

The GAO



Winter 1982

REVIEW

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BUSINESS REPLY

THE U.S. GENERAL ACCOUNTING OFFICE, AN INDEPENDENT AGENCY OF CONGRESS, HAS BEEN ASKED TO REVIEW THE PROPOSED MOVE OF THE FEDERAL HOME LOAN BANK OF LITTLE ROCK TO DALLAS, TEXAS. WE ARE LOOKING AT SEVERAL ASPECTS OF THE PROPOSAL. IN THIS PART OF OUR REVIEW WE ARE POLLING ALL SAVINGS AND LOAN ASSOCIATIONS IN THE LITTLE ROCK DISTRICT. SINCE YOUR ASSOCIATION WOULD INDIRECTLY SHARE IN FINANCING THE MOVE THROUGH A REDUCTION IN THE DIVIDENDS YOU RECEIVE FROM THE LITTLE ROCK BANK, YOUR OPINION IS IMPORTANT TO US. PLEASE ANSWER THE FOLLOWING QUESTIONS AND PROMPTLY RETURN BOTH PAGES OF THE MAILGRAM TO US. YOUR RESPONSE WILL BE KEPT CONFIDENTIAL. CALL MAPK 6PRTCKE ON (202) 399-4254 IF YOU HAVE A QUESTION

The **GAO** **REVIEW**

Winter 1982

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From Our Briefcase

Kudos for a Timely GAO Report

The following "technical note" appeared in the Association of Government Accountant's newsletter, *Government Financial Management*, September 1981:

GAO's Crystal Ball *In light of the ensuing air controllers' strike, which closed some airport control towers in order to husband personnel resources, GAO looked pretty good in a June 1 audit report on this topic. In the report, GAO suggested that "Millions of dollars and savings are possible if FAA adopts uniform criteria to identify economically unjustified control towers and closes such towers." Further, the agency said, FAA has not been adequately surveying or evaluating air traffic levels at 24-hour control towers to identify opportunities to reduce operating hours, and suggested that decreased staff which could result would save money.*

Money-Saving Tips from GAO

GAO continually strives to make its messages heard on Capitol Hill. In one committee chamber at least, the walls reverberated with sounds of GAO audit findings and recommendations. Thanks to the House Budget Committee, chaired by Representative James R. Jones, GAO has a mechanism for getting its work on Government administrative practices into the Federal budget process. The committee, in turn, can use GAO's information to fulfill its oversight and legislative roles.

In a September 1981 status report (PAD-81-87) to this committee, GAO culled information from its various divisions on savings possible from modifying costly administrative practices. By communicating this information to the executive Council on Integrity and Efficiency and proposing corrective legislative actions, the House Budget Committee can improve Government administration through budget actions. GAO will continue periodically to provide the committee



with information on administrative reform.

The renewed emphasis on economy and efficiency across Government makes it appropriate here to highlight the areas of administrative reform addressed in the September status report. While some actions had been taken since March 1981 when these issues were discussed in an earlier report, the September status report highlighted the actions still needed.

Delinquent Accounts and Loans Receivable

Problem: Federal agencies reported that receivables due from U.S. citizens and organizations were \$139 billion as of September 30, 1980. This statistic is materially understated, because many agencies' accounting systems do not provide accurate information on receivables, expected losses, or writeoffs.

Actions needed:

- Continued monitoring, under the leadership of the Executive Office of the President, of agencies' plans and actions for improving their debt collection programs.
- Continued congressional monitoring through legislatively mandating an annual report on agency debt collection activities and considering debt collection explicitly in budget debates and decisions.
- Specific roles for the Department of Justice, Inspectors General, and GAO.
- Prompt passage of comprehensive debt collection legislation which incorporates effective commercial collection practices.

Unpaid Taxes

Problem: On September 30, 1980, unpaid taxes totaled \$15.8 billion. It is estimated that a \$2.9 billion figure for

fiscal year 1979 for accounts being actively pursued by collection office personnel and revenue officers might grow to \$10 billion in 4 years if additional staffing is not provided. Even with increased staffing, IRS may not be able to reduce the current amount of unpaid taxes but only slow its growth.

Action needed: budget for additional increases in IRS collection staff.

Unresolved Audit Findings

Problem: Data obtained by GAO in March 1981 identified over \$30 billion in unresolved audit findings at 20 Federal departments and agencies.

Actions needed:

- The Council on Integrity and Efficiency should implement procedures for actually dealing with the audit findings in agency management and budgeting, OMB budget review, and litigation and debt collection.
- The Department of Energy needs to resolve outstanding alleged oil-pricing violations.

Paperwork Reduction

Problem: The Commission on Federal Paperwork estimates that Federal paperwork costs more than \$100 billion a year. This estimate includes both internal Government costs and costs levied on all segments of society by Federal information requirements.

Actions needed:

- OMB must obtain congressional approval of its fiscal year 1982 budget request to implement the Paperwork Reduction Act of 1980.
- Legislation or administrative action must be taken to eliminate the wages-paid reporting requirement for construction contracts.
- Executive Order 12065 should be changed to require review of only classified records specifically requested by the public.
- A direct appropriation is needed for the National Archives' technical assistance program.

Defense Logistical Economies

Problem: In a January 1981 memo-

randum to the Secretary of Defense, GAO identified opportunities to save money—amounting to billions of dollars—in the logistical support area of the military forces. In six areas involving sharing or integration of support-type functions among the services, more vigorous action can produce even greater savings by reducing staffing and investment in facilities, equipment, and supplies.

Actions needed:

- Consolidate military base support activities.
- Finish consolidating management of consumable supplies in Defense Logistics Agency.
- Consolidate management of aircraft depot maintenance activities.
- Consolidate intermediate maintenance of aircraft components in Europe.
- Integrate traffic management activities.
- Use wholesale and retail inventories of parts more effectively.

Defense Multiyear Contracting

Problem: The Department of Defense's limited authority to enter into multiyear contracts for most purchases has resulted in inadequate and inconsistent funding for weapons programs and the lack of an "up front" commitment to a program which would allow for program stability, economical production runs, and incentive for contractors to invest in more cost effective equipment.

Action needed: Defense needs to implement a multiyear contracting policy once it is authorized to do so.

Foreign Military Sales

Problem: The value of unfilled orders in the Foreign Military Sales Program was over \$53 billion as of September 1980. Because of the enormous size of this program, the program must be operated at no loss to the taxpayers as required by law. However, in prior years, the Department of Defense made large subsidies to foreign countries under the Foreign Military Sales Program. By

not charging foreign governments enough for equipment and spare parts, the Department is, in effect, subsidizing the sales with taxpayers' money.

Actions needed: Defense needs to

- develop an adequate centralized accounting system,
- establish pricing policies that result in full cost recovery, and
- provide the Congress with adequate information for effective oversight and control.

Work Force Cost Control

Problem: The control of the Government's indirect or contracted work force, which GAO estimates at \$72.6 billion in fiscal year 1980, is extremely limited. The budget process and documentation do not clearly show the nature of the contracted work forces or the funds expended for the numerous services obtained.

Action needed: The Congress needs to modify budget procedures to better identify, manage, and control total Federal work force costs.

General Procurement and Property Management

Problem: Government contracting for goods and services is one of the most pervasive and costly activities of Federal agencies and grantees. Typically, 20 percent of the Federal budget is expended through the procurement process.

A constant objective of the Government procurement process is to increase competition. During the 1970's, trends have been toward less competition—which means the probability of higher prices. Sole-source awards in the Defense Department now are 64 percent.

Actions needed: The Office of Federal Procurement Policy (OFPP) needs to complete its proposed Uniform Procurement System. Also, OFPP and agencies need to establish jointly each agency's base rates of competitive procurements and plans for improving them.

Replacing Obsolete Computers

Problem: The computer industry has made major technological advances in recent years, which have increased performance dramatically while reducing computational costs significantly. The Government has not kept pace with these advances. Its inventory of medium and large-scale equipment is 98 percent pre-1975 technology.

Actions needed: OMB needs to provide high-level leadership and guidance to agencies to get rid of old, expensive equipment.

State and Local Planning Guide

The Northeast-Midwest Institute has published the updated version of its handbook to help State and local planning efforts for economic growth. *1981 Guide to Federal Resources for Economic Development* explains the requirements of Federal assistance programs and presents some examples of how the programs have been used in the past.

Basic information on economic tools such as grants, direct loans, tax investments, credits for rehabilitation projects, targeted jobs tax credit, and industrial revenue bonds is presented.

A copy costs \$5 from Northeast-Midwest Institute, Publications Office, PO Box 37209, Washington, DC, 20013. (Source of this information: *Congressional Clearinghouse on the Future*, July 1981.)

GAO's Not-So-Plain Language

So you think writing for GAO is tough? It could be tougher! Several States have enacted plain-language laws to enforce a simpler writing style. What would happen if GAO adopted the Connecticut plain-language statute? This law has very specific provisions:

- Sentences cannot exceed an average of 22 words.

From Our Briefcase

- No single sentence may be longer than 50 words.
- Words must not average over 1.5 syllables.

According to "Sesquipedalian Verbosity Returned" (*GAO Review*, Summer 1979), sentences in GAO's 1978 congressional reports averaged 27 words. Roughly calculated, for every 100 words in these reports, authors used 18 words of three or more syllables—double the syllable limit in Connecticut! Although the *GAO Review* article did not mention the average sentence length, GAO editors can guarantee that most of our congressional reports contain at least one sentence over 50 words long!

On Location



Mr. Staats is clearly pleased to have received the Comptroller General's Public Service Award for 1981 from Mr. Bowsher.



Taken by surprise, Milton Socolar receives an award from Mr. Bowsher for his leadership during the vacancy in the Office of the Comptroller General.

GAO Honors Outstanding Employees

The 1981 annual GAO Honor Awards ceremony was special, particularly since the stage was graced by the current Comptroller General, Charles Bowsher, the former Comptroller General, Elmer Staats, and the man who recently acted in the office's

capacity for 7 months, Milton Socolar. Mr. Bowsher and Frank Fee, awards committee chair, both recognized that the evening's honorees were representative of GAO's many fine staff, including the many others who were honored at division, office, and regional ceremonies throughout the year.

Senator John Chafee, under whom Mr. Bowsher served as Secretary of

the Navy in the late 1960's and early 1970's, was the keynote speaker. He spoke of the high regard in which GAO is held on Capitol Hill and mentioned that he had won several long-shot legislative victories by having a GAO report as supporting evidence for a position.

Mr. Bowsher chose Elmer Staats to receive the Comptroller General's Public Service Award. Citing Mr. Staats' lengthy and fruitful career, Mr. Bowsher said no other name connotes more quickly an image of efforts on behalf of efficient Government. Mr. Staats spoke briefly, noting that GAO was fortunate to have such a talented new leader, and that, while their styles may be different, they share the same objective of enhancing the efficiency and effectiveness of Government.

Milton Socolar was the surprised recipient of a commemorative bowl, whose inscription cited him for his leadership of GAO during the 7-month vacancy in the Office of the Comptroller General. Mr. Socolar was unselfish in his praise for Assistant Comptrollers General Harry Havens, John Heller, and Clerio Pin, whom he presented with the Comptroller General's Awards for 1981.

Among his closing remarks, Mr. Bowsher referred to GAO's continuing efforts to make the Federal Government more effective. He quoted a Navy admiral who said "Nothing is so inefficient as doing well something that should not be done at all." GAO awardees and other talented staff will continue to help the U.S. Government pursue programs that are worthy of being done.

Community-Spirited Accountants

Have you ever thought of doing *pro bono* work in accounting? Some people have, through a regional organization called Community Accountants. This organization provides free services to small business people and nonprofit community groups and does public issue analysis. Many volunteers include management analysts who are not certified public accountants.

Community Accountants, located

in Philadelphia, is Pennsylvania's affiliate organization of the national Accountants for the Public Interest (API). Other API affiliates are in California, Florida, Illinois, Massachusetts, New Jersey, New York, Ohio, Oregon, and Rhode Island.

The following text contains excerpts from an article which appeared in the May-June 1981 newsletter for Accountants for the Public Interest. Its author is John Paul Dalsimer, president of Community Accountants.

Community Accountants has been receiving increasing support from the accounting profession. When we first opened our doors in 1974, no accounting firm gave money. During our 1980-81 fiscal year, 15 firms have contributed \$12,000 and numerous others will donate time and volunteers...

For years, many accounting services have been provided at less-than-standard charge rates. Also, accountants have helped their church and civic groups...

Social awareness of accounting... whether in public accounting or industry... has increased in recent years. Almost every public question, whether it be aid to poor people in housing, employment, education, utility rate increases, aid to small business people, medical care and facilities, all involve money. Accountants are the largest group of competent financial analysts and business consultants and therefore best qualified to comment on these public issues.

It seems only natural that these services be available to all. However, accountants also have families and earn their livelihood through providing these services, and it is logical that most users should purchase them in the marketplace. But some system to extend these services to all the people is necessary. One answer is Community Accountants. Community Accountants provides a vehicle for individuals and firms and industry to be sure everyone in society can receive accounting service, even if at the immediate point in time they cannot purchase it. At a time in our society when faith in our institutions seems to be at a very low point, better understanding of the things that affect

our lives is very important. And accountants can (and are) helping.



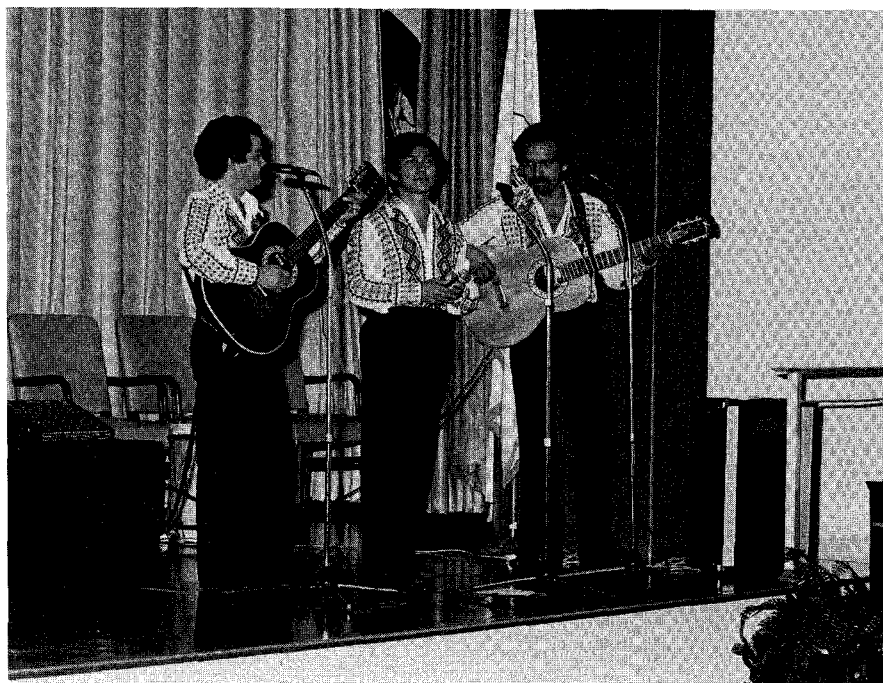
Raul Yzaguirre addressing staff members at GAO's Hispanic Heritage Celebration.

GAO Celebrates Hispanic Heritage Day

"If I'm not for myself, who will be? If I'm only for myself, what am I?" These questions, posed by keynote speaker Raul Yzaguirre, were central to his address given at GAO's Hispanic Heritage Celebration on September 17, 1981. The day focused on the political and artistic accomplishments of the Nation's Spanish-speaking citizens.

