson, Colan, Ols, and Blair*)

Community Mental Health Centers Program

Gregory J. Ahart, director, Manpower and Welfare Division, appeared before the Subcommittee on Public Health and Environment of the House Interstate and Foreign Commerce Committee on February 19 to discuss the results of the GAO review of the Community Mental Health Centers Program administered by the National Institute of Mental Health of the Department of Health, Education, and Welfare. (Other participants: Messrs. *Martin, Elmore, Fenstermaker, Neuroth, and Griffith*)

Airborne Warning and Control System

On March 12, *Jerome H. Stolarow*, deputy director, Procurement and Systems Acquisition Division, appeared before the Subcommittee on Tactical Air Power of the Senate Armed Services Committee to discuss the Air Force

program for developing and procuring the Airborne Warning and Control System (AWACS). GAO concluded that, in the absence of a high-priority need, a conservative management approach should be followed and that the viability of this concept be well established before production is authorized by the Congress. (Other participants: Messrs. *Flynn, Bohan, Desmond, Schwebs, Tuck, Oczkowski, Horan, and Fitzgerald*)

Campaign Financing in the District of Columbia

The Subcommittee on Government Operations of the House Committee on District of Columbia held hearings on April 4 on two bills, H.R. 13539 and H.R. 12638, concerning public financing of political campaigns in the District of Columbia. *L. Fred Thompson*, director, Office of Federal Elections, commented, based on the experience of GAO in the administrative enforcement of the Federal Election Campaign Act of 1971, on four general areas: full disclosure and centralized campaign organization, contribution and expenditure limits, administration and enforcement, and incentives for small private contributions. (Other participants: Messrs. *Litchfield, Scarborough, and Blair*)

Labor Department Programs and Services for Veterans

On April 30 *Gregory J. Ahart*, director, Manpower and Welfare Division, appeared before the Subcommittee on Readjustment, Education, and Employ-

ment of the Senate Committee on Veterans' Affairs to discuss the results of the GAO review of the Department of Labor's program for providing special employment assistance to Vietnam-era veterans initiated pursuant to Executive Order 11598 of June 16, 1971, and the Vietnam Era Veterans' Readjustment Assistance Act of 1972. (Other participants: Messrs. *Henig* and *Walsh*)

Energy Information

On February 6, *Phillip S. Hughes*, assistant comptroller general, appeared before the Senate Interior and Insular Affairs Committee at hearings on S. 3782, to establish a national energy information system.

His statement summarized the existing situation, described current data collection processes and problems, focused on recent activities in the Federal Energy Office and in the Congress, and concluded that it would be feasible to establish within the executive branch an energy information system containing current and valid information on energy supply and demand. (Other participants: Messrs. *Peach*, *Duffus*, *Sawyer*, and *Griffith*)

Expenditures for Prescription Drugs by Federal Agencies

The Comptroller General appeared on February 20 before the Monopoly Subcommittee of the Senate Small Business Committee to discuss GAO work related to procurement of and reimbursement for prescription drugs

by the Federal Government. (Other participants: Messrs. *Ahart*, *Crowther*, *Martin*, *Collins*, *Baine*, *Shnitzer*, and *Fitzgerald*)

Management of HUD-Held Multifamily Mortgages

On March 27 *Wilbur D. Campbell*, associate director, Resources and Economic Development Division, discussed for the Legal and Monetary Affairs Subcommittee of the House Government Operations Committee the GAO report on improvements needed in the overall management of HUD-held multifamily mortgages wherein it was recommended, among other things, that the Department of Housing and Urban Development issue regulations providing uniform guidance to field offices in the administration of the mortgages. (Other participants: Messrs. *Birkle*, *Maranto*, *Toler*, *Wolters*, *Hirschler*, and *Sperry*)

Federal Housing Administration Mortgage Insurance Funds

Baltas E. Birkle, deputy director, Resources and Economic Development Division, appeared on March 26 before the Legal and Monetary Affairs Subcommittee of the House Government Operations Committee to discuss the financial status of special risk and general insurance funds administered by the Federal Housing Administration and the Department of Housing and Urban Development and to update information furnished at a previous ap-

pearance. (Other participants: Messrs. *Campbell, Sherman, and Sperry*)

Metro Cost and Construction Reporting

Henry Eschwege, director, Resources and Economic Development Division, testified on April 2 before the House Committee on District of Columbia concerning the GAO report on the Washington Metropolitan Area Transit Authority's system of reporting on the status of Metro's cost and construction program. (Other participants: Messrs. *Kelley, Carroll, Waters, and Blair*)

Radionavigation Systems

At hearings on March 28 before the Subcommittee on Coast Guard and Navigation of the House Merchant Marine and Fisheries Committee, *F. J. Shafer*, director, Logistics and Communications Division, summarized a GAO study on radionavigation systems for general-purpose users with particular emphasis on the Coast Guard's plan to serve the navigation needs of the maritime community incident to the Committee's consideration of the Coast Guard authorization for fiscal year 1975. (Other participants: Messrs. *Smith, Bailey, and Griffith*)



Frank C. Conahan

Frank C. Conahan was designated director of the European Branch, International Division, effective August 15, 1974.

Mr. Conahan received his bachelor of science degree in accounting from King's College in 1955 and attended the Executive Development Program at the University of Michigan Graduate School of Business Administration in 1968. For the academic year 1972-73, he was a member of the Senior Seminar in Foreign Policy at the Foreign Service Institute.

In 1955, Mr. Conahan joined GAO in the former Division of Audits. After serving in the Navy from 1956 to 1958, he returned to GAO as a staff member of the Civil Accounting and Auditing Division. He transferred to the International Division when it was formed in 1963 and subsequently served as assistant director, and most recently as associate director.

Mr. Conahan is a member of the American Accounting Association, the American Society for Public Administration, and the United Nations Association of the United States of America. He received the GAO Meritorious Service Award in 1963, the GAO Career Development Award in 1968, and the GAO Special Education Award in 1973.

Louis W. Hunter



Louis W. Hunter was designated associate director in the International Division, effective August 15, 1974.

Mr. Hunter is a CPA (California). His professional associations include the American Institute of Certified Public Accountants, the National Association of Accountants, the American Accounting Association, the Federal Government Accountants Association, and the California Society of Certified Public Accountants.

He received a B.C.S. degree from the Golden Gate College of Business in 1946 and later attended the University of San Francisco Law School. In 1964 he completed the Advanced Management Program at the Harvard Graduate School of Business Administration.

He joined the GAO staff in 1952 after several years of public accounting experience and has served in the San Francisco regional office and the European Branch as well as in the Civil Division in Washington. He was designated an assistant director in the Civil Division in 1960 and in the International Division in 1964 and an associate director in 1967. He became manager of the New Delhi Office, European Branch, in July 1970; was assigned to the European Branch Office, Frankfurt, Germany, as an assistant director, in August 1972; and was designated director of the European Branch in 1973.



Edward J. Mahoney

Edward J. Mahoney, deputy director, Financial and General Management Studies Division, retired from GAO in March 1974 after more than 30 years of Government service.

Mr. Mahoney has been a member of the faculty of American University (1959-66), teaching classes in automatic data processing and systems analysis. He has also been a member of the American University Advisory Committee for Automatic Data Processing Programs.

Prior to joining GAO, Mr. Mahoney was engaged in the development and implementation of large-scale mechanization programs in both industry and government. He has served in GAO since 1948.

Mr. Mahoney held positions of increasing responsibility in the Accounting Systems Division (1948-56), Accounting and Auditing Policy Staff (1956-67), Office of Policy and Special Studies (1967-71), and the Financial and General Management Studies Division (1971-74). Mr. Mahoney was a member of the Joint Government Committee that developed the Federal Government's electronic system for U.S. Treasury check operations, a system that processes over 2 million Government checks daily. He was also a member of the Hoover Commission Task Force that studied electronic data processing systems and punched card processes in the Federal Government.

Mr. Mahoney is the U.S. Representative as National Correspondent on the subject of Informatics and Public Accounting—International Institute of Administrative Services and a member of the Planning Council of the American Management Association, Management Systems and Sciences Division.

John W. Moore



John W. Moore, associate general counsel (general government matters), retired from GAO on April 30, 1974, after 32 years of Federal service.