In addition to speaker Raul Yzaguirre, president of the National Council of La Raza and one of the foremost Hispanic leaders in the United States, the program featured the "Trio Nuevo Horizonte" musical group, which played representative songs from Latin American countries. The Hispanic theme extended to GAO's lobby, where silkscreens from the Latin American Youth Center's Centro Grafico were on display.

Mr. Yzaguirre's thought-provoking comments centered around the notion of political theory versus practice. The key goals of the Constitution and the Declaration of Independence, for example, could be a reality,



The "Trio Nuevo Horizonte" provides musical entertainment for GAO's Hispanic Heritage Celebration.

or they could be platitudes. Today, according to Yzaguirre, the Constitution makes promises which the current system doesn't deliver. As a Nation, he feels, we need to evaluate these promises and ways to achieve them. We are, in fact, our brother's keeper, and in this spirit we must engage all of America in working for one another. The values thus celebrated at this event, he concluded, are not only Hispanic, but also American.

Mr. Yzaguirre's words were introduced by another inspirational speaker. In his welcoming remarks, GAO's Civil Rights Office Director, Alex Silva, articulated the significance of the day's celebration. His comments provided a special context for appreciating the cultural richness which Spanish-speaking citizens have contributed to the Nation. Included here is an adaptation of his remarks.

While there has been much research into the ways numerous variables have influenced Hispanic culture, one of the most persistent influences on Latino life... is that of individual family ties and traditions... Family cultural, linguistic, and social traditions stem from intimate family events or rituals—some originating from long-forgotten sources—and are per-

petuated through continuing observance and repetition over the years. They give us the strongest links by far to the many-faceted cultural heritage of members of la familia.

Yet while individual family groups, given the diversities which exist in all groups, may have unique and distinctive qualities of their own, they also reflect how, as a people, Hispanics have been able to retain their heritage, coloring it in the various hues of region and environment, shaping it with the subtle nuances of specific familial language and celebration, yet keeping traditional philosophies and cultural aspects particular to Hispanic people as a whole.

This fits in with the Hispanic concept of nosotros, or "we." Nosotros incorporates a natural progression from self to family to group to community to country to culture and, finally, to the whole world. The emphasis is on unity and union; it stresses the idea of fusion of separate entities into a coherent whole, into the culture of la familia.

However, in the near past, as well as today, there has been cultural loss and isolation from families and barrios, or neighborhoods, as Hispanics, like other Americans, have become increasingly mobile. Perhaps this

explains, at least in part, why many Hispanics are reaching out to practice their heritage and attempting to reknit their cultural ties...

*For Hispanics it is important to keep alert and recognize the ways in which their culture is practiced and kept alive. For example, when a parent, ostensibly assimilated into the American mainstream, is conversing with a daughter or son and addresses them as *mija* or *mijo*, the parent is simply practicing cultural continuance.*

*Family traditions which have persisted for generations are microcosmic evidence of the whole. To be sure, family loyalty scales and the effects of assimilation mark individual differences and degrees of cultural continuance, but the concept of *nosotros* remains strong among all Hispanic cultural groups.*

This is the essence of the Hispanic Heritage Celebration. By embracing two different philosophies, two different languages, and two different cultures, Hispanics are able to mold a totally new way of explaining life both to themselves and to the dominant Angloamerican culture.

International Counterparts Greet Mr. Bowsher

GAO's many distinguished foreign visitors and its International Auditor Fellowship Program have quickly engaged Comptroller General Charles Bowsher in the Office's busy arena of international liaison activities. In October 1981, a week into his 15-year term, Mr. Bowsher hosted Auditors General from Australia, Botswana, Malawi, Mauritius, and Sri Lanka, who were en route home from a conference of Commonwealth Auditors General held in Jamaica. Discussions with Mr. Bowsher focused chiefly on the state of the art of auditing in the visitors' countries.

The five Auditors General were followed a week later by the Comptroller and Auditor General of Kenya, David Njoroge, who is also the President of the International Organization of Supreme Audit Institutions (INTOSAI). He discussed with Mr. Bowsher up-



Standing with Mr. Bowsher (center) are (from l.) Auditors General Keith Brigden, Australia; C. Pillay, Mauritius; E.P. Letsididi, Botswana; and A.N. Zakaria, Malaysia.

coming INTOSAI activities and urged him to continue GAO's level of activity within the organization.

GAO's willingness to share its audit techniques with less developed nations was furthered as a third class of International Auditor Fellows (see Fall 1981 *GAO Review*, "On Location") bid farewell at the end of their program in October 1981. Comptroller General Bowsher presented certificates to them and attended a party the Fellows hosted in appreciation of their sponsors, some instructors, and other interested GAO staff who enhanced their stay.

The GAO Review Spotlights Best Articles

Each issue of the *GAO Review* contains a variety and mix of articles not usually found in Government publications. A brief survey of several past issues reveals articles on such topics as agent orange, fraudulent investment companies, and the energy crisis, in addition to the more audit-related areas of program evaluation, methodology, and analysis.

Having your writing published can be very rewarding. In the past some *Review* articles have evolved into symposium papers, chapters in books, source works for specialized research,

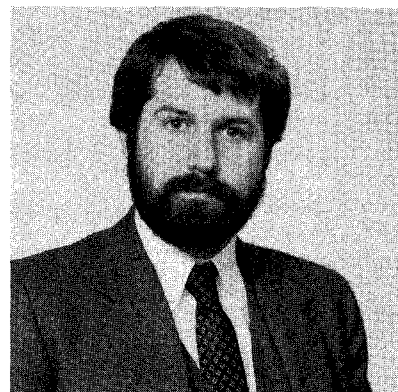
and citations in bibliographies. In fact, one author reports receiving a phone call from an Australian magazine seeking to reprint his article.

The *GAO Review* offers an added inducement to those staff members who are would-be authors. Cash awards of \$500 are presented each year for the best articles written by GAO staff and originally published in the *Review*. One award is available to contributing staff 35 years of age or younger at the date of publication, and another is available to staff over 35 at that date. An impartial panel of judges, appointed by our Editor and independent of the *Review* staff, selects the awardees. The judging period includes articles from the Summer and Fall issues of one year and the Winter and Spring issues of the next year.

We had an opportunity to speak with this year's winners, T. J. Sullivan and William F. Laurie:

T. J. Sullivan

T. J. Sullivan, author of "Program Area Specialists—A Key to the Future of GAO Evaluation," (*GAO Review*, Spring 1981), originally wrote his article as a position paper advocating specialization by GAO evaluators. "GAO tends to encourage a general career focus," he says. "I wanted to specialize in programs for the elderly



GAO Review award winner T. J. Sullivan.

because I've worked in that field since 1975. Specializing is not really done in GAO, so my article grew out of an attempt to change a management policy that personally affected me."

T. J. says writing the article was not difficult. "But changing it from an HRD-oriented strict advocacy paper to an article of interest to the whole agency was murder."

T. J. Sullivan joined GAO in 1979 as a Presidential Management Intern and has since joined the Human Resources Division as a GAO evaluator. His undergraduate education was at Salem College, Salem, West Virginia, and he received an M.A. degree in public administration (programs for the elderly) from West Virginia University. T. J. is presently attending law school at George Washington University. He chairs HRD's Junior Management Council and has served as HRD's representative to the Career Level Council. He is a member of the Gerontological Society of America and the National Council on the Aging.

William F. Laurie

Bill Laurie wrote "Alice Through the Looking Glass, or Trying New Evaluation Techniques" (*GAO Review*, Summer 1980) for some very definite purposes. "The outcome of GAO's study of the well-being of older people in Cleveland was very unique. It was a major study in the field because of the techniques we used and the fact that, through these techniques, we could actually measure what effects programs were having on the well-being of the elderly



GAO Review Award winner William F. Laurie.

over time. Besides that," he adds, "a *GAO Review* poll said that a lot of readers were interested in new evaluation techniques. I wanted to publicize the technique we used and show that our work can make a difference."

Bill Laurie received his B.S. degree in accounting from the University of Buffalo. He joined GAO's Cleveland suboffice in 1957 and still serves there as a senior evaluator. Bill is a certified public accountant (Ohio), a certified internal auditor, and a certified manager. He is a member of the Gerontological Society of America, the American Institute of CPAs, the American Academy of Political and Social Sciences, the Ohio Academy of Science, and he serves as a board member of Case-Western Reserve University.

GAO Photographer Nominated for 1981 Outstanding Handicapped Federal Employee

GAO was pleased to nominate Richard "Rocky" Rockburn for the 1981 Outstanding Handicapped Federal Employee of the Year Award. In recognition of his nomination, the Office of Personnel Management recently cited Rockburn as GAO's Outstanding Handicapped Employee with a certificate signed by OPM Director, Donald Devine, and President Reagan.

Rocky is a fine example of how a handicapped employee sets high, yet realistic, career goals for himself and



Richard "Rocky" Rockburn (l.) receives GAO's Outstanding Handicapped Employee of the Year Award from Alex Silva, Civil Rights Office director.

works actively with his supervisors to have his job responsibilities brought in line with his ambitions. In Rocky's case, his task was to convince management that a deaf person could succeed as GAO's staff photographer.

Rocky has been totally deaf since infancy, when a high fever destroyed his hearing. His parents taught him to lip-read when he was a toddler; later, he attended a special school for oral communications. His skill in reading lips and communicating with others orally, instead of through sign language, enabled him to attend regular public school classes. (In fact, he did not learn how to sign until he was 16.) This early determination to overcome the barriers between himself and others proved to be the foundation for his success at GAO.

In 1978 Rocky entered Federal service, joining GAO in Washington as a temporary employee in the lithographic section of GAO's printing plant. Although some photographic techniques are used in the lithographic platemaking process, this job clearly was not in line with Rocky's career goals. He took the initiative and met

with his supervisor to discuss the possibility of doing photographic work for GAO, even though the office head was very skeptical about a deaf person working as a photographer. Rocky's persistence and persuasiveness paid off, however, and he was reassigned to GAO's Graphic Services Branch as a full-time visual communications specialist.

Over the past 3 years, Rocky has done photography for all of GAO's special publications, including the *GAO Review*, the *Annual Report to Congress*, and the employees' newspaper, the *Watchdog*. He also does archival and publicity work for GAO, covering agency ceremonies, special meetings, visits from international dignitaries, and events on Capitol Hill. One of his most important achievements was his move into documentary photography. Some of GAO's investigations require photographs as evidence for audit findings. Rocky works with GAO evaluators to plan the use of photography in congressional reports and travels to take pictures at the various sites: Navy yards, training schools, construction sites,

farms, forests, dams—all the near and far places that GAO investigates.

Much of Rocky's photography brings him into daily contact with people who have not met him and who have no experience communicating with a deaf person. Rocky's ability to work comfortably with these people is remarkable. This holds true whether he is discussing a photographic design or setting up a posed picture. Many people have commented on the high quality of his work, including former Comptroller General Staats, who presented him with an Appreciation Award (1980), and his own supervisor, who has twice awarded him a Certificate of Merit (1978, 1980).

Rocky's most recent and far-reaching contribution to GAO has been to design and oversee the construction of a darkroom. By processing his own photographs instead of relying on contract developing and processing, Rocky will save the agency about \$1,000 a month. Rocky drew up the floor plans, consulted with photographic experts and contractors, selected the processing equipment, and worked with GSA employees to see that the equipment, plumbing, and electrical hookups were properly installed. This project took over 18 months to plan and complete. The responsibility for its success is almost entirely Rocky's, since he remains GAO's only photographic specialist.

The example of Richard Rockburn is inspiring to both handicapped people and to the Government itself. One can see in Rocky how a handicapped employee, by energetically and responsibly pursuing his career goals, is succeeding in his professional ambitions. One can also see how a Federal agency can morally and materially benefit from giving that employee a fair chance.

Staats Elected to the Accounting Hall of Fame

Former Comptroller General Elmer B. Staats was elected to be the 41st outstanding accountant of the Ohio State University's Accounting Hall of Fame. Mr. Staats is one of the few members who is not a professionally

trained accountant.

The presentation was made by Dr. Yuji Ijiri, President of the American Accounting Association, and Robert Trueblood, professor at Carnegie-Mellon University. Praising Mr. Staats for his achievements, they said, "The greatly widened and altered concepts of comprehensive audit and performance evaluation that he has developed have earned him the highest regard throughout the world—not only in the public sectors but also in the private ones."

People are nominated to the Accounting Hall of Fame by a Board of Nominations, consisting of forty-five prominent accountants. The selection process is performed by mail, and those who receive the most votes are inducted into the Hall.

The Accounting Hall of Fame was established in 1950 to honor the work of individuals in the accounting profession. Members include public accountants, university professors, and government officials. Among notable government officials are Eric Kohler, Andrew Barr, Carman Blough, William Wertz, and T. Coleman Andrews.



Elmer B. Staats (seated 3rd from l.) with fellow members of the Accounting Hall of Fame.

Manager's Corner

As part of GAO's Management Development Program, *The GAO Review* will feature "Manager's Corner" as a source of information on current management theory and practice. The purpose of the feature is to expand the knowledge and skills of GAO managers by increasing their awareness of management problems and achievements. "Manager's Corner" will provide issues for discussion among GAO managers.

"Manager's Corner" will be a permanent addition to *The GAO Review*. It will contain a general bibliography as well as article abstracts on a particular management topic chosen for each issue of *The GAO Review*. Members of the Senior Executive Service will suggest themes which interest them and may volunteer to write abstracts.

A joint project of the Office of Information Systems and Services and the Office of Organization and Human Development, "Manager's Corner" can be a valuable information tool for GAO managers. Subject matter experts from Technical Information Sources and Services will scan management journals, such as *Academy of Management Journal*, *Harvard Business Review*, and *Public Administration Review*, for articles on the quarterly topic. OOHDS will provide copies of the articles to members of the Senior Executive Service and to SES candidates. You may request copies of articles by calling the OOHDS staff at 275-6056. Your advice and comments would be appreciated.

Mentoring

The first topic for "Manager's Corner" is "Mentoring." Mentoring is not a new concept; many executives attribute their successes to the support and guidance of a mentor. At GAO, mentoring is a formal part of the Executive Candidate Development Program. Candidates will be assigned mentors who can help them develop the necessary skills for becoming members of the Senior Executive Service.

Discussed in the following articles

are benefits of mentoring in the development of future executives, problems which may arise in the relationship between mentor and candidate, and guidelines for making mentoring useful to an organization.

Bibliography for Manager's Corner

Mentoring

Bensahel, J.G. "Let Your Protege Make His Own Way." *International Management*, 30, No. 5 (May 1977), 44-46.

Provides rules for developing a protege and suggests that the wise executive should not be overprotective, but should encourage the protege to learn from experience.

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Grote, Richard C. and Kaye Stine. "Mentors Seen as Key Allies in Career Growth." *Training*, 17, No. 8 (August 1980), 107-108.

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Argues for the importance of mentors to career advancement. Describes benefits of the mentor relationship and guidelines for maintaining it.

Klauss, Rudi. "Formalized Mentor Relationships for Management and Executive Development Programs in the Federal Government." *Public Administration Review*, 41, No. 4 (July-August 1981), 489-496.

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McLane, Helen J. "Jumping Ahead by Having a Mentor." *Data Management*, 19, No. 3, (March 1981), 38-39, 56.

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"P's and Q's of Mentoring." *Security Management*, 25, No. 2 (February 1981), 78-81.

Maintains that all professionals have a responsibility to help others by serving as mentors. One measure of a professional's success is the success of his proteges. Advises professionals about who to mentor, how to mentor, and possible pitfalls in the mentoring process.

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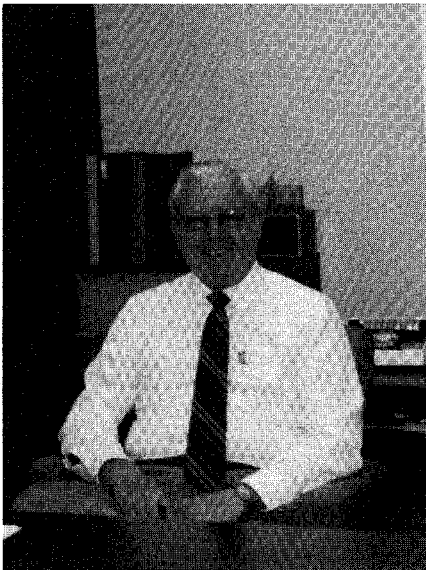
- Carrell, Michael R. and John E. Ditrach. "Organizational Equity Perceptions, Employee Job Satisfaction, and Departmental Absence and Turnover Rates." *Organizational Behavior and Human Performance*, 24, No. 1 (August 1979), 18-28.
- Cummings, Larry L., Gary P. Latham, and Terence R. Mitchell. "Behavioral Strategies to Improve Productivity." *Organizational Dynamics*, 10, No. 1 (Winter 1981), 4-23.
- Doolittle, Fred. "Auditing Disputes in Federal Grant Programs: The Case of AFDC." *Public Administration Review*, 41, No. 4 (July-August 1981), 430-436.
- Geringer, Wendy M. "Identification and Evaluation of Data Necessary to Establish 'Equitable' Pay Scales for Federal Government Employees." *Public Personnel Management*, 10, No. 2 (Summer 1981), 207-243.
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- Hicks, William D. and Richard J. Klimoski. "The Impact of Flexitime on Employee Attitudes." *Academy of Management Journal*, 24, No. 2 (June 1981), 333-341.
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- Mayer, Richard J. "Setting Staff Development Goals in the Eternal Now." *Human Resource Management*, 20, No. 1 (Spring 1981), 8-10.
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- Whorton, Joseph W. and John A. Worthley. "A Perspective on the Challenge of Public Management: Environmental Paradox and Organization Culture." *Academy of Management Review*, 6, No. 3 (July 1981), 357-362.
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- Contents that the act of managers injudiciously pulling strings and playing favorites is now passe and has been replaced by applying objective criteria to the management advancement process. However, managers still believe that subordinates should be guided and helped along their career paths within certain parameters.**
- Zaleznik, Abraham. "Managers and Leaders: Are They Different?" *Harvard Business Review*, 55, No. 3 (May-June 1977), 67-78.
- Suggests that most societies and business organizations are caught between two trends: one for managers to maintain the balance of operations and one for leaders to create new approaches and imagine new areas to explore. Asserts that because leaders and managers are basically different types of people, conditions favorable to the development of managers stifle young leaders who need mentors.**

Corrections

Some names and a picture were inadvertently omitted from the Fall 1981 *GAO Review's* article on the Denver regional office. Also, Pam Tumler should have been identified as the region's writer-editor.



The secretarial staff of the Denver regional office are (standing left to right) Beth Gates, Debbie Palmer, and (seated left to right) Sharon Haggard and Barbara Harris.



ARM John Murphy

This is fourteenth in a series of articles on GAO's regional offices.

The Kansas City Regional Office: At the Crossroads of Our Nation

Researched and edited by Marge Ellis

The title for this article would be more appropriate if it read: "The Kansas City Regional People," for it's the people, not the place, that make it a regional office. There are 125 of us: 72 in Kansas City, 40 in St. Louis, and 13 in Oklahoma City.

Who are these people? They are evaluators, typists, a writer/editor, cooperative education students, computer specialists and technicians, travel voucher examiners, administrative work leaders and assistants, secretaries, and managers.

What about them? They are talented; they represent several races and many religious denominations; they are skilled and experienced in a wide variety of disciplines; they are friendly and cooperative; they possess extensive subject matter expertise. They have taken advanced degrees and professional certifications, and they have provided leadership and services to professional organizations and their communities.

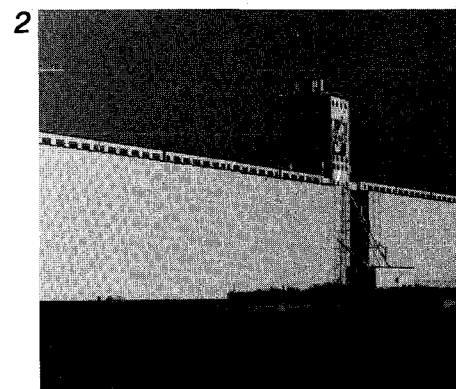
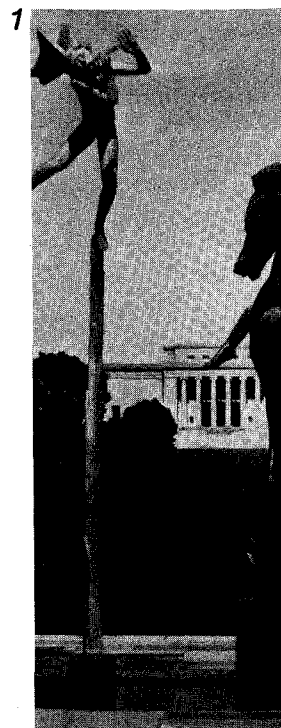
Together they have demonstrated the capability to competently and successfully undertake every aspect of GAO's work. Over the years, they have kept pace with and sometimes exceeded GAO's expectations of them. They have honed their administrative and evaluative skills, and all have contributed to making the "Kan-

sas City Regional People" a vital part of the Field Operations Division and GAO.

Missouri, Kansas, Oklahoma, and portions of Nebraska, Illinois, Tennessee, and Arkansas make up our territory. Our region combines the charm of the Old South, the ruggedness of the Ozarks, the beauty of the prairies, the sophistication of the big cities, and the warmth and friendliness of Small Town, America.

Most people's concept about this area is that it is flat and dry ("The Great American Desert"). Not so. The Ozarks, which are the oldest mountains in America, extend 55,000 square miles from Missouri, Arkansas, Kansas, and Oklahoma.

Water made our region what it is today. Throughout the Kansas City region, rivers, lakes, streams, and subterranean waters flow. Major rivers pervade the region and, to a degree, tie it together: in the east is the Mississippi; from the northwest and west, out of Nebraska and Kansas, come the Platte and Kansas rivers; they both join the Missouri near Kansas City. This river flows east across the State, converging with the Mississippi at St. Louis. These rivers and their tributaries were paths used by explorers and settlers who led the way west.

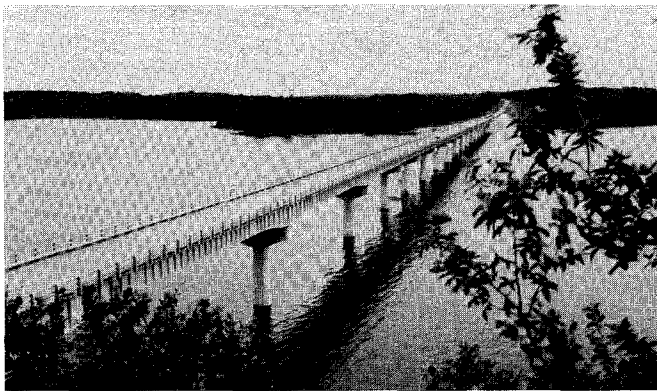


1 Nelson Gallery of Art, Kansas City. (Courtesy the Nelson Gallery of Art.)

2 The world's longest wheat elevator, Hutchinson, Kansas. (Courtesy Kansas Wheat Commission.)

3 "Mile-Long Bridge" at Truman River, Warsaw, Missouri. (Courtesy U.S. Army of Engineers.)

4 The Truman Sports Complex in Kansas City. (Courtesy Convention and Bureau of Greater Kansas City.)



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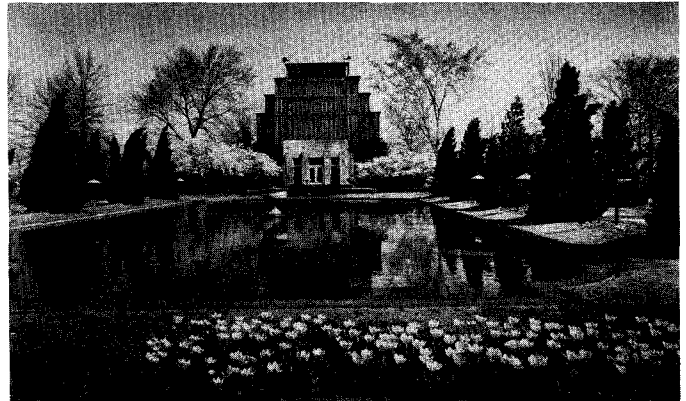
5 Downtown Kansas City. (Courtesy Convention and Visitors Bureau of Greater Kansas City.)

6 The "Jewel Box," located in St. Louis' Forest Park. (Courtesy Chamber of Commerce, Metropolitan St. Louis.)

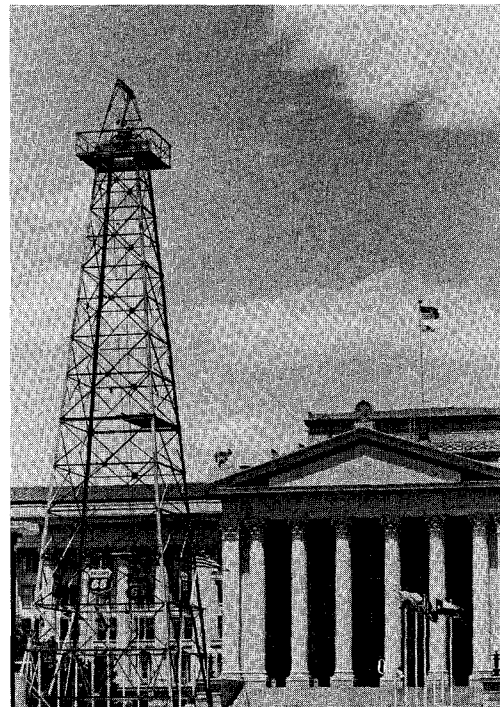
7 Oklahoma City's State capital building has producing oil wells on its grounds. (Courtesy Oklahoma Tourism.)



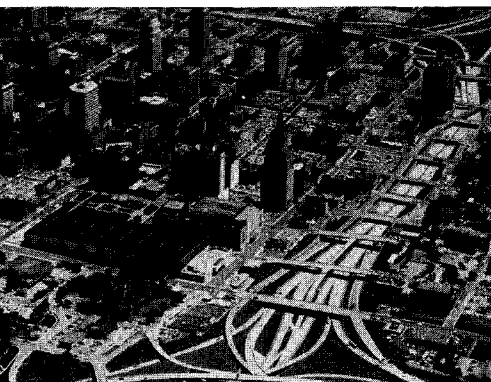
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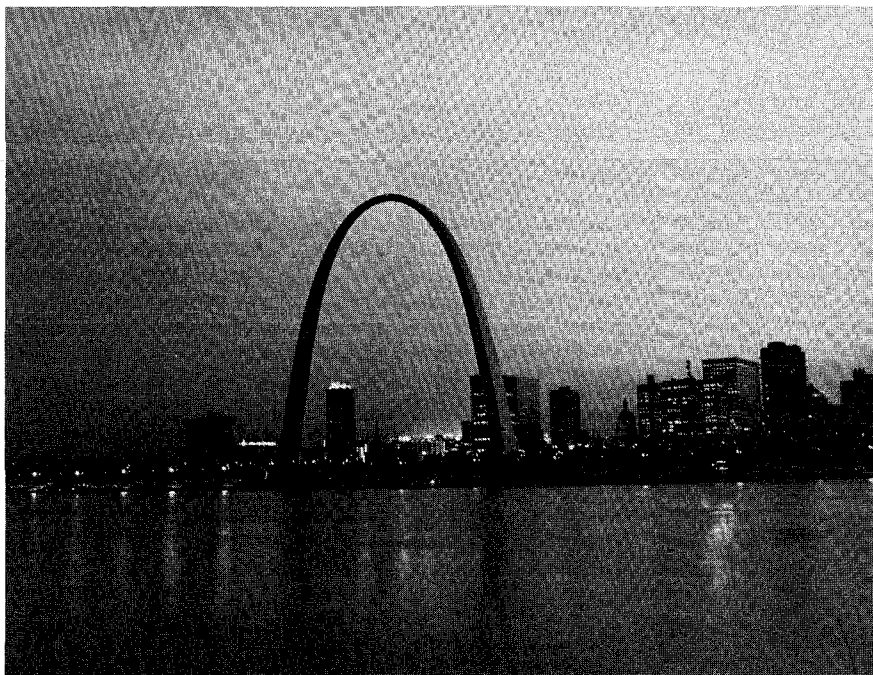
Gateway to the West

The area's past is steeped in history and tradition. Explorers, traders, pioneers, cowboys, farmers, Indians, miners, outlaws, journalists, United States Presidents, aviators, industrialists, and humorists are all part of its colorful history. Its abundant resources—water, fertile land, minerals, and strong, courageous people—and the centrality of its location assured its future. Today, it's America's "breadbasket" and one of America's major manufacturing, transportation, distribution, and cultural centers. How the area developed and those who developed it deserve a brief review, starting in the east.

St. Louis

It began as a trading post, founded in 1764 by Pierre Laclède, where the Mississippi and Missouri rivers converge. The settlement was *the* outfitting and trading post for fur trading and exploration of the northwest wilderness. Lewis and Clark embarked from here in 1804 on their famous expedition, after the area west of the Mississippi was obtained from the French in 1803. With St. Louis' growth, river traffic multiplied as flat boats, keel boats, and barges dominated the waterways. Steamboats arrived in 1817. The Delta Queen, the Maid of Orleans, and the Robert E. Lee all plied their trades here. "Mississippi gamblers" and showboats were in their heyday.

As a commercial center and gateway to the West, St. Louis prospered. Today the metro area is home to 2.5 million people. Its transportation tradition has been sustained as an important trademark. It is the number one port on the Nation's inland waterway system, second in the Nation as a railroad hub, the center of nationwide trucking, and a major center for aviation. St. Louis also is one of the Nation's industrial centers, possessing abundant water, electric power, nearby mineral resources, transportation, and a large labor force. Aircraft, automobiles, printing, beer,



Night lights on the St. Louis riverfront. (Courtesy Convention and Visitors Bureau of Greater St. Louis.)

shoes, and chemicals are among its principal products.

One unique aspect of the St. Louis area is its proximity to the population center of the United States, located in DeSoto, Missouri, just 30 miles southwest of the Gateway Arch in downtown St. Louis. Census officials predict the center will remain in Missouri for this century.

Kansas City

Kansas gets its name from the Kansa Indians, who from the Mississippi River followed the Missouri River to the West. Settlers followed, and in 1821 they established the first permanent settlement. In 1826 an outpost was set up nearby at St. Joseph, Missouri. Both places became famous as jumping-off places for pioneers moving west along what became known as the Santa Fe and Oregon trails. In 1850, 600 wagon trains left the town of Kansas for Santa Fe and California. But many settlers stayed, and frontier forts were established to protect settlers and pioneers from Indian attack: Fort Smith in Arkansas; Fort Sill, near Lawton, Oklahoma; Fort Scott, in mideastern Kansas; Fort Leavenworth, near Kansas City; Fort Osage, near Independence, Missouri;

and Fort Kearny, in south-central Nebraska.

As in the case of St. Louis, transportation also was a major factor in Kansas City's growth. The rivers brought trappers and trappers brought traders; rivermen made trade possible and they brought the pioneers who settled and farmed the land. Railroads also had their effect. After the Civil War, the railroad towns of Abilene, Dodge City, and Wichita became famous terminal points for Texas cattle drives. The towns' past reputations for lawless notoriety have been kept alive with countless movies and television series.