Mr. Moore joined the former Audit Division of GAO on November 3, 1941; transferred to the Accounting and Bookkeeping Division in 1943; and has served in the Office of the General Counsel since 1948. He served as an assistant general counsel from April 8, 1970, until his appointment as associate general counsel on August 20, 1972. In this capacity Mr. Moore was responsible for legal work of the Office of the General Counsel pertaining to the availability of appropriations and to general Government matters involving all Federal agencies and the District of Columbia.

Before entering the Government service, he was the principal of a junior high school in Kentucky. Mr. Moore received his B.S. degree from Eastern Kentucky University and his LL.B. degree, with honors, from the National University of Law, now consolidated into The George Washington University. He also completed courses toward an M.A. degree in education at the University of Kentucky.

He is admitted to practice before the District of Columbia Bar, the District Court of Appeals for the District of Columbia, and the Supreme Court of the United States. He is a member of the Federal Bar Association. He received the GAO Meritorious Service Award in 1961, 1966, 1967, and 1968.



James H. Rogers

James H. Rogers, manager of the Philadelphia regional office, retired at the end of June 1974 after 32 years of Federal service, of which 28 years were spent with GAO and 4 years as a naval officer during World War II.

Mr. Rogers attended the University of Tennessee and graduated from Rider College in 1933. In 1962 he attended the Advanced Management Program of the Harvard Business School.

From 1933 to 1942 Mr. Rogers was employed in the Philadelphia office of Lybrand, Ross Bros., & Montgomery (now Cooper & Lybrand). During World War II he served in the Navy Cost Inspection Service as a commander and ended his Navy career as the officer in charge of their Pittsburgh office. In early 1947 he joined GAO's newly formed Corporation Audits Division where he supervised many large audit assignments such as the Tennessee Valley Authority. In January 1952 he was assigned as the first supervisor in charge of the new comprehensive audit program at the Department of the Interior. In December 1956 he was appointed the regional manager of the Philadelphia office.

Mr. Rogers is a certified public accountant in Pennsylvania and Tennessee. He is a member of both the American and Pennsylvania Institutes of CPAs. In 1960 he was national first vice president of the Federal Government Accountants Association.

Mr. Rogers received the GAO Meritorious Service Award in 1960 and the GAO Distinguished Service Award in 1968.

Allen R. Voss



Allen R. Voss was designated regional manager of the Philadelphia regional office, effective July 1, 1974.

Since joining GAO in 1958, Mr. Voss has served as an assistant director in the Office of Policy and Special Studies, assistant and associate director in the Civil Division, and associate and deputy director in the Office of Policy and Program Planning. Since 1972, he has served as director of the Office of Policy. In 1966 he completed the Advanced Management Program at the Harvard University Graduate School of Business Administration.

Mr. Voss served in the Air Force from 1948 to 1952. He graduated with high honors from the University of Florida in 1956, with a bachelor of science degree in business administration. Before joining GAO, Mr. Voss served as a staff member of a public accounting firm and as a cost accountant with a manufacturing company.

Mr. Voss is a CPA (Florida) and a member of the American Institute of CPAs. He received Meritorious Service Awards in 1961 and 1968 and the Distinguished Service Award in 1972.

Other Staff Changes

New Assistant Directors

Financial and General Management Studies Division

Joseph J. Donlon, Jr.

General Government Division

Stephen L. Keleti, III

Logistics and Communications Division

James G. Mitchell

James F. Morris

Richard F. Tucker

Manpower and Welfare Division

Albert B. Jojokian

Thomas P. McCormick

Transportation and Claims Division

David Lodwick

New Senior Attorneys

Office of the General Counsel

Matthew S. Watson

Thomas F. Williamson

Professional Activities



Office of the Comptroller General

The Comptroller General, *Elmer B. Staats*, addressed the following groups:

Citizens' Research Foundation's National Conference on Money and Politics, Washington, D.C., "Enforcing the Campaign Finance Laws," February 28.

American University's Institute of Election Administration and the National Association of Counties' Seminar, "Revolution in Campaign and Election Law," Washington, D.C., "Role of GAO in Area of Campaign Finance Regulation," March 2.

The Ditchley Foundation's "British Legislators" Conference on "Responsibilities of Governments, Legislatures, and the Media Towards the Public in Regard to Government Policies and Actions," Ditchley Park, Enstone, England, "Measurements of Costs and Effectiveness," March 9.

Federalism Seventy-Six's Conference on Using the Federal System More Effectively, Washington, D.C., "The New Federalism—Unfinished Business," March 14.

Senior Seminar in Foreign Policy, Foreign Service Institute, Depart-

ment of State, Washington, D.C., "The Congress and the GAO," March 15.

The Brookings Institution's Conference for Business Executives on Federal Government Operations, Washington, D.C., "The Role of the General Accounting Office," March 25.

Federal Executive Institute's Federal Executive Development Program, Washington, D.C., "GAO as a Catalyst for Change in Government Operations," March 27.

Center for the Study of the Presidency's 1974 National Student Symposium on the Presidency, Reston, Virginia, Round Table on "The Presidency and the Congress, Future Organization and Issues," March 31.

National Archives and Records Service's Symposium on Value-Centered Reporting, Washington, D.C., "Why a Higher Priority is Needed for Improved Government Reporting," April 1.

Industrial College of the Armed Forces, 1973-74 Class, Washington, D.C., "The General Accounting Office and the Department of Defense," April 17.

Association of Governing Boards of Universities and Colleges, National Conference on Trusteeship, New Orleans, La., "Survival of Higher Education in the Years Ahead," April 29.

Mid-Atlantic Intergovernmental Audit Forum, Charter Signing Ceremonies, Philadelphia, Pa., May 1.

National Association of Schools of Public Affairs and Administration, Syracuse, New York, "Evolving Needs in the Preparation of Future Leaders for the Federal Service," May 3.

Following are recently published articles of the Comptroller General:

"Measuring and Enhancing Federal Productivity" (based on speech presented at Conference Board Conference on Productivity, New York City, May 23) in *Sloan Management Review*, Fall 1973.

"GAO Audit Standards: Development and Implementation," *Public Management*, February 1974.

"Revenue Sharing: A New Challenge for the Auditing Profession," *The Internal Auditor*, March-April 1974.

"Acquisition Management Needs Realistic Forecasting to Close the Confidence Gap," *Defense Management Journal*, April 1974.

During the period May 13-22, the Comptroller General participated as the U.S. delegate in the 8th International Congress of Supreme Audit Institutions, held in Madrid, Spain. Other members of the U.S. delegation were: *E. H. Morse, Jr.*, Assistant

Comptroller General, and *Roland Sawyer*, GAO Information Officer.

E. H. Morse, Jr., Assistant Comptroller General, submitted a paper on operational and program auditing for presentation at the Accounting Colloquium of the University of Texas, Austin, April 12. *Al Voss*, director, Office of Policy, spoke on his behalf in summarizing and discussing the paper.

Mr. Morse spoke on evaluation of Government programs at the Civil Service executive seminar on public management at Kings Point, N.Y., April 25.

An article by Mr. Morse entitled "The Auditor Takes on Program Evaluation" appeared in the Fall 1973 issue of the *Armed Forces Controller*.

Mr. Morse received the annual achievement award on March 20 from the Boston Chapter of the Federal Government Accountants Association for outstanding contribution to Federal financial management. The award was presented on behalf of the Boston Chapter by *Walter F. Frese*, consultant to the Comptroller General and former director of the GAO Accounting Systems Division.

Thomas D. Morris, Assistant Comptroller General:

Participated in a Productivity Conference with officers of the State of Vermont, Montpelier, March 1.

Participated in a conference on "Preparation of Business Executives for Federal Service" at Harvard University, March 8, 9, and 10.

Participated in the Department of Defense Top Management Seminar as a guest speaker covering "Productivity Measurement," AMETA, Rock Island, Ill., March 12.

Addressed the Seminar on Sophisticated Auditing Techniques, FGAA, Sheraton-Park Hotel, March 25, "Auditing—the State of the Art and Its Value to Management."

Participated in panel on "Office of Federal Procurement Policy—What? Where? When? Who? Why?," National Contract Management Association, National Educational Symposium, Shoreham Hotel, April 18.