The railroads also brought to the Midwest one of its (and the world's) most important commodities—hard red winter wheat. In the 1870's American railroad agents advertised in Europe for homesteaders. The Ukrainian Mennonites came in thousands and carried along bags of a hardy, severe, cold-weather wheat called "turkey red." Today Kansas is the leading wheat-producing area in the world.

The Kansas City metro area now has about 1.3 million people. Contrary to widely held beliefs, it is neither flat nor somewhere west of Wichita. It's an up-and-down town with more

hills than Rome, and it straddles the Missouri-Kansas line. The economy is diverse. It ranks high in national averages, such as number one in farm equipment distribution, greeting card publication (Hallmark), frozen food storage and distribution, minority business formation, and foreign trade zone space. It ranks number two in automobile production, freight car hauling, grain elevator storage, and wheat flour production.

Kansas also claims a special geographic feature: the geographic center of the United States is located in Barton County, some 200 miles from Kansas City.

Oklahoma City

Prior to 1889 Oklahoma was known only as "Indian Territory," the home of five Indian tribes, and a hiding place for outlaw gangs who raided Kansas and Missouri banks and then jumped over into the "territory" to escape lawmen hot on their trail.

Oklahoma City's origin is unique. It owes its beginning to the "Great Oklahoma Land Run of '89," when 10,000 people settled on the banks of the North Canadian River poised in anticipation of the starting signal. They had every imaginable conveyance from foot and horseback to bicycle. Some couldn't wait. They "jumped the gun" and arrived a few hours sooner than everyone else to stake out the choice locations. These early arrivals were labeled "Sooners." The term stuck and became the State's nickname. That evening, a teeming tent city—Oklahoma City—stood where just 24 hours earlier there had been only prairie.

About 1.2 million people now live in the Oklahoma City area, many of them within the city, which is geographically the second largest city in the United States. Petroleum and its products have played a big part in the city's development since "black gold" was discovered beneath it in 1928. Today, it houses the major offices for large oil and energy-related companies. The State capital has oil wells producing on its grounds.

Oklahoma City's economy is diverse

and strong. Agriculture, energy, government, and manufacturing make it so. Oklahoma City's national stockyards comprise the world's largest stockers' and feeders' cattle market. The city is one of the Nation's largest processing and distribution centers for farm products, such as winter wheat, corn, and soybeans. Aviation is especially important to Oklahoma City—about 40,000 people are employed in aviation-related jobs.

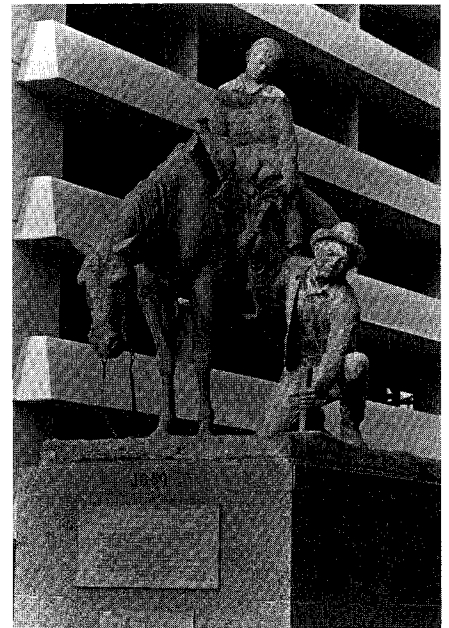
Colorful and Historical People

Jesse James, Wyatt Earp, Doc Holliday, Buffalo Bill, and Bat Masterson all gained fame in the Kansas City region. Abolitionist John Brown (of Harpers Ferry infamy) first went on the rampage in Kansas, and during the Civil War the infamous Quantrill's Raiders nearly destroyed Lawrence, Kansas. The famous Dred Scott slavery trial took place in St. Louis. The people of Kansas were leaders in opposing the extension of slavery to new States. Kansas entered the Union as a free State in 1861 following the Missouri Compromise. Kansas' Carry Nation led the prohibitionist fight, literally smashing up saloons with her hatchet.

Mark Twain's (Samuel Clemens) tales of Tom Sawyer and Huckleberry Finn brought his hometown of Hannibal, Missouri, and Mississippi River life into everyone's home. Pulitzer Prize winner William Allen White's editorials in the *Emporia Gazette* became world famous. Ernest Hemingway was a reporter for the *Kansas City Star*, and Eugene Field wrote his famous children's poetry from his home in St. Louis.

Famous aviators are prominent in the region's history. Aviatix Amelia Earhart was from Atchison, Kansas. Charles A. Lindbergh's "Spirit of St. Louis" transatlantic flight was financed by St. Louis businessmen who believed in the future of commercial aviation.

Donald W. Douglas built large aircraft manufacturing complexes in St. Louis and Oklahoma City. Wiley Post, the first man to fly solo around



This statue honors the homesteaders of the 1889 land rush, which resulted in Oklahoma City's founding. (Courtesy Oklahoma City Convention and Tourism Center.)

the world, was from Oklahoma, as was his fellow flyer, author and humorist Will Rogers. The Cessna and Beech families founded their aircraft companies in Wichita, Kansas. Astronaut Ron Evans, born and educated in Kansas, commanded Apollo 17's flight to the moon.

The thirty-third President, Harry Truman, was from Independence, Missouri, and his successor, Dwight D. Eisenhower, was born in Abilene, Kansas. The Truman and Eisenhower presidential libraries are now located in their hometowns. The Presidents' final resting places are on the libraries' grounds. Alf Landon, who opposed FDR for the presidency in 1936, still lives near Topeka, Kansas; his daughter, Nancy Landon Kassebaum, was one of the first women to be elected to a full term in the Senate. Former Comptroller General of the United States, Elmer B. Staats, was born in Richfield, Kansas.

GAO in Mid-America

GAO's presence in this area dates from 1936, when a U.S. Department of Treasury payment center was established in Manhattan, Kansas, to expedite farm and cattle loan payments under emergency spending pro-

grams started during the Depression. In 1943 area offices were set up in Kansas City and St. Louis to cope with the tremendous backlog of unaudited paid vouchers from World War II. At about this time, an office also was established at the Douglas aircraft plant in Oklahoma City to audit war materials contracts.

In 1952 the Kansas City and St. Louis area offices were redesignated as regional offices, and travel within the region increased to apply comprehensive audit techniques to a wide array of Federal activities. Earlier, in 1948, a small staff at Oklahoma City mainly audited business schools and colleges which bulged with veterans attending school on the GI bill. A few years later the staff joined the Dallas regional office, but in 1958 they were again assigned to the Kansas City regional office. In 1960 the St. Louis and Kansas City offices merged to form the Kansas City regional office.

The first regional managers were James Hammond in Kansas City and Collin Blick in St. Louis. Hammond transferred to headquarters in 1953 and was replaced by Forrest R. Browne. In 1960 Blick transferred to the Civil Aeronautics Board. K. L. Weary arrived in 1966 to replace Browne, who became deputy director of the Field Operations Division. Weary retired in 1976 and was replaced by David A. Hanna, who is the manager today.

Changing Work Demands

The region's work has undergone considerable change since those early days of auditing paid vouchers. One of the assistant regional managers, Arnett Burrow, who started with GAO in 1953, traced it this way:

When he was hired, GAO was in the process of recruiting people with public accounting experience to strengthen its ability to do comprehensive audits of Federal agencies. The idea of doing comprehensive audits of agencies' records stemmed from the work of the Corporations Audit Division. The programs were initially oriented mostly to examining agency controls over revenues and



St. Louis staff in the "old days."

expenditures and compliance with laws and regulations. The central idea was that "comprehensive" meant some test of about every kind of transaction an agency processed as well as the security of their assets, such as inventory, furniture, and equipment.

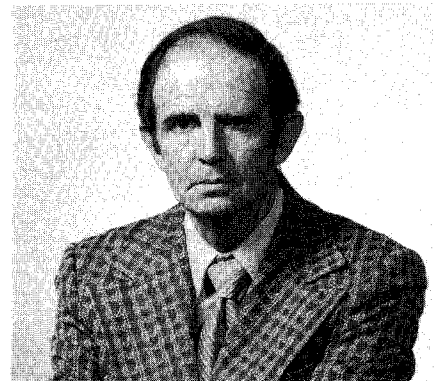
Most of our work was undertaken with no particular reporting objective in mind. We periodically wrote 'significant findings' reports, but couldn't see that they received much attention at the headquarters level. We did, however, collect some money through the 'audit exception' route.

At the same time, an Investigations Division of GAO was making headlines now and then by being more selective in what it reviewed.

The importance of this approach became ingrained, in my case, when I was assigned to lead an audit of fixed price contracting at a large contractor. This happened about 1954 or 1955. Although I had a staff of six assistants, it was soon evident we couldn't 'audit' the transactions as fast as they occurred. We decided to settle on contract price negotiations. We soon became even more selective and examined only those negotia-

tions where we could identify a potential weakness; it worked, and we built solid cases that the Government was sometimes significantly overcharged.

Because of the success of this effort and similar efforts by other regions, the idea caught on of probing for weaknesses in the early phase of a review and devoting most of the audit effort to developing evidence on those weaknesses. Its usefulness became even more apparent as Government spending rose to astronomical levels which far exceeded GAO's ability to audit "everything." Eventually, most



Arnett Burrow, assistant regional manager

of GAO's work was directed to improving the efficiency and economy of agency operations, using this selective approach.

GAO's entry into effectiveness or program results reviews came in 1968 when the Prouty Amendment directed GAO to review the effectiveness of a variety of social programs.

We tackled this in the Kansas City region with about 65 staff members, or roughly one-half of our total staff. Although the reports drew some valid conclusions, they demonstrated we weren't too well prepared for this type of work, for they contained little quantification of what the Government was spending on these programs.

We have come a long way since then and developed considerable capabilities throughout GAO to do effectiveness reviews. We have participated in a number of reviews employing systems analysis techniques, including the effectiveness of reserve forces training, the military forces handling of the AWOL problem, and controlling pollution of the Mississippi River, to name a few.

Focus of Today's Work

Considering the economic and demographic diversity of the regional area, it follows that the region's work is quite varied. Issue areas that have recently dominated the work include

- automatic data processing, and financial accounting and reporting;
- agriculture (food production and marketing);
- communications;
- logistics management, procurement, and readiness;
- personnel management;
- tax administration; and
- energy.

Space limitations keep us modest, if not humble, but to provide a flavor of what we do and where we do it, highlights of recent work and some staff accomplishments follow.

Agriculture

Private sector and governmental

agricultural activities pervade the region and involve production, financing, marketing, distribution, and storage. Regional staff have worked on assignments aimed at making the private and public systems work more efficiently and economically and in the consumers' interest. A review of Federal inspections of meat and poultry slaughter plants demonstrated ways to improve inspections and the need for better sanitation to assure wholesome products. Another review showed that more direct marketing from cooperatives to consumers could lower food prices. A report on food programs suggested improved management could better meet the needs of school children, the elderly, and the needy. Finance-related work disclosed that the farm credit system was duplicative and that consolidating three systems would eliminate overlapping services and reduce costs. An innovative analysis of grain warehouses' financial positions demonstrated that more can be done to give farmers advanced warning about warehouses which may be going bankrupt. Lacking such information, some farmers have suffered severe financial losses.

Logistics Management, Procurement, and Readiness

Logistics and military preparedness activities are carried out at installations located throughout the region. Work is regularly done at the Air Force's Strategic Air Command Headquarters, Omaha, Nebraska; the Military Airlift Command, Scott Air Force Base, Illinois; the Army's Troop Support and Aviation Materiel Readiness Command and Aviation Research and Development Command, St. Louis; and the Air Force's Air Logistics Center, Oklahoma City.

Tests at two of the five Air Force's air logistics centers showed the centers had \$50.3 million of stocks on order when stocks of the same items were already \$8.3 million in excess of requirements. We made several recommendations to prevent this. In other work, we reviewed the Air Force's

computer model for simulating strategic airlift operations to determine its needs for air crews. Examination of the model showed that it overstated requirements because it did not include some factors and included questionable assumptions. We made a number of recommendations to improve the model's reliability, which the Air Force incorporated into its plans to change the model.

Procurement and system development and acquisition work is carried out regularly at McDonnell-Douglas Corporation, located in St. Louis. This corporation has been a major contributor to the space program and the top (dollar-volume) defense contractor for the past several years, developing and producing a succession of major weapons systems. Systems currently active include the F-15 Eagle, F-18 Hornet, AV-8B Harrier, and the Harpoon missile, all of which have been subjects of congressional reports on cost, growth, and system effectiveness.

Communication

The region has led much work in the communications field by working at the Defense Commercial Communications Office and GSA's Circuit Procurement Branch, both located near St. Louis. These two activities procure virtually all voice and data circuitry for Federal activities in the 50 States. Reviews have been focused on long-line requirements and network configurations. Using computer-assisted analyses of their own design, staff have pioneered work in reviewing interagency long-line circuit requirements and network layouts, use of spare network capacity, and consolidations of Government-wide metropolitan area telephone systems.

On one assignment, tests at four cities showed that consolidation of local Federal telephone services could reduce telephone costs by \$1.4 million a year after incurring one-time costs of \$1.5 million. It would eliminate the need for planned modernizations estimated to cost \$9.1 million. We recommended that the Office of

Management and Budget develop a policy that would require consolidating and modernizing local telephone service.

Tax Administration

American taxpayers, of course, are the benefactors behind all governmental activity, and they aren't necessarily happy about it. This was the subject of recent congressional testimony and a report stating that illegal tax protestors threaten the Nation's voluntary tax system. Although IRS is dealing with the problem, work led by regional staff brought out steps IRS could take to increase its effectiveness.

Kansas City's involvement in planning and doing work in tax administration is because of a heavy concentration on IRS activity within the region. Two of IRS' 10 service centers are located in Kansas City, Missouri; two others are in Memphis, Tennessee; and 6 district offices operate within the region's boundaries.

Aside from reporting on people not paying taxes, staff also reported that IRS is not adequately assuring itself that individual taxpayers filing returns are paying the proper amount of tax. In a nationally led review, staff found that IRS' audit quality control system did not reflect the tax determination rate as accurately as IRS thought it did. Even after an audit, returns showed high rates of technical and computation errors, significant audit issues were overlooked, and required probes for unreported income often were not made. Recommendations were made to improve quality control, and the innovative techniques used to measure audit quality are now being extended to IRS' audits of corporate returns.

EDP and Financial Accounting and Reporting

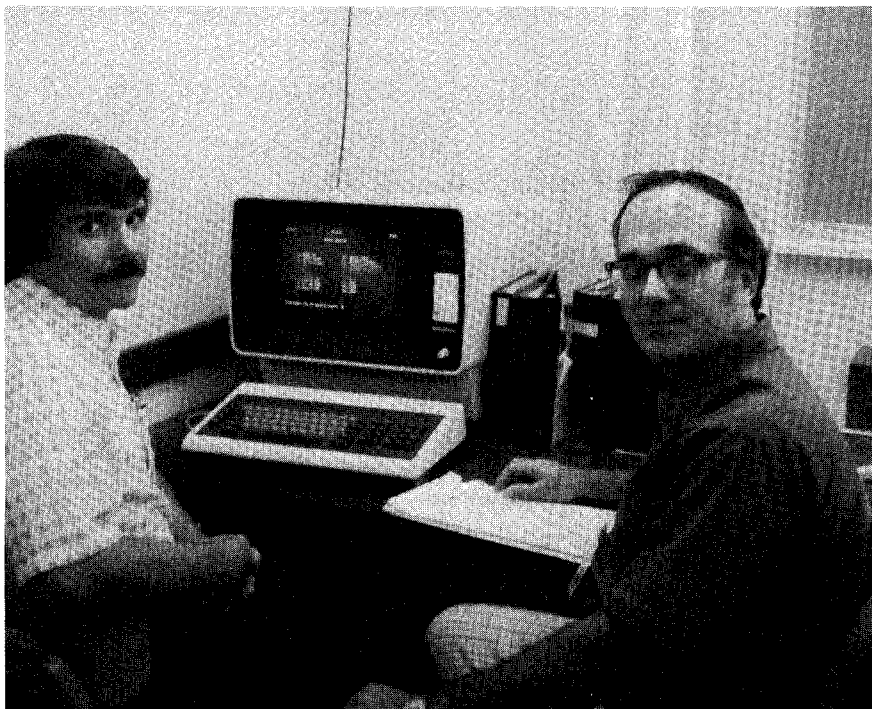
Several large-scale Federal computer service centers are located within the region. Our reviews have covered

hardware and software acquisition and management, as well as systems development and operations. For example, we recently completed a review of contracting for software. The review discussed a variety of problems common to software development contracts and a provisional checklist for effective software contracting. We recommended that the National Bureau of Standards and the General Services Administration provide specific guidance to Federal agencies on managing contracting for custom software development. The provisional checklist has been widely publicized in EDP literature.

In another review we found that Federal agencies were spending millions of dollars yearly on computer software maintenance but had done little to manage it. Consequently, insufficient attention was given to updating systems. We recommended that the National Bureau of Standards take the lead in issuing technical guidelines on maintenance and that Federal agencies single out software maintenance as a management objective.

Much of our financial accounting and reporting work stems from the presence of national finance offices: the Commodity Credit Corporation (CCC) and Federal Crop Insurance Corporation (FCIC), in Kansas City, and the Farmer's Home Administration (FmHA) in St. Louis. The corporations' financial statements must be reviewed every 3 years. This promises to be an even greater workload in view of the size of the corporations' activities and the desire of GAO to begin issuing unqualified opinions on the statements. CCC's inventories and receivables amount to billions of dollars. In addition to auditing FCIC's statements, we also proposed a method to better align risk with individual farmer's production history, in writing insurance. At FmHA, our evaluation of its computer-based management information system was of direct assistance to an appropriation subcommittee's efforts to control cost growth.

Another source of finance-related work is the Marine Corps Finance Center located in Kansas City. A re-



KCRO staff members Bob Sommer (l.) and Lenny Hill perform computer analyses at their Scott AFB, Illinois, audit site.

view at this center showed that, although millions of dollars were spent on the system for computing members' pay, about 19 percent of the pay accounts audited were in error. Costs under this automated system were \$7 million a year more than under its prior manual system, and the Corps had to retain many manual procedures to correct errors made by the automated system. We made several recommendations to the Secretary of Defense for improving the management and operation of the system.

Personnel Management

We have participated extensively in the work of the Federal Personnel and Compensation Division. Kansas City is a Federal regional center, and the region contains Federal activities which employ millions of people. Selected staff members have developed expertise in the division's issue area.

Recently we have led reviews of manpower requirements and various aspects of the military justice system, including the military departments' handling of AWOL problems and the discharge systems. We also made

reviews of the efficiency of reserve and guard training, manpower problems restricting the use of National Guard and Reserve forces, and the use of professional employees by Government agencies.

One review disclosed that the military services were spending millions of dollars to apprehend people classified as deserters who were absent from duty for more than 30 days. Most of these people were discharged as unqualified for retention, in many cases, shortly after they were apprehended. We recommended that the Secretary of Defense consider the less costly alternatives of discharging deserters in absentia, except when wanted for some specific purpose, and not undertaking apprehension until an individual had been gone long enough to indicate that a voluntary return was improbable.

Other Important Areas of Work

Large urban areas, medium-sized cities, rural areas, water and mineral resources, diverse populations, and large amounts of Federal spending account for the region's playing an

important role in reviewing a wide variety of other Federal programs. The regional territory also is covered by 4 of the 10 Federal regional centers, including the one located in Kansas City.

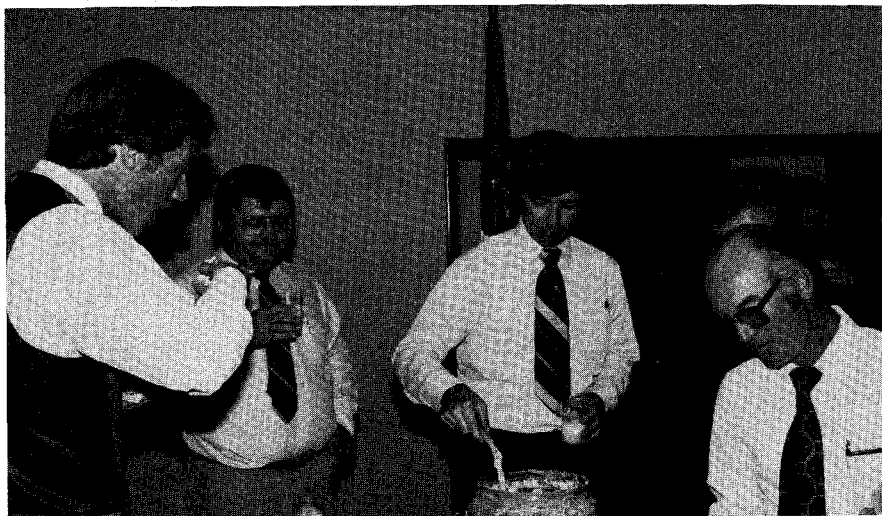
Health, education, income security, and social service program reviews account for an important segment of the regular workload. Nursing homes and VA medical centers, prime sponsors for employment programs, and social security payment centers have all been reviewed. Energy work, particularly relating to natural gas regulation, has grown in importance in the last few years. The five Corps of Engineer districts and the extensive system of dams and reservoirs within the region has involved us in cost-benefit studies and power marketing issues. We also have done work regarding Federal efforts to control pollution of the Mississippi and Missouri rivers and to improve the Mississippi's lock and dam system for barge traffic. Federal prison facilities at Leavenworth, Kansas; Springfield, Missouri; and Marion, Illinois; and related probation and parole activities have enabled the region to make important contributions to the law enforcement area.

Other work will have to go unmentioned, for there is no reasonable way to cover it all. Perhaps it can be summed up simply by noting that the Kansas City Regional People are an important part of the action in GAO's getting the job done.

Regional Organization

To guide all this activity, the region is organized into five operating components, under the regional manager's direction: a management council, management teams, technical assistance group, staff management unit, and administrative unit.

Using a participative approach, most audit work is conducted through three management teams, whose leadership component consists of an assistant regional manager and from four to five GS-14s. Team responsibilities include assignment leadership



Oklahoma City staff members (l. to r.) Keith Nelson, Bob Hammons, Don Brader, and Tommy Patterson gather for an office reception.

and supervision; program planning; and staff management, development, and relations.

To a large extent, the other units and a writer/editor work in direct support of the management council and teams. Their work, and that of the managers' secretaries, is of paramount importance to the region's success in accomplishing its objectives. Collectively, they provide many essential services, such as timely and professionally prepared reports, schedules, critical pay, travel checks, all of which keep us functioning.

An important outside activity is the Mid-America Intergovernmental Audit Forum, composed of Federal, State, and local government auditors and State CPA society representatives from Iowa, Kansas, Missouri, and Nebraska. The Forum's purpose is to promote effective audit coordination among its members and examine current auditing issues. The regional manager chairs the Forum, and a GAO staffer serves as executive director.

Staff advisory groups and representatives play an important role in guiding the region's operations. Staff members, elected by their colleagues, make up the Equal Employment Opportunity Advisory Council and the Staff Advisory Council (GS-12s and below). Both groups made important contributions to recent organizational development efforts.

Staff also elect representatives to GAO's Career Level Council and GS-13/14 Management and Policy Advisory Committee. Coordinators for the Federal Women's Program, Hispanic Employment Program, Handicapped Program, and EEO counselors are appointed by the regional manager. The persons holding these positions have all provided valuable advice and assistance to fellow employees and management.

All in all, it's an excellent staff to do business with.

Excellent Places to Live or Visit

What's to your liking? There's a good chance you will find it in Kansas



Kansas City's Crown Center, a "city within a city," is privately developed and financed by Hallmark, Inc. (Courtesy Convention and Visitors Bureau of Greater Kansas City.)

City, Oklahoma City, or St. Louis. Most important, the people are outgoing and friendly. Homes, by today's standards, are still moderately priced, schools at all levels are excellent, and area universities and colleges make it possible for you or your children to get degrees. Outdoor recreation of every kind is nearby; the cities' art centers, theaters, unique museums, zoos, and other entertainment will satisfy most everyone's tastes.

Regularly scheduled airline flights make it easy to visit all three offices. Each city has excellent, moderately priced hotels located near the offices. You'll find the choice of restaurants to be outstanding. Our office facilities are designed to provide private and comfortable meeting places. The St. Louis office is fitted with a large conference room especially suited to meet the needs of all GAO units. Excellent air service to St. Louis from most all parts of the country makes it a convenient and economical location for meetings.

A wide choice of evening entertainment, including theater, night spots, shopping, and sightseeing are available to travelers. In Kansas City, the Country Club Plaza and Crown

Center are special for shoppers, and Kansas City's jazz musicians are still alive and well. Laclede's Landing in St. Louis offers good food and entertainment, and the nearby Gateway Arch offers a unique "capsule" ride to the 630-foot-high observation deck. Oklahoma City's Metro Concourse is a unique underground shopping and restaurant area, and you'll never be able to find (even in Texas) a prime-rib cut to match the one offered by a local restaurant.

Professional sports enthusiasts won't be disappointed. There are the Cardinals and Royals for baseball, the Chiefs and Cardinals for football, the Blues for hockey, the Kings for basketball, the Comets and Steamers for indoor soccer. For rodeo and softball fans, Oklahoma City offers professional-circuit rodeo, the National Cowboy Hall of Fame, and the National Softball Hall of Fame. The truly dedicated sports fan probably already knows that the NCAA, the National Association of Intercollegiate Athletics (NAIA), and the Fellowship of Christian Athletes are all located in Kansas City.

That's us. We'll always be pleased to greet you.



Eleanor Chelimsky

Ms. Chelimsky is the director of GAO's Institute for Program Evaluation. Prior to joining GAO in 1980, she held positions with the United States Mission to NATO and the MITRE Corporation. Ms. Chelimsky received a B.A. degree in economics from the University of Maryland and did graduate study there in political science. She was a Fulbright Scholar in Paris and received the Diplôme Supérieur from the University of Paris.

Adapted from an address to the American Psychological Association's 89th Annual Convention, Los Angeles, Aug. 24-28, 1981.

Making Evaluations Relevant to Congressional Needs

The problem of evaluation use is hardly a new one. We've been puzzling for years now about how to get program managers, for example, to use evaluation findings as a way of correcting or even cutting their programs, despite the obvious career threat which such use can represent. Or about how to get harried administrators (who dispose of maybe 15 minutes at the end of a day) to read evaluations, despite their typical lengthiness, complexity, and seemingly inevitable infestations of jargon. Or about how to get practitioners to modify traditional practice based on evaluation findings, despite the often highly unspecific and dubiously applicable nature of the recommendations. Or about how to get legislators to consider evaluation findings in, say, program reauthorizations, despite their sometimes distant relevance to the controversy at hand or the failure of the evaluation products to arrive on time.

Evaluation as Seen by Evaluators

Evaluators have heard more and more about the difficulties which users have had in applying evaluation findings; they've concentrated more and more on the evaluations themselves, trying to make them more rigorous, more perfect, on the assumption that it was perhaps poor quality which impeded use. The problem there is that although poor quality may indeed impede use, good quality *doesn't* ensure it. All of us realize that some very mediocre evaluations have been very well used, while some very excellent work has languished elegantly on the shelves and in baskets of policymakers—whether or not it served to highlight methodological points among research audiences.

In sum, under criticism, evaluators have continued to scrutinize the subject of their interest—that is, the evaluation—rather than the needs of

the user. There's nothing very surprising about that, given that evaluation research has many of the characteristics of research in general. That is, the researcher, as such, is interested in producing new knowledge, knowledge for its own sake. Researchers are trained within particular disciplines, and their work typically flows from ideas or hypotheses which they develop and which usually build upon the ideas and hypotheses of researchers before them. They test these hypotheses as systematically as they can and carefully document those tests and the findings which ensue. Their expectation is that both tests and findings will either be borne out or thrown out by other researchers, who will then build upon the new findings, using the same systematic, formal methods. It's this familiar step-by-step, carefully explicated, iterative but nearly closed-circuit process—in which the researcher is both producer and user—that marks the research enterprise, with three of its essential characteristics: *cooperation, cumulation, and review (or use) by peers.*

A fourth characteristic is *control*. Researchers expect to have great independence in designing and executing their work, at least partly because they need to ensure continuity in the thinking which produces the research design and guides the analysis and interpretation of results. So almost total control and direction by researchers have long been the norm in the performance of the research function.

But these particular characteristics—"truth for truth's sake," dependence upon earlier research, focus on other researchers as the essential research user, and autonomy in the conduct of the work—have a natural, but perhaps unintended, side-effect. Because they focus so heavily upon the research (or upon the evaluation) and because every emphasis also implies some deprivation (as every economist knows, there are no free lunches), these characteristics lead inevitably to at least some indifference on the

researcher's part in the use or application of research findings *when the users are not researchers*.

In trying to understand and improve the use that's made of research findings, it's important to begin with the researcher's perspective. In Beranek's words, although the majority of researchers may never make significant contributions nor achieve recognition, they still work as researchers because of what they see as the nobility, the worthiness, the "charisma" of research. For most researchers, the very act of doing research fulfills their public obligation. And the peer review system rewards them for doing good research, not for whatever use is later made of their findings.

But the fact the the "use issue" fails to receive a great deal of attention from researchers is not the only problem. Many social researchers, many evaluators, actually equate a focus on use with what they call "client-satisficing," or the unfortunate and improper substitution of a market goal for the knowledge goal which is basic to the entire research enterprise. So the fact that researchers are inner-directed, peer-directed, and knowledge-directed—characteristics that we often hear represented as the great strength of both a particular piece of work and of the "interconnected fabric"² of research, in Harvey Brooks' term—that fact can pose problems for policymakers and others needing to use the findings. For not only do researchers tend to think first of their own research interests (and those of their research field), and only second—if at all—of the needs of research users, but further, an effort to emphasize the needs of users is actually considered somehow unworthy and even dangerous by more than a few researchers and evaluators.

What does this mean if we're trying to improve the use of research or evaluation findings by non-research audiences? Well, in the first place, it means the research and non-research perspectives (perspectives of policymakers or practitioners, for example) are

not naturally linked, but need to be reconciled, if findings are to be both usable and used. Second, it means that this may not be easy to do because the combination of researcher interdependence, research autonomy, and the pursuit of goals requiring high levels of technical competence tends to isolate researchers as a group. Such *isolation*, which may really be a fifth characteristic of the research function, allows a deep gulf of misunderstanding to widen and harden between the world of research and the outside world.³

The existence of this gulf has two effects. First, it gives rise to researcher views of the outside world as "hostile, incapable of encompassing objective research, and bent on subordinating it to dubious goals, such as profitmaking, or the creation of artificial needs."⁴ Second, it reinforces user-held images of evaluators and researchers, who may be viewed as fanatic, inflexible, or arrogant, and their evaluation or research products as "over-theologized, spooky, unfathomable, tedious to read, and complicated to understand," in Carey's phrase.⁵

This second effect, which speaks to the image of researchers held by non-researchers, brings us to the other important perspective we need to understand if we want to improve the use of research or evaluation findings, and that's the perspective of the user. In this case, today, we're talking about a *legislative* user. What do we really know about the legislative perspective, especially insofar as its interactions with the research perspective are concerned?