Participated in National ASPA Conference on "Federal Government Productivity Management and Policy," Syracuse, N.Y., May 7.

A. T. Samuelson, Assistant Comptroller General, addressed the following chapters of the National Association of Accountants on GAO's role in assisting the Congress:

Virginia Skyline Chapter, Charlottesville, Va., March 14.

Lehigh Valley Chapter, Bethlehem, Pa., May 10.

Joseph S. Rosapepe, deputy information officer:

Addressed the American University Institute on Management of Government on "Policies and Procedures," February 16.

Addressed the Public Affairs Seminar for Public Executives of the Baltimore Federal Executive Board on March 13 in Baltimore, Md.

Mr. Rosapepe has been elected presi-

dent of the Government Information Organization. He had previously been a vice president of the association representing public affairs officers on Federal, State, and local levels.

Office of the General Counsel

Paul G. Dembling, general counsel:

Co-authored an article for the *Netherlands International Law Review* entitled "Pollution of Man's Last Frontier: Adequacy of Present Space Environmental Law in Preserving the Resource of Outer Space," January 1974.

Spoke on "The Work of GAO" before a seminar for Business Executives sponsored by The Brookings Institution, February 25.

Spoke on "Debarments and Suspensions in Government Contracts" before the Briefing Conference on Government Contracts in Philadelphia, March 5-6.

Spoke before the Aerospace Industries Association on "Patents, Proprietary Data and the GAO" in New Orleans, March 14.

Spoke on "Debarment, Suspension and Blacklisting in Government Contracting" before the Government Contract Claims Course sponsored by Federal Publications, Inc. and The George Washington University, March 28.

Lectured to a George Washington University National Law Center seminar on "Communications Satellite Act," April 18.

Participated in an American Society of International Law Workshop on "Space Stations: Present and Future," April 26.

Spoke on "GAO's Position on the Service Contract Act" before a Department of the Navy Office of the General Counsel seminar, May 2.

Was appointed a member of the 3-person Hearing Committee of The Disciplinary Board, The District of Columbia Bar, March 1974.

Milton J. Socolar, deputy general counsel:

Spoke on "Operations of GAO" before the Institute for New Government Attorneys sponsored by the Civil Service Commission, March 13.

Participated in a panel discussion before the Federal Executive Institute and spoke on "Advisory Opinions on Payroll, Contracts and Bid Protests," March 27.

Paul Shnitzer, associate general counsel:

Spoke on "Recent Developments in Government Contract Law" before the Briefing Conference on Government Contracts, in Philadelphia, March 3-6.

Spoke on "Some Significant Problems in the Application of the Service Contract Act" before a course on Labor Standards sponsored by The George Washington University National Law Center, May 9-10.

John F. Mitchell, senior attorney, spoke on "Remedies Available in GAO in Disputes Arising Out of Contractual Relations with the Federal Govern-

ment" before the American Bar Association members of the Georgia bar in Atlanta, February 27-28.

Charles P. Hovis, deputy assistant general counsel, addressed a joint meeting of the Huntsville Chapters of the National Contract Management Association and Federal Bar Association on "GAO's Interim Bid Protest Rules and Regulations," February 21-22.

Vincent A. LaBella, deputy assistant general counsel, spoke on "Bid Protest Procedures and Source Selection in Negotiated Procurements" before the Defense Procurement Executive Seminar, April 30.

Ronald Berger, attorney-adviser, participated in the Briefing Conference on Government Contracts in Philadelphia, March 3-6.

John G. Brosnan, attorney-adviser, spoke on "Mistakes in Bids" before the Central Connecticut Chapter of the National Contract Management Association in Hartford, February 28-March 1.

Herbert I. Dunn, attorney-adviser, spoke on "Source Selection—Negotiation in Government Contracts" before the Northern New Jersey Chapter of the National Contract Management Association, March 13-14.

Ann H. Finley, attorney-adviser, participated in the Briefing Conference on Government Contracts in Philadelphia, March 3-6.

Martin L. Glass, attorney-adviser, participated in a Government Contracts Symposium in Los Angeles, April 23-26.

Alan S. Goldberg, attorney-adviser, participated in the Briefing Conference

PROFESSIONAL ACTIVITIES

on Government Contracts in Philadelphia, March 3-6.

Alan I. Saltman, attorney-adviser, spoke on "Mistakes in Bid Procedures of GAO" before the Fort Monmouth Chapter of the National Contract Management Association, March 28-29.

Office of Congressional Relations

Martin J. Fitzgerald, legislative attorney, discussed the role of the General Accounting Office in support of the Congress on April 4, during a session of the Civil Service Commission's Institute in the Legislative Function, Washington, D.C.

Office of Federal Elections

Fred Thompson, director, addressed the following groups:

The Federal Government Accountants Association's Student Seminar in San Francisco on "Campaign Financing," February 27.

The Finance Seminar given by the Republican National Finance Committee in Chicago on "Campaign Finance Legislation," April 5.

Office of Personnel Management

Leo Herbert, director:

Discussed the history, organization, and functions of GAO at a MBA Forum at the University of Alabama in Tuscaloosa, on March 19. *Marvin Colbs*, Atlanta regional manager, participated in the question and answer session following Mr. Herbert's talk. That evening, both participated

in a meeting of the Alabama Accounting Society.

Spoke on April 5, at the Management Development Program, Tulane University, New Orleans, on "Improving Management in the Federal Government."

Federal Personnel and Compensation Division

Forrest R. Browne, director, spoke at the Civil Service Commission Executive Seminar, Oak Ridge, Tenn., on "The GAO and Congressional Oversight of Agency Program Management," March 21.

David P. Sorando, deputy director, addressed the participants of the Department of Defense Comptroller Course, Maxwell Air Force Base, Montgomery, Ala., on February 25. He spoke on "The Evolving Role of GAO."

William F. Coogan, assistant director, discussed "GAO Views of Agencies' Training Problems" at a Civil Service Commission seminar of Federal training officers in Lancaster, Pa., on January 30.

Harold E. Lewis, assistant director, spoke at the Industrial College of the Armed Forces, Washington, D.C., on GAO's audit of the problems in meeting military manpower needs in an All Volunteer Force environment, on April 17.

Thomas A. Eickmeyer, audit manager, spoke April 17 on interservice training and GAO reviews of Department of Defense training and education programs at the Industrial College of the Armed Forces, Washington, D.C.

**Financial and General
Management Studies Division**

Donald L. Scantlebury, director:

Made a presentation on the Legislative Reorganization Act of 1970 and its implications for GAO and the executive agencies at a meeting of the Agency Management Analysis Officers Group on March 21.

Spoke at the Hampton Roads Chapter of the National Association of Accountants on "How the Information Needs of Congress Affect Governmental Accounting" on April 17.

Fred D. Layton, deputy director:

Spoke on the GAO standards at the Federal Grant Financial Management Workshop in Atlanta, Ga., on March 21.

Spoke on the GAO audit standards before the San Jose, Calif., chapter of the Institute of Internal Auditors on April 9.

Keith E. Marvin, associate director: Addressed a Federal City College class in public management concerning GAO reviews of the Space Shuttle Program, March 7.

Appeared as a panelist on occupational outlook for program analysts at the annual symposium of the Association for Public Program Analysis, April 9.

Joseph L. Boyd and *Kenneth Pollock*, assistant directors, participated in a seminar of the Hampton Roads Chapter of the National Association of Accountants on the auditor's role in an EDP environment, Norfolk, Va., on March 20.

Wallace M. Cohen, assistant director, delivered a paper at the third Cost-Effectiveness Symposium, National Bureau of Standards, Gaithersburg, Md., on March 19.

Ernest H. Davenport, assistant director:

Addressed the Tucson Chapter, Institute of Internal Auditors, on GAO audit standards and management in Tucson, Ariz., on February 5.

Discussed the GAO audit standards applied to internal audit at the North Carolina Public Finance Officers Association spring meeting sponsored by the Institute of Government, Chapel Hill, N.C., on February 27.

Participated in a panel discussion on program evaluation and the external auditor before the Capital District Chapter, American Society for Public Administration, in Albany, N.Y., on March 12.