The Legislative User-Researcher Gap

To begin with, it would appear that, in the normal course of events, legislators and researchers are separated by different goals, different standards of evidence, different tolerances of uncertainty. Researchers have a goal

of knowledge or truth, whereas legislators have a goal of power or impact, as Don Price has observed.⁶ The researcher's knowledge goal is, of course, implemented via the scientific method and both goal and method lead researchers, first, to believe in *rational* solutions to dilemmas and, second, to define uncertainty *very* carefully. But the legislative power goal, which is implemented via the adversary process (*not* the scientific method), instead leads legislators to believe that the best solution is the one presented with the most persuasive arguments or backed up by the most impressive authority.⁷ That is, *for the legislator, the evidence is instrumental to the negotiation or to the decision, whereas for the researcher, the evidence is the end in itself*.

A few years ago, the National Science Foundation conducted an important effort targeting the transfer of evaluative scientific information between researchers and legislators in 42 states. Researchers worked directly for legislators, and a researcher⁸ working in the State of Indiana described the problem this way:

The researcher says he's certain only when he's absolutely certain. To him, making no statement is better than making a statement based on incomplete data. But in policymaking, positive value is placed on "making a decision," regardless of whether or not there is sufficient objective evidence to support the decision. We see this conflict vividly in recent attempts to establish permissible chemical carcinogen levels in factory emissions, in occupational exposures, and in food substances to insure reasonable safety. But proving that a substance causes cancer in humans is virtually impossible by scientific criteria of proof. The best that can be done is to show that under certain special circumstances, the substance is associated with the induction of cancer in another species of animal. The scientist cannot extrapolate these animal observations to humans with

scientific certainty. And yet the policymaker must make a decision about humans. In order to make a timely decision based on the best evidence available, certainty to a policymaker can be what a scientist might conjecture as either "damn likely" or "almost never."

Further, these differences in goals and methods between legislators and researchers naturally bring differences in priorities and strategies, differences which signify that researchers may see the need for research everywhere and legislators may not see it anywhere. A Minnesota legislator involved in the same National Science Foundation study had this to say:

Legislative priorities exist in the following order with regard to a particular issue: first, legislators consider the effect on constituents (how do they feel about it?); second, they consider legislative feasibility (is there a consensus to do something about it?); and only in last place do they consider substantive information (what do we know about it?). The legislator thus reverses the priorities of the ideal "statesman-policymaker" who puts substance first and constituents last. Also, somewhere within the legislator's last priority lies the researcher's top priority. And this explains quite a few things. For example: why emotional issues (i.e., constituent issues) dominate legislatures; why, if you come in with substance but without showing how constituents will be affected or what legislative strategy is possible, you won't get much response; why service packages need to be concentrated on glamorous issues, not technical ones; and why timeframes for legislative action are geared to time in office, not to the amount of time needed to solve a problem.⁹

But what do such legislative priorities signify for an evaluator? Well, if legislators must think first of their

constituents, second of legislative feasibility and only third of substance, and if we assume that this year's "emotional" program issues might include, say, fraud or waste in entitlement programs, cost growth in government, poor management, "useless" programs, and program ineffectiveness or inefficiency, *in that order*, we can see that evaluators have been spending most of their time on the least emotional issues and addressing chiefly the bottom-most legislative priorities.

But in addition, this low legislative priority assigned to substance is reinforced by the typically legal, rather than scientific, training of lawmakers. This results in a lack of legislative familiarity with research modes and procedures, which in itself deepens the isolation between legislators and researchers and constitutes an impediment for legislative bodies in the use of research.

Relationships between researchers and legislators, then, are conditioned not only by different training, different goals, different methods, and different priorities, but also and especially by different areas of ignorance. And the researcher is usually as ignorant of the policy context in which a research question is posed as the legislator may be of research methods. Yet to answer the question, "Is benzene dangerous?" the researcher must know *in what context*; similarly, to use evaluation findings properly, the legislator must know *what confidence can be placed in those findings and how they can be applied*.

How Evaluation Can Shrink the Gap

To sum up, an effort to improve the use of evaluation or research by legislators must try to address two kinds of problems:

- researchers' or evaluators' inattention to the public use of their work generally and to legislators' information needs in particular and

- communication problems between researchers and legislators because of their isolation from each other and because of their different perspectives.

One of the several missions of GAO's Institute for Program Evaluation (IPE), is to mount precisely such an effort with regard to evaluation. We have begun this effort first, by trying to get as clear an idea as possible of *legislative information needs* and second, by trying to build two types of linkages: linkages of *logic* which can bind those information needs to particular evaluation strategies and linkages of *communication* which can improve understanding and develop working relationships between evaluators and congressional staff.

First, then, what are the most common legislative information needs that can be satisfied through evaluative techniques? To answer this question, we used GAO, congressional, and National Science Foundation sources and did some interviews of our own as well. The sense we got was that in at least six important ways evaluators can respond usefully to the needs of legislators and legislative staff:

- (1) by answering evaluative questions, of course, but also, by getting the information to the legislative user rapidly enough to fit the time constraints of the congressional negotiation or decision process;
- (2) by sifting through the quantities of existing evaluative information to synthesize, analyze, and present succinctly that which is relevant to the question at hand;
- (3) by refining, where possible, the formulation of that question-at-hand to be sure of the feasibility of obtaining the information sought and the appropriateness of that information to the policy need;
- (4) by identifying major gaps in available information for future attention by evaluators at GAO or elsewhere;
- (5) by evaluating plans for new programs or policies and reviewing eval-

evaluation reports for old ones; and (6) by directly helping congressional staff to develop the evaluative questions about program effectiveness and efficiency needed in the legislative oversight of executive agencies.

IPE's Evaluation Strategy for the Congress

Assuming that these are the first and most important legislative needs that evaluators should try to fill, we are now setting up our strategy for doing so by building linkages of logic and communication with the congressional users of our work. These linkages rest upon two hypotheses: first, that designing backward from the information needed is feasible and that it will, in fact, ensure the relevance, timeliness, and use of the work performed; and second, that the appropriateness of an evaluation design to the information needing to be produced is more important than the rigor of that design.

With those ideas as a starting point, our evaluation strategy for working with the Congress now contains the following elements:

Element #1: Negotiating the question in terms of the information need. We begin every job by a series of meetings with the congressional sponsor to refine the question so that we can be sure that the question's a researchable one, that it can be answered given the time and resources available with the appropriate degree of conclusiveness, and that the congressional users know exactly what they'll be getting and agree that it's what they need. We won't, for example, begin a 2-year job if the information need doesn't require it or if we only have 6 months' time; or any job if the effort doesn't seem likely to produce the information sought, or if we don't get sponsor agreement that the information is indeed that which is needed.

Element #2: Learning more about the evaluative information needs of legislative users. We need to deepen our understanding of the forces acting to generate evaluative information needs in the Congress if we want to respond to them optimally. To begin with, all information needs are not, of course, evaluative. In addition, some which are evaluative may require work of a sort which makes them more appropriate for congressional agencies other than the GAO. Some other needs may require audits rather than evaluations. Also, we need to be able to distinguish among general evaluative information needs so as to organize our responses usefully according to some classification. For example, some evaluative needs recur at fixed intervals; some call for knowledge of program effectiveness; some require only descriptive information; some may be susceptible to a building-block, mixed-methods strategy; some are answerable with extant data, and so on.

Element #3: Developing and testing a panoply of evaluative tools for use with the Congress. Given that much of the congressional criticism leveled at evaluation has concerned its timeliness, we *must* confront the tension between the legislative need for rapid provision of evaluative information and the fact that designing and executing rigorous evaluations takes a long time. In addition, we must also confront the tension between GAO's need to manage its work in the least costly way possible (every question simply cannot be addressed with a \$500,000 survey or a million-dollar evaluation) and the fact that quality is sometimes very expensive. We are therefore using the negotiation process (just discussed as Element #1) to separate out those questions which can be appropriately answered by methods *other* than rigorous evaluations, and we are developing or adapting and testing such methods for use with legislative sponsors on three such methods. I think we are making some progress.

1. *The Evaluation Synthesis.* An evaluation synthesis brings together existing studies and uses them as a data base for answering specific congressional questions. It allows us to determine what is actually known about a particular topic, the level of confidence one may have in the various studies used in the data base, and the gaps in evaluative information which remain. We do an evaluation synthesis either when a congressional committee asks for a program effectiveness study to be completed in 9 months and we are able to negotiate that request to the synthesis and evaluation of *existing* studies, or when we are asked for an analytical summary of the state of knowledge in a particular area. Our first evaluation synthesis will be published in September. It has addressed, for the House Subcommittee on Select Education, the topic of access to special education by the handicapped. The questions we agreed to answer for the subcommittee, using the new evaluation synthesis method, were four:

- What are the numbers and characteristics—such as age, race, handicapping condition and its severity—of children receiving special education?
- What are the characteristics of children who are less often included in the special education program?
- What are the characteristics of children who may be overrepresented in the special education program?
- What are the major factors related to who gets special education?

The evaluation synthesis is designed to be performed by one or two persons, having access to specialized expertise, over a period of 6 to 9 months. (The precise amount of time will, of course, depend on the narrowness of the topic area and the size of the data base available.) We developed this method to respond to three needs: the need for rapid evaluative information, the need for directing massive amounts of existing informa-

tion to the answering of specific questions, and the need for a cost effective use of IPE's evaluative resources. In addition, the method allows IPE at least partially to fulfill its mission of improving the use which the Congress makes of evaluative information since, in and of itself, it ensures the initial or secondary legislative use of evaluations which have already been completed.

II. A second method we are developing for serving the Congress is *The PODSE, or Program Operations and Delivery of Services Examination*. This is an adaptation of the service delivery assessment developed at the Department of Health and Human Services. Here we are not so far advanced as with the evaluation synthesis, having just completed a tentative methodology which we're now going to test. With this method, we will ourselves perform a study which seeks to answer *only* descriptive, nonimpact types of questions, such as: How are services being delivered in a particular program? What do beneficiaries think of the program? What are the program's vulnerabilities to fraud and abuse? In deciding whether a PODSE is appropriate, we look at what information already exists and at the kind of program which is involved. A PODSE would be especially useful in a case where a program was—for example, so new that little was known about it, existed only to serve particular clients (such as crime victim assistance centers or Vietnam Veterans' Outreach programs), so that client and practitioner opinion of the program would be crucial questions—or where significant opportunities for service abuse might exist. A counterindication for a PODSE, of course, would be the need to know the overall effectiveness of a program. We expect the PODSE to include some elements of an opinion survey, combined with some aspects of operations analysis. It will be performed by a team of 4 or 5 people with help from GAO's regional offices, taking, we think, about 8 to 10 months to complete. We are develop-

ing this method to serve the need for rapid information on service delivery performed by executive agencies, as well as the need for legislators to know about affected constituent attitudes toward service programs. Finally, it can either stand alone or establish the need for a rigorous evaluation of program effectiveness.

III. The third method I want to mention is the *Evaluation Planning Review*. This method is still on the drawing board, but it seeks to answer legislative questions about the feasibility, the logic, and the reasonableness of proposed new policies and programs based on the evaluative experience of the past. That is, by going through the evaluation planning process for a new program, looking at its objectives and the rationale given for believing they are reasonable, we can identify areas of some uncertainty, of great uncertainty, and of total uncertainty. At the same time, we can ensure that later evaluation of the program is considered. This effort allows congressional staff to ask for more supporting data, if needed, to modify the objectives or change the implementation or administration of the program. Above all, the evaluation planning review sets the stage for the evaluative questions of the oversight function. Now these new methods naturally don't exclude the usual mix which IPE will perform of case studies, surveys, and process or outcome evaluations. But again, we will do expensive, long-term studies only when they must be done. The backbone of this process is the up-front job negotiation with congressional staff which determines the appropriate evaluation design for a particular legislative information need.

Element #4: Frequent briefings of congressional staff and continuing communications on progress. It goes without saying to anyone who has ever conducted an evaluation that many things can go wrong between the evaluator's tidy job design and the messiness of job execution which may often be studded with unplea-

sant events like losing your best staff, not finding the data you counted on, and so forth. By briefing the legislative user frequently, we hope to ensure, first, that that user will know what we're doing, what problems we're having, and what changes may be necessary in the final product we had agreed on; and second, that we will know how the user's information need may have changed or expanded, allowing us possibly to broaden our own effort, if study scope, time, and available data should allow us to do so.

Element #5: One-on-One Evaluative Work with Congressional Committee Staff. This work focuses on legislative language mandating evaluation, on the preparation for hearings examining evaluative questions, and on agency oversight. Here we work in depth with a single committee, trying to transfer evaluative skills as well as to provide evaluation help in a particular area. This work will be supplemented by briefings to interested congressional staff to acquaint them with aspects of evaluation design which can be useful to them in their work.

These five elements, then, furnish the essential components of our approach toward trying to increase the use of evaluative findings by the Congress. The shape of this approach—focused on the information need of the user rather than on the evaluative interests of the producer—has evolved from an effort to avoid or address the problems encountered between legislative users and evaluators in the past.

The strategy is based on the belief that the routinization of these two kinds of linkages—the direct linkage of the evaluation to the user need and continuous communication between sponsor and evaluator—should lead to

- more relevance and timeliness in the evaluation product,
- no reduction in evaluative quality,

Making Evaluations Relevant to Congressional Needs

- a gradually increasing understanding of the evaluative process by the legislative user,
- more satisfaction on the part of that user, and as a result,
- improved congressional use of evaluative findings.

¹William Beranek, Jr., *Choosing and Using Scientific Advice in the State Legislature*. Holcomb Research Institute, June 1979.

²Harvey Brooks, "Can Science Survive in the Modern Age?" *Science*, Vol. 174, Oct. 1, 1972.

³"Policy for the Social Sciences: An Examiners' Report," Stanley Hoffman, Wassily Leontiev, and Henry Tajfel in *The OECD Observer*, October-November 1974, No. 72, p. 21.

⁴*ibid.*

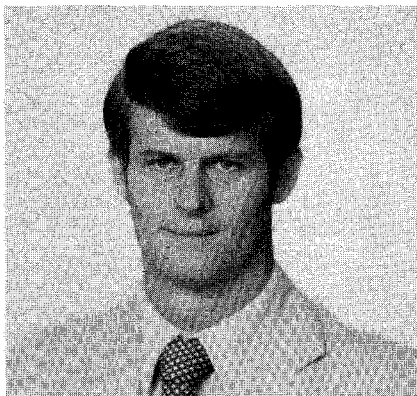
⁵Eleanor Chelimsky, *An Analysis of the Proceedings of A Symposium on the Use of Evaluation by Federal Agencies*. The MITRE Corporation, M77-39, July 1977, p. 43, Remarks of William D. Carey.

⁶Don K. Price, *The Scientific Estates*. Chapter 5. Harvard Press, 1965.

⁷Beranek, 1979.

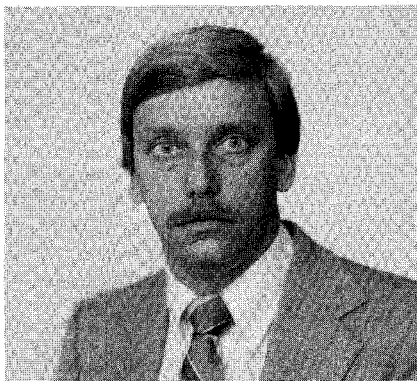
⁸Beranek, 1979.