Presented a talk on the GAO audit standards to the Association of Central Oklahoma Governments Seminar in Oklahoma City, Okla., on April 26.

Was appointed to the following American Institute of CPA committees: (1) State and Local Government Auditing and (2) Minority Recruitment.

Mortimer A. Dittenhofer, assistant director:

Gave a talk at a meeting of the Toledo Chapter of the Institute of Internal Auditors on audit standards and internal auditing in Toledo, Ohio, on February 11.

Gave a talk on GAO audit standards and internal auditing at a meeting jointly sponsored by the Institute of Internal Auditors and FGAA in Denver, Colo., on March 19.

Gave a talk on the responsibility of internal auditors to society to a joint meeting of the Richmond and Tidewater Chapters of the Institute of Internal Auditors in Williamsburg, Va., on March 26.

Gave a talk on the audit standards and Government auditing at Xavier University Accounting Association in Cincinnati, Ohio, on March 27.

Spoke on the audit standards and internal auditing at a meeting of the Cincinnati Chapter of the Institute of Internal Auditors in Cincinnati, Ohio, on March 27.

Gave a talk at a symposium on auditing for management under the GAO standards for the Institute of Internal Auditors in Philadelphia, Pa., on April 1.

Spoke on "Constraints Against Accountability Reporting" at a meeting of the Maryland Chapter of the Society for Public Administration on April 3.

Gave a talk on auditing for management under the GAO standards at a meeting of the Institute of Internal Auditors in Huntsville, Ala., on April 8.

Was a seminar leader on (1) the audit standards project, (2) means to implement the audit standards, and (3) auditing for management under the GAO standards at the Mid-west Conference of the Municip-

pal Finance Officers Association on April 17.

Kenneth W. Hunter, assistant director, spoke at the National Symposium on Achieving Value-Centered Reporting in Washington, D.C., on April 2. Mr. Hunter discussed GAO's work with the Congress in identifying congressional information needs and improving the usefulness of reports provided to the Congress.

Robert J. Ryan, Sr., assistant director:

Addressed the American Management Association on GAO audit standards and management in New York City on February 6.

Spoke on the GAO audit standards to the Milwaukee Chapter of the Institute of Internal Auditors on February 19.

Spoke on auditing—the state of the art and its value to management—to the San Antonio, Tex., Chapter of the Institute of Internal Auditors on April 18.

Earl M. Wysong, Jr., assistant director:

Addressed the Association of Systems Management's Chesapeake Division conference, "Dataflow 74," in Annapolis, Md., on March 29, on the Legislative Reorganization Act of 1970.

Made a presentation on April 2, at the Audit Manager Seminar on GAO Requirements for the Interagency Auditor Training Center in Bethesda, Md., on GAO's ADP requirements for system design approval.

Rodney E. Espe, audit manager:

Spoke on the audit standards as dinner speaker for the Houston Chapter of the Institute of Internal Auditors in Houston, Tex., on February 26.

Lectured on GAO internal auditing requirements at the Audit Manager Seminar on GAO Requirements presented by the Interagency Auditor Training Center in Bethesda, Md., on April 1.

Participated as a panel speaker on the audit standards at a workshop jointly sponsored by the Newark, N.J., chapters of FGAA and the National Contract Management Association on April 18.

James K. Kardokus, supervisory management analyst, coordinated a program entitled "Legislative Branch Interest in Federal Reporting," for the Information and Records Administration Conference in Washington, D.C., on March 22. Mr. Kardokus also discussed GAO's work under the Legislative Reorganization Act of 1970.

M. Thomas Hagenstad, supervisory management analyst, described GAO's information support to the Congress at the Information and Records Administration Conference on March 22.

General Government Division

Albert Hair, assistant director, spoke to the Northern Virginia Chapter of FGAA on the problems in revenue sharing evaluation, Springfield, Va., March 19.

Stephen J. Varholý, assistant director, participated as a panelist at the

Grant Financial Management Workshop, Atlanta, March 21.

Bill W. Thurman, supervisory auditor, spoke at the Conference on Federal Affairs of the Tax Foundation, Inc., on the subject of "Evaluating General Revenue Sharing," Washington, April 1, and on the same subject to the Minnesota Chapter, Municipal Finance Officers Association, Hill City, Minn., April 18.

Richard L. Fogel, supervisory management analyst, had an article entitled "Special Services Impact: Information for Legislative Action" published in the Spring 1974 issue of *Policy Studies Journal*.

International Division

John Milgate, associate director, and *Thomas Brogan*, assistant director, attended the conference for Federal Management and Program Executives sponsored by the Brookings Institution at Williamsburg, Va., from January 6 to 18.

Frank M. Zappacosta, assistant director, was reelected Director of Professional Development, Washington Chapter, National Association of Accountants, in March 1974 for the year ending May 31, 1975.

Logistics and Communications Division

Werner Grosshans, associate director, taught a class on improving evaluation capabilities at the Interagency Auditor Training Center on February 19-22. He and *Fred Haynes*, assistant director, conducted a seminar session at the Industrial College of the Armed Forces on functions of the Logistics

and Communications Division on April 17. At a recent meeting of the American Institute of Industrial Engineers, Mr. Haynes was elected Vice President, Region II.

Charles R. Comfort, assistant director, addressed the Defense Advanced Traffic Management Course at the U.S. Army Transportation School, Fort Eustis, Va., on April 9. He spoke on GAO contributions to improving military transportation operations.

Richard A. Helmer, audit manager, addressed the Mid Winter Conference of the National Association of State Agencies for Surplus Property on the status of GAO's survey of the Federal surplus personal property donation program. The conference was held on February 27 at the Burlington Hotel in Washington, D.C. Mr. Helmer also addressed the Defense Disposal Management Seminar at the U.S. Army Logistics Management Center at Fort Lee, Va., on March 6. He spoke on the results of GAO audits of Defense property disposal operations and related areas.

Norm Austen, supervisory auditor, spoke on GAO and the Radio Frequency Spectrum before the Radio Technical Commission for Maritime Services, St. Petersburg, Fla., April 3.

Manpower and Welfare Division

William D. Martin, deputy director, attended the Advanced Management Program, Harvard University, Boston, Mass., from February 4–May 3.

Morton E. Henig, associate director, attended a Brookings Institution Conference for Management and Program

Executives held March 31 to April 12 at Virginia Beach, Va.

Harold L. Stugart, assistant director, attended the Program for Management Development, Harvard University, Boston, Mass., from February 11–May 10.

Richard H. Horte, supervisory auditor, was awarded a Master of Business Administration degree by The George Washington University in February 1974. His major field was operations research and systems analysis.

Wilbert H. Ammann, supervisory operations research analyst, participated as a member of an Ad Hoc Committee to determine whether to form a Management Science Section within the American Society for Public Administration (ASPA). This Committee met during ASPA's 1974 Annual Conference which was held May 5–8 at Syracuse, N.Y.

Procurement and Systems Acquisition Division

Harold H. Rubin, deputy director, conducted a session on GAO's audit function at the Civil Service Commission's Executive Institute on Management of Scientific and Engineering Organizations at The National Academy of Sciences, Washington, April 4.

Mr. Rubin also participated in a panel discussion on independent research and development at a special program sponsored by WEMA in Washington on May 16. WEMA is a trade association whose over 700 members are small-to-medium sized companies engaged in electronics and information technology.

Dr. John G. Barmby, assistant director of the systems analysis staff, is the GAO representative to the Defense Economic Analysis Council. He spoke on the "Federal Experience with Cost-Effectiveness Analysis" at the Industrial College of the Armed Forces, Washington, May 20 and 21.

Joseph C. Bohan, assistant director, spoke on the role of GAO in major weapons systems acquisitions at the Navy Logistics School, Washington, in April.

Charles A. Kezar, supervisory research analyst, spoke on "The Economic Benefits of the Shipbuilding Construction Differential Subsidy" at the Defense Economic Analysis Council symposium at the Industrial College of the Armed Forces, Washington, May 20 and 21.

Mr. Kezar also spoke on "Lease vs. Buy Decisions" at a symposium of the American Society for Public Administration and participated in its panel on management science and applications at Syracuse, N.Y., on May 6.

Resources and Economic Development Division

Max Hirschhorn, deputy director, was the presiding official of the 15th Annual Awards presentation of the Federal Government Accountants Association, Washington Chapter, on May 9.

Brian Crowley, assistant director, addressed the Society of American Value Engineers on April 30 at its 14th Annual Conference in Los Angeles, Calif. His topic was the "Application of Value Engineering Techniques to the

Design and Construction of Waste Treatment Plants."

Transportation and Claims Division

T. E. Sullivan, director, participated with the General Services Administration and Braniff International Airways, Dallas, Tex., March 5, in a conference and demonstration of computer application to the procurement of and automatic payment for airline tickets procured through teleticketing operations.

Mr. Sullivan attended the Revenue Accounting Committee meeting of the Association of American Railroads, Boston, Massachusetts, June 12-14. He addressed the Committee on the revised bills before the Congress which would transfer the audit function from GAO, on progress in the use of the new Government Bill of Lading and Transportation Request, and on areas of mutual concern found in the audit of rail carrier accounts.

J. J. Cramsey, supervisory management auditor, European Branch; *J. K. Brubaker*, supervisory management auditor; and *A. W. Sumner*, supervisory traffic management specialist, participated in the National Defense Transportation Association conference in Wiesbaden, Germany, December 1973.

W. F. McDade, supervisory transportation specialist, and *J. R. Nicholson*, supervisory traffic management specialist, attended the semiannual meeting of the Revenue Accounting Committee of the Airline Finance and Accounting Conference, Air Transport Association of America, Washington,

D.C., March 19. They advised the Committee of the status of the revised Government Bill of Lading and attendant procedures, the revised Government Transportation Request, and the congressional bills which would transfer the detailed transportation audit function from GAO.

A. W. Sumner and *J. R. Nicholson* participated as panel members in workshops for 700 carrier industry and military traffic personnel at the Eastern Area Military Traffic Management and Terminal Service, General Traffic Management Seminar, New Orleans, La., April 2, 3, and 4.

J. Goldman, assistant director, and *Mrs. V. Levin*, management auditor, participated in an interagency conference on rate and tariff simplification sponsored by the Department of Transportation at the Transportation Systems Center, Cambridge, Mass., April 16.

Field Operations Division

Joseph Eder, regional manager, Boston region, on March 21, gave an address at a CSC course. His subject was "GAO and Its Role in Financial Management."

Peter A. Larson, audit manager, *Ben F. Gardner* and *Robert C. Wuori*, supervisory auditors, Chicago region, participated in the University of Illinois Minority Employment Conference, Urbana, Ill., on February 7 and 8.

Stanley J. Stancukas, supervisory auditor, Chicago region, spoke on "GAO's Role in Evaluating Delivery of Public Services by State and Local

Governments" at a conference sponsored by the Chicago, Indiana, Peoria, and Springfield Chapters of the American Society of Public Administration, on March 15.

Clement F. Preiwisch, audit manager, Chicago region, spoke before the Chicago Chapter of FGAA, April 25, on "The Organization of the Midwestern Intergovernmental Audit Forum."

Robert W. Hanlon, regional manager, Cincinnati region, and *Daniel V. Loesch*, auditor-in-charge, Indianapolis, spoke to the Finance Officer Advanced School at Fort Benjamin Harrison in Indianapolis on April 2 on GAO and Army Financial Management.

Nander Brown, Jr., supervisory systems analyst, Cincinnati region, spoke to the Cincinnati Chapter of the Data Processing Management Association on "EDP Auditing—Its Impact on Data Processing Personnel."

Estle L. Wesley, supervisory auditor, Dayton, participated in "Accounting Week" at the Dayton Convention Center on March 20, discussing opportunities for accountants in Government.

W. H. Sheley, Jr., regional manager, *Romulo Garcia*, supervisory auditor, and *Deon H. Dekker*, assistant regional manager, Dallas region, participated as instructors in a Financial Management Course conducted for minority businessmen. The sessions were held in Dallas during the months of February and March 1974. Other Dallas staff members, *Ernest Frosch* and *Curtis Carlson*, were actively involved in arranging the course.

Paul C. deLassus, assistant regional manager, Dallas, discussed the Standards for Audit of Governmental Orga-

nizations, Programs, Activities and Functions before a sponsored meeting of participants of the National Graduate University, Division of Special Studies. The session, held for State and local government officials, was part of a 3-day session held in Dallas in March 1974 and concerned negotiation and administration of Federal grants and contracts.

Mr. deLassus discussed audit standards on April 11 at a meeting of the Regional Council of Finance Officers held in Austin, Tex.

Irwin M. D'Addario, regional manager, Denver, participated in the University of Denver's 1974 Intergovernmental Management Challenge Seminar on January 3. His subject was "The Role of the Manager."

John E. Murphy, assistant regional manager, and *Bernard L. Lowery*, audit manager, Denver, spoke to the graduate class in public administration at the University of Colorado Denver Center in April. Their subject was the role of GAO.

John E. Murphy, assistant regional manager, and *Clifford B. Neuroth*, audit manager, Denver, spoke to the graduate class in public administration at the University of Colorado Boulder Campus in April, on the role of GAO.

Bernard L. Lowery, audit manager, Denver, was elected president of the Denver Chapter, National Contract Management Association, for the 1974-75 year.

Edgar L. Hessek, audit manager, Denver, gave a talk at a Surface Protection Workshop sponsored by the Bureau of Land Management in Salt Lake City on March 11. His topic was

"The Role of GAO in Auditing Federal Programs."

James K. Meissner, supervisory auditor, Denver, was guest speaker at the initiation banquet of Beta Alpha Psi, national accounting fraternity, at the University of North Dakota on February 26. He spoke on the role of GAO.

Donald McDade, supervisory auditor, Kansas City region, on February 16 spoke at the Nebraska Democratic Candidate's Campaign Seminar in Lincoln, Nebraska. His subject was the registration and reporting requirements of the Federal Elections Campaign Act of 1971.

Arthur Zago, audit manager, Kansas City region, spoke on March 28 at the National Contract Management Association, Capital Chapter, Wichita, Kansas. Mr. Zago's speech covered GAO's role in Government contract management, Public Law 87-653 implementation and followup, and current broader interests of the Office.

David Ashley, supervisory auditor, Kansas City, spoke to a class on Minorities' Experience in History at Maple Woods Community College, Kansas City, Mo. His speech was on the role of the Equal Employment Opportunity Counselor.

Frederick Gallegos, management auditor, Los Angeles region, was guest speaker at the April 25 meeting of the California State Polytechnic University Data Processing Club. In his presentation, "How My Cal-Poly Education Has Helped Me in My Work With GAO," Mr. Gallegos cited examples of where his EDP education helped in the

analysis and evaluation phase of GAO work.

Mr. Gallegos also spoke on "Statistical Models and EDP Applications" to a Fortran Programming class after the meeting. On May 17, Mr. Gallegos spoke before several "Problems in Democracy" classes at San Bernardino High School. His subject was "The Legal Issues Surrounding Credit Service Bureaus, Public Law 91-508."

Victor Ell, audit manager, Los Angeles, spoke before a meeting of the Independent Garage Owners Association, April 16. His topic was "Your Public Watchdog." He discussed the work of GAO, including reviews related to the automotive industry. On May 1, Mr. Ell was a speaker at the USC School of Public Administration's Career Planning Day. His topic was "Preparing for a Career Interview."

On May 2, Mr. Ell was a panel member in a Beta Alpha Psi program at California State University, Los Angeles. He represented the public sector in presenting "Professional Opportunities in Accounting."

James T. Hall, Jr., regional manager, Los Angeles, spoke before a meeting of the Institute of Internal Auditors, Phoenix Chapter, Phoenix, Ariz., on April 24. His topic was "Internal Auditing Applied to Management."

Paul Latta, supervisory auditor, Norfolk region, spoke to the Virginia Peninsula Chapter of the FGAA on "Revenue Sharing—An Overview," on January 22.

Deloit Strickland, audit manager, and *John C. Payne*, supervisory auditor, Norfolk region, addressed the Ac-

counting Club at Atlantic Christian College, Wilson, North Carolina, on the organization and responsibilities of GAO, February 12.