⁹The Hon. Gordon Voss, Minnesota State Legislature, Remarks at a Panel Discussion, Conference on "The Intergration and Use of Research Within the Federal System," Hawaii, June 19, 1979.



Mark E. Gebicke

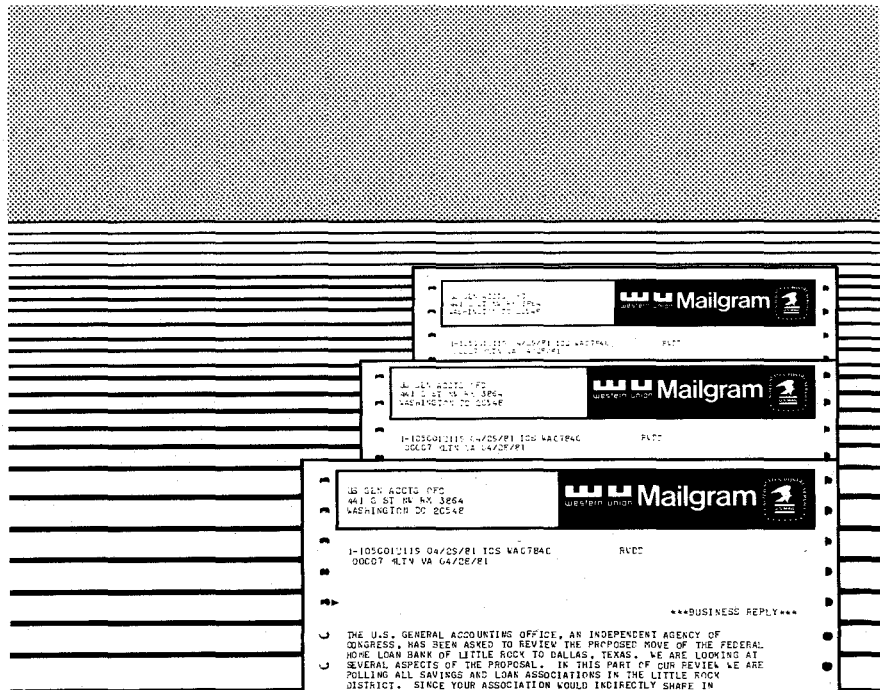
Mr. Gebicke is a senior evaluator in the General Government Division. He received his B.S. degree in business administration from High Point College, High Point, North Carolina, and an M.S.A. in governmental administration from George Washington University, Washington, D. C. A previous contributor to the *GAO Review*, Mr. Gebicke's GAO service includes audit assignments with the Energy and Minerals Division and staff positions with Personnel and the Project Planning and Management Task Force.



Thomas E. Slomba

Mr. Slomba is a research psychologist in the Technical Assistance Group (TAG) of the Institute for Program Evaluation. He received his B.A. from the State University of New York at Buffalo, and he received his M.A. from Kent State University. Mr. Slomba joined GAO in 1977. Prior to joining GAO he did program evaluation work with the Child Guidance Center of Cleveland, the Research and Planning Council of Buffalo, New York, and a Washington consulting firm. Mr. Slomba received the GAO Meritorious Service Award in 1979.

Auditing By Wire: Shocking Results



Let us suppose that as part of one of your audits you must poll several hundred persons in a couple of weeks. If we were to tell you of a technique which resulted in an 83 percent response rate in 2 weeks and over 95 percent in 3 weeks, would you be interested? Read on.

Should the Little Rock Bank Move to the Big City of Dallas?

In March 1981 several congressmen from Arkansas requested GAO assistance in assessing the issues surrounding a proposal to move the Federal Home Loan Bank of Little Rock, Arkansas, to Dallas, Texas. The request was rather straightforward and relatively routine. The only thing somewhat unusual about this assignment was the time within which the congressmen wanted our resulting report—10 weeks from the initiation of the audit work to the issuance of the report.

How we managed to complete the audit work and issue the report within 10 weeks is another story. Suffice it to say it took a dedicated effort of all those participating in the review in the Dallas regional office, the General Government Division, and the Institute for Program Evaluation. As you might suspect, we also employed several time-saving steps to ensure that we would meet our goal.

After exploring the information available on the proposed move, we identified 11 separate issues that needed to be addressed to comprehensively review the proposal. Some of the issues, such as analyzing and comparing the bank's cost to move to Dallas or within Little Rock, were complex. A simpler issue involved comparing the quality of mail service received by Dallas with the quality of mail service received by Little Rock.

Two of the 11 issues we agreed to undertake only if time and resources were available. One of these optional issues was whether the 615 savings and loan associations located in

Arkansas, Louisiana, Mississippi, New Mexico, and Texas favored or opposed the move of the Little Rock Bank. We knew that to address this issue, the president of each savings and loan association would have to be polled. We believed this information was critical to the successful completion of the review, since the savings and loan associations have a financial interest in the bank. Let us explain.

The savings and loan associations are stockholders of the Little Rock Bank. As stockholders, these associations would indirectly finance a major bank expenditure, such as a move. The associations would finance the move through a reduction in stock dividends paid by the bank. By using our high estimate of the first year costs, we found the move to Dallas would cost \$1.17 per share of bank stock. Stated another way, the smallest association would pay only \$5.85 for the move, but the largest would pay over \$200,000. Most of the associations would pay between \$1,170 and \$5,850. Of course, the associations could pass the cost of the move on to their customers.

What Is the Best Way to Question 615 People in 3 Weeks?

Since we realized the assignment required surveying the 615 presidents of the savings and loan associations, we immediately contacted the Institute for Program Evaluation's Technical Assistance Group (IPE-TAG). One of this group's responsibilities is to design and approve GAO questionnaires and survey methodology. The IPE-TAG staff pointed out that our tight timeframe would probably not allow us to use the typical survey techniques—mail-out questionnaires or telephone interviews.

We were told that mail-out approach required 6 to 8 weeks just from the

time it is mailed until the time we would expect a reasonable response rate. The 6- to 8-week estimate did not include the time needed to design the questionnaire, print copies, prepare transmittal letters, and fold and insert 615 pieces of mail into envelopes. Obviously, the mail-out approach was out of the question.

In examining the feasibility of a telephone survey, we learned that talking about conducting such a survey was a lot easier than actually doing one. The IPE-TAG staff estimated that, to actually interview about 90 percent of the 615 savings and loan association presidents, we would have to make between 1,500 and 1,700 phone calls. A relatively large number of calls would be required since most savings and loan association presidents would not be reached on the first call. Call backs would have to be scheduled and additional contacts made. Such an undertaking would require more staff than we had at our disposal. Contacting only a sample of presidents was not the solution to our problem, because we would have to stratify our sample by each of the five States and by the size of each association. Such a sample would have required us to contact a very large proportion of the 615 associations. A stratified sample would have reduced the required number of phone calls, but not enough to pursue this approach. The IPE-TAG staff was right; mail-out questionnaires and telephone interviews would simply take too much time and resources.

Why Not Send Mailgrams?

After considering and rejecting typical approaches, the IPE-TAG staff suggested an unusual approach. Why not send mailgrams? The IPE-TAG staff explained that since we needed a response to a few relatively simple questions, we could send a Western Union business reply mailgram to

each association president. By using mailgrams we could eliminate the time required for printing and stuffing, and we were assured that delivery would occur the next day.

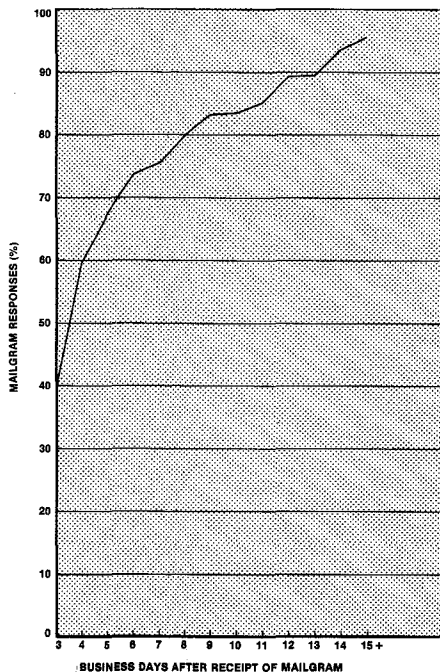
Western Union mailgrams would be in the hands of the association presidents the day after we provided Western Union with the text of our questionnaire and the names and addresses of the 615 recipients. The business reply mailgram is accompanied by a prepaid business reply envelope allowing the recipients to respond by first class mail. The IPE-TAG staff estimated that the time required to realize a reasonable response rate using a mailgram would be about one-half that of a typical mailed questionnaire.

We contacted Western Union to obtain an estimate of the cost per mailgram. Western Union told us that a two-page mailgram with the text we were considering would cost about \$3.25 per mailgram. The cost, as expected, was higher than that of a mailed questionnaire and comparable to that of a telephone survey. However, the benefit of saving valuable time and resources far outweighed the cost. Thus, we decided to go with the mailgram.

Working closely with the IPE-TAG staff, we finalized the text and question format of our mailgram. We eliminated the "nice-to-know" questions and stuck with the questions which were essential to our review. Besides keeping us on track, this "weeding" process helped to keep our costs low, since the mailgram charge is based principally on the number of words used.

We took our final text and the names and addresses of our recipients to the Western Union office at 1400 G Street, NW. There our text was entered via terminal to the Western Union computer. We proofread our mailgram as it appeared on the terminal screen. As we left the Western Union office, our expectations were high. We were not to be disappointed.

(FIGURE 1)
RESPONSES TO GAO MAILGRAM



day we had! On Monday, the third business day after the mailgrams were delivered to the recipients, we received 249 responses. By Thursday, or after just 6 business days, we had received 453 responses, or 74 percent. Figure 1 graphically summarizes the responses we received from our initial 615 mailgrams and about 100 followup mailgrams 2 weeks later.

In the end we received 588 responses out of a possible 615 for a 95.6 percent rate. Not bad considering we received the responses within 3 weeks after we took the mailgram text and names and addresses to Western Union.

ness reply mailgram looks like when it is received by the addressee.

Assume an individual wishes to send a mailgram to 1,000 people. The individual only has to get the message and the name and address of each recipient to a Western Union office. From the Western Union office the information is put into the Western Union Info-Master Computer in Middletown, Virginia. The Western Union computer uses the zip code in the address to electronically send the message to one of 151 post offices nearest the addressee. The message is printed, folded, and stuffed into an envelope at the post office and delivered via regular postal delivery the next day.

Upon receipt of the mailgram, the respondent must only complete the questionnaire and refold the mailgram into the provided business reply envelope. The mailgram is refolded so that a return GAO address appears in the envelope window. The time invested by the recipient is but minutes.

Figure 3 shows exactly how the mailgram works. For the survey of association presidents, we used the computer-originated input method. Western Union entered the message and the 615 names and addresses at their Washington, D.C., office.

For sending mailgrams to smaller groups of respondents (100 or fewer), GAO has the capability to use the EMPAC IV method of input. Using this method, the mailgram text, names, and addresses are entered directly via a terminal in the GAO building. This method is more cost effective for smaller jobs because Western Union has a minimum charge of about \$250.00 for computer-originated input.

Although the minimum does not apply to the EMPAC IV input method, it does require that GAO staff key in the names and addresses of recipients at GAO headquarters. For small jobs this added work results in substantial cost savings per mailgram sent.

Ethel Merman Was Right

As Ethel Merman sings in the Western Union advertisement, "What a difference a mailgram makes." We found the number and timing of the responses to our mailgram nothing less than incredible. We are certain these results would not have been possible using the alternative approaches we considered.

The mailgram questionnaire was delivered to the recipients on a Wednesday. We received no responses on Thursday or Friday, but what a Mon-

What Exactly Is A Mailgram?

Unless you have received or sent a mailgram, you may be wondering what exactly is a mailgram? A mailgram is a service offered jointly by Western Union and the U.S. Postal Service. Mailgram service was initiated as "electronic mail" in 1970. A mailgram message is electronically transferred by Western Union to a post office near an addressee and is delivered by the U.S. Postal Service the next business day. Figure 2 shows what a busi-

Figure 2

US GEN. ACCTG. OFC
441 G ST NW RM 3864
WASHINGTON DC 20546

1-1050011119 04/09/81 ICS VAC78
00007 ALIN VA 04/28/81

MR MARK E GESSI
ATTN: BRIGMON K
BRINLOX RD 20

DEAR MR GESSI:

THE U.S. GENERAL ACCOUNTING OFFICE, HAS REQUESTED YOUR ASSISTANCE IN CONDUCTING A SURVEY OF ALL SALES DISTRICTS IN FINANCING THE SMALL BUSINESS DISTRICTS. FROM THE LITTLE INFORMATION WE HAVE, YOUR FIRM IS A MAJOR CONTRIBUTOR TO THE ECONOMIC DEVELOPMENT OF THE DISTRICT.

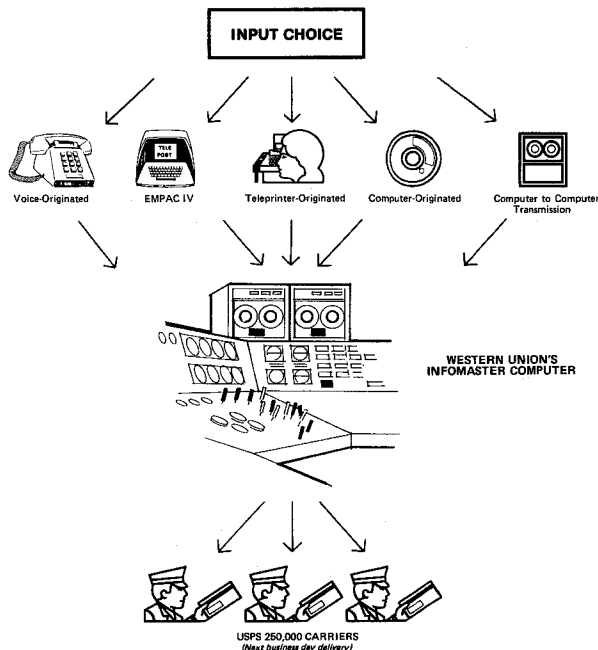
1. DO YOU FAVOR
() FAVOR - AN
() OPPOSE - A
() UNDECIDED

2. I FAVOR IT
() IMPROVE IT
() IMPROVE IT
() LOWER BATH
() LOWER MY C
() OTHER (SPE

Figure 3

Mailgram -- The Action Communication

Here's How It Works



for other comments. Although these four questions required the use of a two-page mailgram, a mailgram could probably handle 10-15 questions effectively. A mailgram asking 10 questions would probably require three or four pages. The maximum number of mailgram pages is six; however, these pages are attached top and bottom, so a six-page mailgram would be about 6 feet long. Such a "lengthy" questionnaire may turn off some respondents. Others may find manipulating it into the return envelope somewhat like refolding a street map. In most cases, we would not recommend a six-page mailgram.

The second criterion is that you must have a current mailing list which identifies respondents by name. A mailgram loses its impact if it is addressed—"Dear Occupant." Also, mailgrams addressed to "Dear Manager," or "Dear Budget Director," usually do not lend themselves to mailgrams. If your list is outdated, you will be wasting a lot of money to find out some recipients are "no longer at this address." For our survey of association presidents we were fortunate to have an up-to-date directory of the associations which included the presidents by name. In many instances mailing lists have to be constructed from scratch. This can be a difficult and time-consuming process.