John C. Finch, OPM, and *Priscilla H. Williams*, supervisory auditor, Norfolk region, spoke before a forum for students at the University of Virginia. The forum was sponsored by the McIntire Accounting Society. The subject was "Opportunities for Accounting Careers in Government."

David Gray, audit manager, and *Larry Davis*, supervisory auditor, Norfolk region, together with *Kenneth Pollock* and *Joseph Boyd*, assistant directors, FGMS, participated as panel members at a seminar of the Hampton Roads Chapter, National Association of Accountants, Norfolk, Va., on March 20. They discussed the role of the auditor in an EDP environment.

Ronald J. Powell, auditor, Philadelphia region, participated in a Career Day on April 17, sponsored by the Temple University's Minority Network and the Association of Black Business Students.

Natalie R. Hurlbrink, management auditor, Philadelphia, visited Drexel University on April 10 to speak before Phi Gamma Nu, Drexel's chapter of the National Women's Professional Business Sorority.

Milton H. Harvey, assistant regional manager, Philadelphia, was the luncheon speaker at a meeting of FGAA's Fort Monmouth chapter on March 5. He spoke on the functions of GAO as they related to activities of FGAA members' agencies.

William Parsons, assistant regional manager, San Francisco region, spoke

before the Alameda Defense Management Association on March 28. His subject was productivity. On April 18, he spoke before the Municipal Finance Officers Association on "Applying Audit Standards to Program Areas."

James Brucia, audit manager, San Francisco region, spoke at the Pacific Missile Range and National Missile Command. His subject was "GAO—Its Roles and Functions."

Frank Graves, supervisory auditor, San Francisco region, was elected chairman of the EDP Audit Study Committee, Institute of Internal Auditors, for 1974-75. He will also serve on the Board of Governors of the San Francisco Chapter.

Charles Vincent, assistant regional manager, San Francisco, made presentations on operations auditing, as follows:

- January 1 and April 9, at Civil Service Executive Center.
- January 26, at the San Francisco Chapter, National Association of Black Accountants.
- March 21, at the San Francisco Chapter of the Institute of Internal Auditors.
- March 29, at the California State University, Hayward Economics Department faculty.

—April 25, at a faculty forum at the University of Nevada, Reno.

E. Dennis Gutknecht, supervisory auditor, Seattle region, presented a "Case Study on Management Accounting as Performed by the GAO" to Beta Alpha Psi, University of Washington, April 30.

Roger D. Hayman, supervisory auditor, Seattle region, participated in an Accounting Career Seminar at the University of Washington Department of Accounting, March 11.

John J. Cronin, assistant director, FGMS, and *Robert Eurich*, and *James Stringfellow*, supervisory auditors, Washington region, conducted a briefing on April 4 for the Management Advisory Service Subcommittee, District of Columbia Institute of Certified Public Accountants, on the current GAO survey of the use of contractors and consultants to assist Federal departments and agencies in developing financial management systems.

James B. Deemer, audit manager, and *Ronald C. Oleyar*, supervisory auditor, Washington region, were guests of the Delta Sigma Phi International Business Fraternity at Shepherd College, March 19. Mr. Oleyar addressed members and guests about GAO responsibilities and accomplishments.

Successful Candidates— May 1973 CPA Examination

REGIONAL OFFICES

<i>Name</i>	<i>Regional Office</i>	<i>State</i>
Leonard L. Benson	Cincinnati	Ohio
Robert L. Blackstone	Seattle	Washington
David E. Bryant, Jr.	Washington	Virginia
Jerrold W. Burgoyne	Washington	Maryland
Robert A. Correll	Detroit	Michigan
Paul E. Cox	Cincinnati	Ohio
George R. Englert	Washington	Virginia
Lawrence L. Feltz	Chicago	Wisconsin
Roger W. Flann	Los Angeles	California
Connie L. Garsjo	Denver	Montana
Richard H. Koebert	Los Angeles	California
Bonnie L. Kooser	Seattle	Washington
Jon E. Kucholtz	Dallas	Texas
Darryl L. K. Lee	Far East Branch	Hawaii
Paul E. Levine	New York	New York
Neil N. Miller	Detroit	Ohio
William Moffitt	Boston	Rhode Island
John T. O'Neill	Chicago	Illinois
Tommy J. Patterson	Kansas City	Oklahoma
Jean R. Scheuerman	San Francisco	California
Paul E. Staley, Jr.	Seattle	Washington
Julia K. Swisher	Seattle	Texas
Harold A. Weinstein	Los Angeles	California
Larry S. Westfall	Los Angeles	California

WASHINGTON

<i>Name</i>	<i>Division</i>	<i>State</i>
Lawrence D. Gaston, Jr.	Manpower and Welfare	Maryland
Otis C. Luttrell	Financial and General Management Studies	Tennessee
F. Earl Morrison	Procurement and Systems Acquisitions	Maryland
Donald L. Stenger	General Government	West Virginia
Ronnie E. Wood	Resources and Economic Development	D.C.

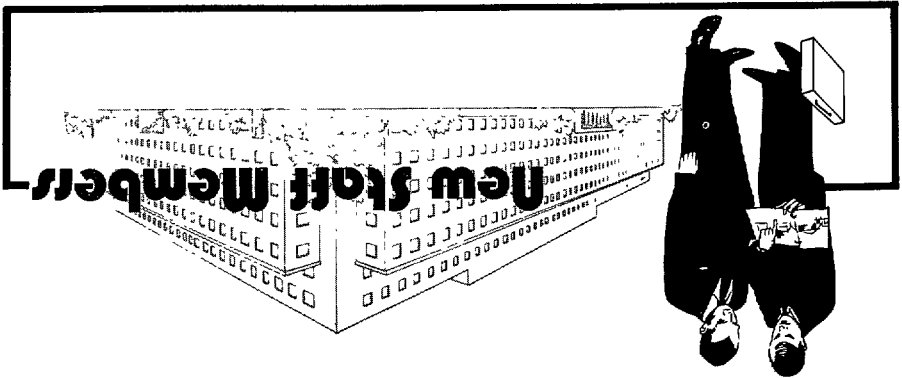
Successful Candidates— November 1973 CPA Examination

REGIONAL OFFICES

<i>Name</i>	<i>Regional Office</i>	<i>State</i>
Merle K. Courtney	Norfolk	Virginia
Michael S. Golichnik	Los Angeles	California
George M. Kanya, Jr.	Detroit	Ohio
Jerry W. Pennington	Kansas City	Oklahoma
David Phillips	Kansas City	Iowa
Larry M. Seigel	Los Angeles	California
John H. Stahl	Washington	Virginia
Phillip D. Sykora	Kansas City	Oklahoma
Kenneth R. Weartz	Cincinnati	Ohio

<p>Department of the Army University of Montana Department of Commerce Singer General Services Administration Marco Systems, Inc. Department of the Army Brigham Young University National Commission on the Financing of Postsecondary Education Department of Health, Education, and Welfare Department of the Army</p>	<p>Alamilla, John G., Sr. Banaugh, Catherine M. Batjpps, Sarah E. Benoit, Paul S. Charney, Donald K. Colligan, George H. De LaTorre, Francisco D. Carbinski, Jerry J. Hansen, Odille S. Ostrow, Harry Stalcup, George H. McLure, Herbert R. Boals, Marsha L. Woods, Thomas J. Watson, Matthew S. Constandy, Ruth C. Kalmar, Kathleen B. Kester, Billy C. Sousa, George A. Whitaker, Virgil L.</p>	<p>Financial and General Management Studies Division Office of Energy and Special Projects Office of the General Counsel Manpower and Welfare Division Procurement and Systems Acquisition Division</p>
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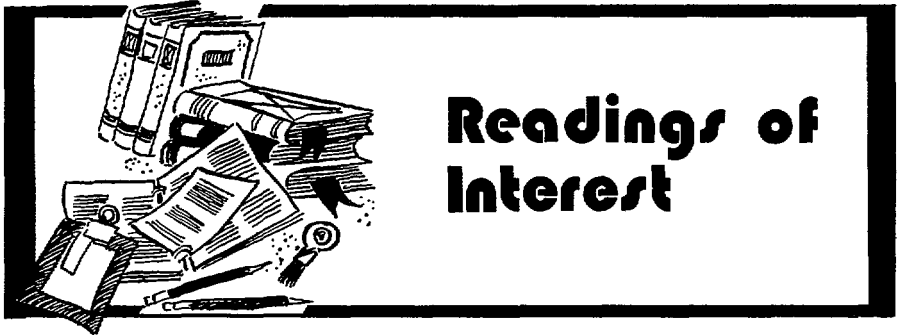
The following new professional staff members reported for work during the period February 16 through May 15, 1974.



Transportation and Claims Division	Gold, Benjamin A.	Department of the Army
Washington Headquarters Division Career Group	Baker, William S.	East Tennessee State University
	Belz, John F.	Boston University
	Cortina, Ruben A.	University of Pittsburgh
	Hughes, Charles D.	Ballard Community Hospital
	McClyde, James O.	United States Postal Service
	O'Hara, Dennis J.	Pennsylvania State University
	Pulliam, John W.	Florida Technological University
	Solomon, James H.	Moravian College
	Spey, Lisa M.	University of Delaware
	Stone, Mary J.	Lincoln University
	Tuchman, Edward H.	Florida State University
	Walker, Carlton B.	Lincoln University
	Wall, Jean M.	LaSalle College
	Zorn, Thomas F.	University of Pittsburgh
 Regional Offices		
Atlanta	Bedwell, William F., Jr.	University of Georgia
	Farley, Grady C.	University of Utah
	Harris, Linda F.	University of Georgia
	Hembree, Raymond W.	Jacksonville State University
	Kovacs, Bryan T.	Dyke College
	Montford, Charlene B.	A & T State University
	Smith, Jesse J.	Alabama State University
	Vawter, Martha C.	University of Georgia
	Wright, Glenda C.	Troy State University
Boston	Larpenteur, Raymond A.	University of Washington
Chicago	Huber, Mark J.	University of Minnesota
	Hupfer, Bruce A.	Northern Illinois University
	Lee, Benny W.	University of Illinois
Cincinnati	Bibb, Kenneth B.	Wilberforce University
	Dailey, Shirley A.	Ohio University
	Ruwe, James V.	Xavier University
	Warren, Daisy E.	Alabama State University
	Wickliffe, Neilson S.	Central State University
Denver	Duffy, Duane A.	Brigham Young University
	Gatlin, Johnetta C.	University of Utah
	Gilman, Donald C.	Metropolitan State College
	Johnson, Gary L.	University of Montana
	Melvin, Robert D.	University of Denver
	Ortiz, Donald J.	College of Santa Fe

NEW STAFF MEMBERS

Detroit	Blackwell, Robert M.	University of Detroit
	Kempe, Richard L.	Cleveland State University
	Price, Valeria G.	Winston-Salem State University
	Wright, Clarence L., Jr.	Duke University
Los Angeles	Pearson, Dana N.	California State University
	Sims, Ruth E.	California State University
	Thompson, Charles	University of Southern California
New York	Acocella, Austin J.	Baruch College
	Carlucci, Maria V.	College of Mount Saint Vincent
	Krieger, Norman A.	Brooklyn College
Norfolk	Maccaroni, Ronald J.	Russell & Holmes Corp.
Philadelphia	Carter, Daniel H.	University of Pennsylvania
San Francisco	Brill, Kenneth C.	University of California at Berkeley
	Bromley, Thomas Y.	University of Nevada
	Engle, Bruce K.	California State University
	Foster, Suzy	Veterans Administration
	Smith, Elliott C.	California State University
Seattle	Cram, David T.	University of Washington
	Smith, David D.	University of Oregon
Washington (Falls Church)	Craten, James C.	American University
	Creed, Thomas W.	East Tennessee State University
	Holt, Ronald E.	University of Maryland
	Jones, Richard E.	Virginia State College



Readings of Interest

The reviews of books, articles, and other documents in this section represent the views and opinions of the individual reviewers, and their publication should not be construed as an endorsement by GAO of either the reviewers' comments or the books, articles, and other documents reviewed.

The Logarithmic Century

By Ralph E. Lapp; Prentice Hall, Inc., 1973; 262 pp., hardback, \$7.95.

The Coming Dark Age

By Roberto Vacca; Doubleday and Co., Inc., 1973; 221 pp., hardback, \$6.95.

Not many years ago, most books forecasting social and economic conditions were optimistic in tone. Typically, they described a society of unprecedented affluence and leisure supported by an increasingly automated economy.

More recently, the tone has changed. There is a growing body of literature which has been termed "doom writing." *The Limits of Growth*¹ (a report

for the Club of Rome's Project on The Predicament of Mankind) set the pace in 1972. Ralph Lapp's *Logarithmic Century* and Roberto Vacca's *The Coming Dark Age* were notable additions to this literature in 1973.

Most people probably know that the growth of just about everything in this century has been unprecedented. Dr. Ralph Lapp is a nuclear physicist and one of the scientists with the Manhattan Project which developed the first atomic bomb. In his book he documents the logarithmic scale of this growth and concludes that these

"* * * logarithms of growth * * * simply cannot be duplicated by the great masses of the earth's population. Indeed, even for the United States, the growth curves must depart from their vertiginous ascent—the twentieth century must, so to speak, begin to bend over."

He says "ours may well remain

¹ Reviewed in *The GAO Review*, Fall 1972.

unique, the only logarithmic century ever to spin itself out upon a defenseless planet."

What he means, simply, is that we are using and abusing the world's resources at a staggering rate which cannot continue unabated. Take natural gas for example. Lapp says that extraction of natural gas at an annual rate of no more than one-tenth of total proven reserves is considered necessary if we are to have short-term energy security. We have been operating close to that safety margin. In fact, the United States has already used up more than half the total amount of natural gas discovered since the first exploration began. The future "gas gap" will become increasingly urgent, Lapp says.

And while urgent energy needs may temporarily shift attention from environmental considerations, these cannot be long ignored. Even if all the sulfur oxide and other pollutants from consumption of petroleum and fossil-fuels could be strictly controlled, there is an inevitable release of carbon dioxide into the atmosphere which, scientists foresee, may produce a "greenhouse effect." The earth will become warmer. A temperature increase of only 2°F to 3°F over a few decades could melt the ice caps and flood coastal regions.

Lapp describes these and a myriad of other related problems which are growing to crisis proportions. He believes our hope is to continue to seek technical solutions while striving for some form of rational planning for an orderly future.

Roberto Vacca does not believe that rational planning will save us. Vacca,

an Italian systems engineer, foresees disaster in the growing size of the technical systems on which advanced societies depend. These systems, he says, are rapidly moving beyond the control of those who manage them. His argument is based not only on the size of the systems, but on their interaction and interdependence. A crisis involving several urban systems, such as electricity, transportation, and water, is likely to produce crises in other systems, such as refuse collection and disposal. We may have enough coal, but if we lack enough freight cars to transport it, the coal cannot fuel our power stations, and so a shortage of freight cars could precipitate an electrical power shortage. There are endless examples of such interdependencies in our complex, technical society.

Vacca argues that we really do not know how some large systems work. We have not traced their parameters and variables. For other systems, we may have the means of control but are too inefficient to exercise them. "Many engineers, managers, administrators, and government officials," he says "do not suspect that problems even exist in this field."

"Even when a handbook solution would indeed solve some isolated problem, no use is made of it, thanks to inertia, neglect, or lack of interest.

"Estimates of future developments in critical situations are often not even attempted, and in those exceptional cases where such an attempt is made, it is limited to modest linear extrapolations."

Vacca's extrapolation from his data is not modest. He concludes that, at any time between now and the 1980s, we face a debacle; not a slow decline

and fall but a sudden collapse of the major systems on which our society depends: energy, transportation, and communications.

Japan and the United States will be the first to experience this disaster, followed soon by Europe and the Soviet Union. The economic and social collapse of the advanced countries of the world will usher in a period of chaos and a "dark age" of relatively primitive order. The scope of the collapse Vacca foresees is such that he urges the preparation of a kind of monastic system, similar to that of medieval times, to preserve the learning of our civilization through the "dark age."

Vacca's critique of the problems of systems engineering is convincing. His extrapolation of these problems into social collapse and disaster is less convincing. However, there is no question of the seriousness of the problems, and Vacca has persuaded some readers of their awful implications. Isaac Asimov, the scientist and author, is quoted on the dust jacket as saying, "I have never read a book that was at one and the same time so convincing and so frightening."

"Doom writing" is not without its critics. The April 1972 issue of *The Futurist* (journal of The World Future Society) defines the two key assumptions of the pessimists: (1) most of the great social problems are not subject to technical solution and (2) the long delays inherent in our socio-economic system may mean that it is too late to solve a problem after it is perceived. These assumptions are not proved by any means. It seems foolish

to conclude that we cannot solve our problems at all. It seems wise, however, to accept the fact that we will not solve them easily. Agencies of Government, and GAO in its unique role, will have a heavy obligation to deal effectively with issues which, left unresolved, could prove the doom writers correct.

A. L. Patterson

Assistant Regional Manager
Atlanta regional office

Energy Under the Oceans

By Don E. Kash, Irvin L. White, and others; The University of Oklahoma Press, Norman, Oklahoma, 1973; 378 pp.; paperback, \$4.95.

This book should be of interest to GAO professionals for two principal reasons. First, a significant public policy problem is dealt with by using a new and controversial academic approach: technology assessment. Second, the authors have applied their new method to an extremely relevant topic, the oil and gas operations on the U.S. Outer Continental Shelf.

Because the book does involve a unique method of assessing public policy, the GAO professional should be able to make some interesting comparisons with GAO auditing techniques. Also, given the increased need for domestic oil and gas sources versus the potential danger to the environment from offshore oil and gas operations, the GAO auditor is given an informed view of an extremely relevant public policy dilemma.

The basic premise underlying technology assessment is that technology is responsible for cataclysmic changes in our environment and in our economic, political, and social institutions. By studying a given technology and its impacts on the above areas, the technology assessors hope to devise policies which will minimize the selected technology's negative effects but which will preserve its positive ones.

To make their assessment of offshore oil and gas operations, Kash and White recruited an interdisciplinary team, consisting of a marine biologist, a lawyer, a physicist, two political scientists, and three engineers. The purpose of forming this team was to bring together men and women of widely different backgrounds to focus on a broad problem area without disciplinary boundaries. The authors reasoned that industry and Government used people from many professional disciplines to create the dilemma and that it would take the same type of people to resolve it.

The team divided the study into three main components: the investigation of the negative impacts of offshore oil and gas operations; a discussion of the relevant government agencies, regulations, and statutes; and a prescriptive section for corrective action. Kash and White accept as given that oil and gas production should be increased by utilizing offshore sources but that the detrimental effects of this exploitation should be minimized.

In this reviewer's opinion, the au-

thors' efforts have been successful. The subject is adequately covered and the prescriptive conclusions follow logically from the premises and the facts assembled by the investigators. There should be one note of caution to the reader, however. The book is extremely heavy in its style. If technology assessment work is to be widely read, the style will have to be livened up. Maybe a poet or a reporter should have been added to the interdisciplinary team.

Despite the stylistic difficulties of the book, it is made extremely interesting when related to some of our work in GAO. Increasingly, we are being requested to examine problem areas which require that we study clusters of statutes and regulations often pertaining to more than one agency. Kash and White offer a provocative method by which such a study can be framed—the focusing on technological impact as the primary point of reference.

Another possible point of interest to GAO is the type of researchers used by Kash and White. In the main we have relied on our auditors to assume the viewpoint of the generalist. We do, on occasion, call on consultants to give us specialized insights into particular aspects of some of our audits. At some point in time, however, we may need to make more frequent use of a team of specialists. Kash's and White's pioneering effort could offer us additional insight on how to put together and manage such a team.

Those interested in innovative audit techniques, a policy dilemma of our

times, or both will find *Energy Under the Oceans* worthwhile reading.

Robert P. Koontz

Supervisory management auditor
Cincinnati regional office

Women in Management

By Donald C. Basil and Edna Traver;
New York, Dunellen Publishing Company, Inc., 1972.

Can women and the society that men built—and still run—change so that both sexes can be total persons without making either feel they're losing something crucial in the process? When both realize the trade-off is profitable, we'll be on our way. Men must give up some of their self-centrism; women must aggressively push to take their share of society's "significant" tasks.

Institutions, both public and private, have an increasing demand for highly qualified managerial personnel and a seemingly decreasing supply. Management has traditionally been men's bailiwick. As more men enter post-graduate professional and technical fields the supply decreases. A need to utilize women has resulted. The civil rights movement has given the push to the pull of the economy. It has not provided a remedy.

These are a few of the questions raised and the conclusions reached in *Women In Management*, a carefully researched book which attempts to insinuate fact and logic into the uncompromising debate which too frequently surrounds the issue from which the book gets its title.

Overall, women hold only 2% of managerial positions. Fewer than one out of four institutions have women in upper level management; even less have women in policymaking positions.

Both women and men whom the authors surveyed agree that biases exist against women which prevent full utilization of their talents.

Women cannot relocate as readily as men. Women lack the necessary motivation to be successful managers and cannot tolerate the pressures and tensions of managements. Men do not like to work for women managers; and women managers create insecurity problems in both sexes working for them.

Executives of both sexes agree on desirable characteristics for top management—decisiveness, consistency, objectivity, emotional stability, creativity, loyalty, and interest in people. Women are thought to be less rational and objective than men, but they have greater ability to understand the needs and feelings of others. Women think this will make them better managers; men disagree.

Interestingly, the author found that executives feel that women are partially responsible for perpetuating these prejudices against their obtaining management positions. Women have not exercised all their new rights as social and cultural values change slowly. Physiological differences still largely define men's and women's roles in our society.

Women's key bid for the stature their potential can get them are motivation and desire, according to Mr. Basil and Ms. Traver. Aggressiveness

and decisiveness may lead to alienating men and other women. A change in women's psychological makeup is already indicated by the fragility of modern marriage. This and the pill should decrease employers' attitude that women are primarily a family appendage.

Are we ready for the 51% "minority"?

Nick Corbet
Federal Women's Program
Committee

Feedback

Military organizations learned long ago that futility is the lot of most orders and organized the feedback to check on the execution of the order. They learned long ago that to go to oneself and look is the only reliable feedback.

Peter F. Drucker
In *Management* (1973)

Annual Awards for Articles Published in The GAO Review

Cash awards are available each year for the best articles written by GAO staff members and published originally in *The GAO Review*. Each award is known as the Award for the Best Article Published in The GAO Review and is presented during the GAO awards program held annually in June in Washington.

One award of \$250 is available to contributing staff members 35 years of age or under at the date of publication. Another award of \$250 is available to staff members over 35 years of age at that date. For articles written by more than one author, the age of the oldest will determine the age category for judging purposes.

Staff members through grade GS-15 at the time of publication are eligible for these awards.

The awards are based on recommendations of a panel of judges designated by the Comptroller General. The judges will evaluate articles from the standpoint of the excellence of their overall contribution to the knowledge and professional development of the GAO staff, with particular concern for:

Originality of concepts.

Quality and effectiveness of written expression, including use of graphic arts where appropriate.

Evidence of individual research performed.

Relevancy to GAO operations and performance.

Statement of Editorial Policies

1. This publication is prepared for use by the professional staff members of the General Accounting Office.
2. Except where otherwise indicated, the articles and other submissions generally express the views of the authors, and they do not necessarily reflect an official position of the General Accounting Office.
3. Articles, technical memorandums, and other information may be submitted for publication by any professional staff members. Submissions may be made directly to liaison staff members who are responsible for representing their offices in obtaining and screening contributions to this publication.
4. Articles submitted for publication should be typed (double-spaced) and range in length between 5 and 14 pages. The subject matter of articles appropriate for publication is not restricted but should be determined on the basis of presumed interest to GAO professional staff members. Articles may be submitted on subjects that are highly technical in nature or on subjects of a more general nature.

1973 Index to the GAO Review

Copies of the index to the 1973 issues of *The GAO Review* are available free of charge to all interested readers.

GAO staff members may obtain copies through their division or office liaison representatives (see inside back cover).

Readers outside GAO may obtain copies by writing the Distribution Section, General Accounting Office, Room 4522, 441 G Street, NW., Washington, D.C. 20548.

Indexes for prior years are not available.

THE GAO REVIEW

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