Use of Mailgrams Not New to GAO

For the past several years Western Union mailgrams have played an important role in GAO's mailed questionnaire surveys. In a typical GAO questionnaire survey, a mailgram is used as a final followup reminder for those who have not returned a completed questionnaire. The mailgram has proven to be an effective final reminder. Its impact communicates the importance of the survey to the respondent. It also has the ability to maneuver past screens, such as a doctor's receptionist who may judge all questionnaires to be junk mail the doctor does not want to see. After sending a mailgram reminder, we often receive calls from recipients requesting another copy of the questionnaire because the ones previously sent were lost or destroyed. Mailgrams used as a followup reminder often make the difference between a fair response rate of 75 percent and a good response of 85 percent.

On several occasions GAO has used mailgrams to actually gather data from respondents as we did in the

assignment described here. The use of mailgrams in our survey of association presidents clearly points out some of the major advantages of this survey method—namely speed, high response, and minimal front-end work.

You may be wondering why we do not make greater use of the mailgram approach. The reason is simple. The vast majority of GAO assignments which require survey techniques do not readily lend themselves to the mailgram approach. But those that do can reap the same benefits that were obtained on this assignment.

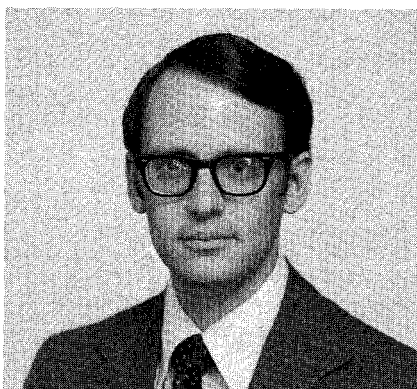
Is There A Role For Mailgrams In Your Next Assignment?

Mailgrams can be quickly and effectively used if your survey meets two important criteria—you must have a small number of relatively simple questions, and you must have a current mailing list which identifies the recipients by name.

In the survey described here, we asked three multiple-choice questions and a fourth question provided space

Summary

Under certain circumstances mailgram surveys can be a very effective way to gather data. As the results of the survey demonstrated, mailgrams will get you respect despite what Rodney Dangerfield says. The IPE-TAG staff has had extensive experience with Western Union mailgrams. If your assignment could benefit from the use of the mailgram approach, you can be sure the IPE-TAG staff will mention this possibility during your discussions on data gathering approaches.



Everette B. Orr

Mr. Orr is a senior evaluator in the Procurement, Logistics, and Readiness Division and is responsible for audits of excess Government property. He has also served in the General Government Division, Office of Program Planning, and Program Analysis Division. Prior to joining GAO in 1976, Mr. Orr served in the U.S. Air Force and the Department of the Treasury. He received a B.S. degree in political science from Virginia Polytechnic Institute in 1969 and an M.A. degree in political science from the University of Arkansas in 1974. Mr. Orr is a CPA (Virginia) and a member of the American Institute of CPAs.

A Silver Mine from Photographic Wastes

"Finally, this question: name a silver mine where you can have your gall bladder removed. Answer: the 18th largest silver mine in America, your local Veterans Administration Hospital."

Good Morning, America
August 30, 1976

All film—still photographs, motion pictures, microfilm, and x-ray—contains silver, and most of it can be recovered, refined, sold, and reused. Silver's sensitivity to light creates the fine range of tones necessary for modern photography. As film is developed, about half of this silver remains on the film (the black and gray image areas) while the other half is washed into processing solution—called *fixer*. The fixer can become rich with silver over time, normally containing about half an ounce per gallon, while scrap film contains about one quarter ounce of silver per pound.

Silver is valuable because of its aesthetic, electrical, and photographic qualities. In addition, many investors have bought silver as a potential hedge against inflation because of its scarcity. During the last 10 years, the price of silver soared from \$1.54 an ounce in 1971 to a high of over \$50.00 an ounce in March 1980. By August 1981, the price had fallen back to about \$9.00 an ounce, but this price is still several times the price of only a few years ago.

The Government uses large amounts of silver in its photographic operations for printing, aerial photography, industrial x-rays of military equipment, medical x-rays, illustrating, and microfilming. GAO has conducted reviews on silver recovery as far back as the 1960's in the Veterans Administration and Public Health Service. These audits demonstrated potential savings from recovery from x-ray processing when silver was only 90 cents an ounce. A 1977 audit established the cost effectiveness of recovery on a Government-wide basis in a variety of photo labs.¹ However, a recent Government-wide review of silver recovery

illustrates the growing concern for conservation and environmental protection in addition to saving money.²

Conserving a Valuable Resource

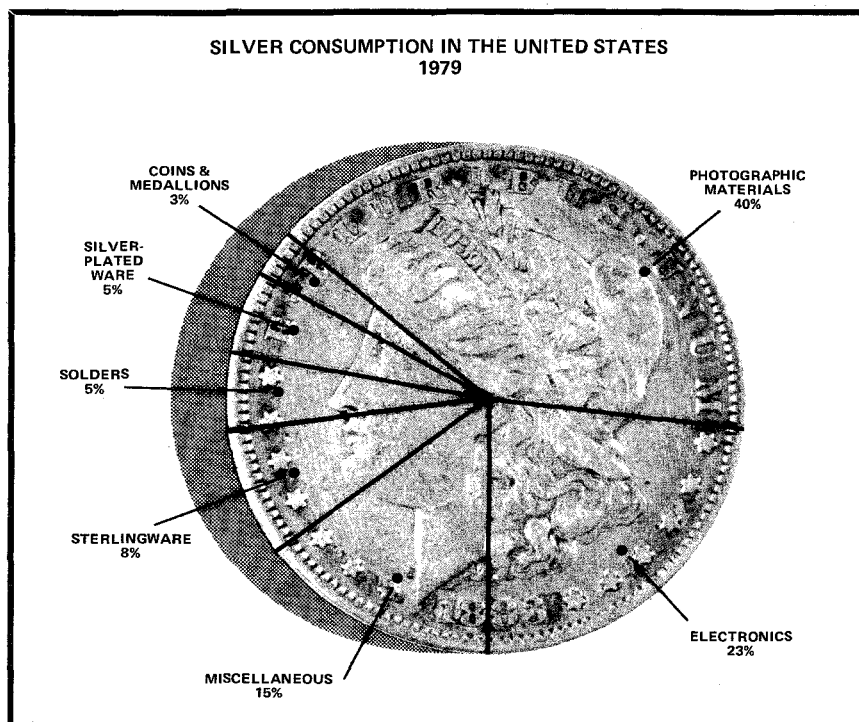
Silver, like most natural resources, is a valuable but diminishing commodity. Recovery not only conserves silver, but also reduces the need for additional mining and importing of silver.

Silver Has Unique Qualities

Silver's traditional value in tableware and jewelry has become secondary to its use in the photographic and electronic industries. Although xerography has reduced the need for silver in some processes, only silver can produce the clear variation in tone needed for photographs. Also, silver's high conductivity and resistance to corrosion are valuable in electronic equipment. As a result of its unique qualities, about 40 percent of the silver consumed in the United States is used in the photographic industry and 23 percent in the electronics industry, while only 15 percent is used to produce tableware.

Reducing the Need for More Mining

Today about 75 percent of the silver refined in the United States comes from recovering silver from scrap (photographic wastes, electronic scrap, and melting silver coins). The United States refines about 166 million troy ounces annually, of which 126 million is from various forms of scrap, while only 40 million is from mining. Recovering from photographic wastes produces about 54 million ounces of silver annually or more than the total U.S. mine production.



for more mining, recovery also benefits the environment by conserving energy, reducing air pollution, and preserving the landscape.

Recovering Silver And Saving Money

Installing recovery equipment is easy and can save money. Most recovery equipment is inexpensive and will return silver worth many times the cost of the equipment. Although recovery was cost effective in only large labs when the price of silver was 90 cents per ounce, the increased market value of silver has made recovery cost effective in even small labs.

Two Recovery Methods

The two most common methods of recovering silver from photographic wastes are electrolytic plating and metallic replacement. The size of the photo lab determines the type of method to use.

Large photo labs (using over 70 gal-

The U.S. demand for silver is expected to rise to about 230 million ounces by 1985, while the domestic mining production will probably only rise to 50 million ounces. With only gradually increasing mine production, silver recovery will become increasingly important as a means of meeting the spiralling demand for silver.

Reducing Dependence on Imported Silver

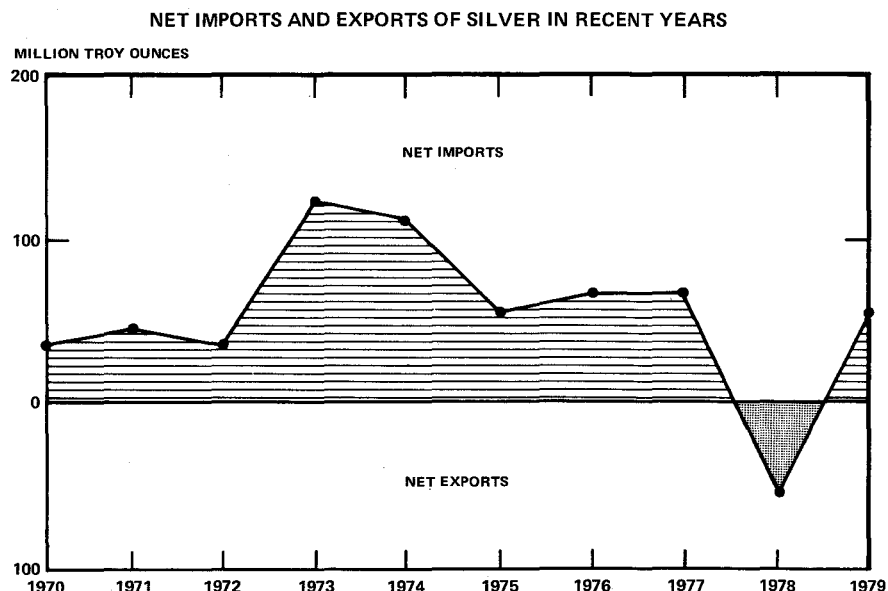
The United States currently accounts for about 40 percent of the total world silver consumption. To meet this great demand, the United States must import large quantities of silver. In the last 10 years, net imports of silver have exceeded net exports each year except in 1978. Recovering silver reduces the need for more imports and, as a result, reduces the balance of payments to foreign countries.

Protecting the Environment

Silver recovery protects the environment because silver is potentially toxic in waterways to useful bacteria, fish, and wildlife. Although silver compounds used in photographic

processes are less toxic than other silver compounds, the Environmental Protection Agency prohibits large photographic processors from discharging silver-laden wastes into streams, rivers, or lakes. In addition, many States and local governments prohibit silver discharge into their sewer systems because silver can inhibit the useful bacterial breakdown of sewage.

Since recovery reduces the need

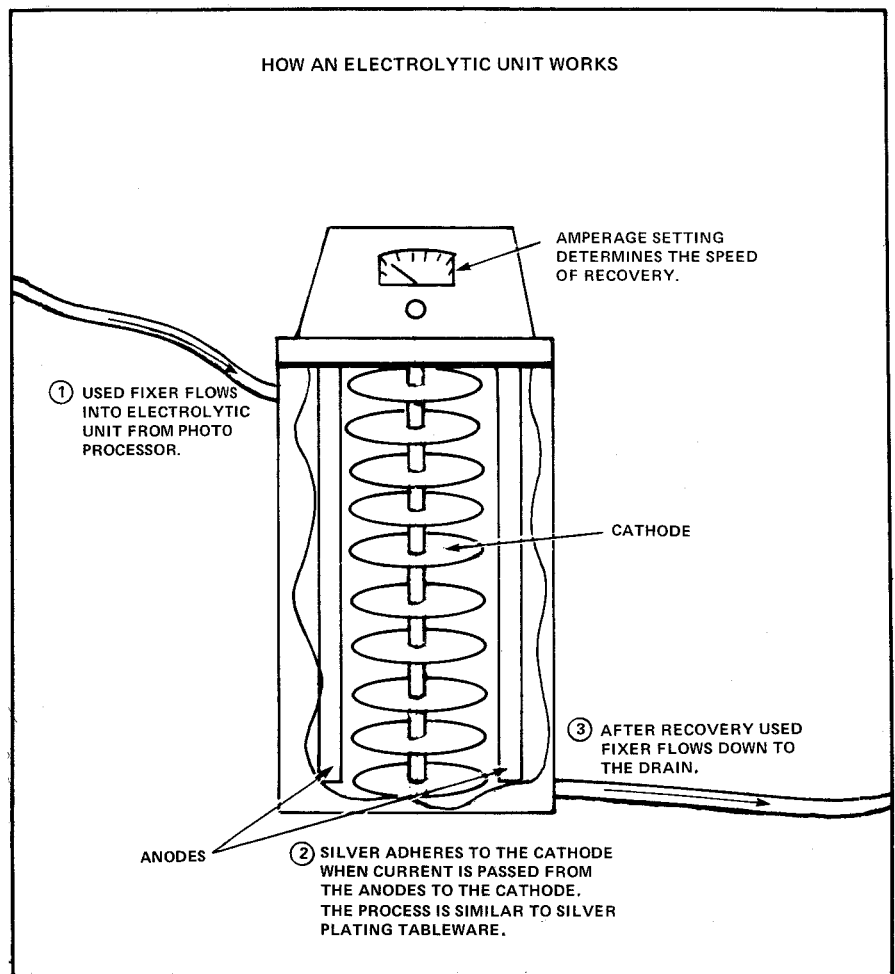


lons of fixer per month) usually recover silver with electrolytic plating because their large potential for recovered silver can easily offset the high start-up costs of electrolytic equipment. This method requires an initial expenditure of \$500 to \$700 for equipment, but the equipment will generally last 5 or more years and can return silver worth many times the initial cost. This method is like silver-plating tableware. During electrolytic plating, current is passed from an anode through silver-laden fixer to a cathode, causing silver to collect on the cathode. The silver is removed by hitting or flexing the cathode when the silver is about one-half inch thick.

Medium-sized labs (using between 40 and 70 gallons of fixer per month) generally use metallic replacement cartridges because they are inexpensive and easy to operate. Silver-laden fixer flows into a cartridge containing steel wool, and through a chemical reaction, the silver is replaced by iron from the steel wool. The silver settles to the bottom of the cartridge and the iron-rich solution flows out of the cartridge and down the drain. The sludge formed in the cartridge contains about 35 percent silver with the remainder being iron and photographic solution.

Although large photo labs saved money by recovering silver when it was only 90 cents an ounce, small labs (using less than 40 gallons per month) have only recently been able to save money from recovery because of the increased price of silver. Small labs can sell the used fixer or turn it over to larger labs for recovery. Interestingly, the used fixer is far more valuable than the cost of new fixer.

Some home photo enthusiasts are recovering silver by a metallic replacement method that doesn't use a cartridge. Powdered zinc is mixed into used fixer, the zinc displaces the silver, and silver settles to the bottom as a sludge. The effectiveness of this recovery method is tested by inserting a copper wire into the solution. Silver will readily adhere to the wire



as a black coating if large amounts remain in the solution. Additional zinc is added until the wire remains shiny, which indicates that full recovery has occurred. The excess fixer is siphoned off and the sludge is air dried to a powder largely composed of silver.

No matter which method is used, the recovered silver must be sent to a refiner for either sale or refining into 99.9 percent pure silver ingots.

Saving Money

Recovering silver from photographic wastes can be lucrative. After refining and transportation costs, a \$30 metallic replacement cartridge can return over \$300, and a \$700 electrolytic unit can return over \$13,000 from silver recovery in its 5-year life.

The Veterans Administration (VA) provides an example of the cost effectiveness of silver recovery on a large scale. VA recovers silver from x-ray

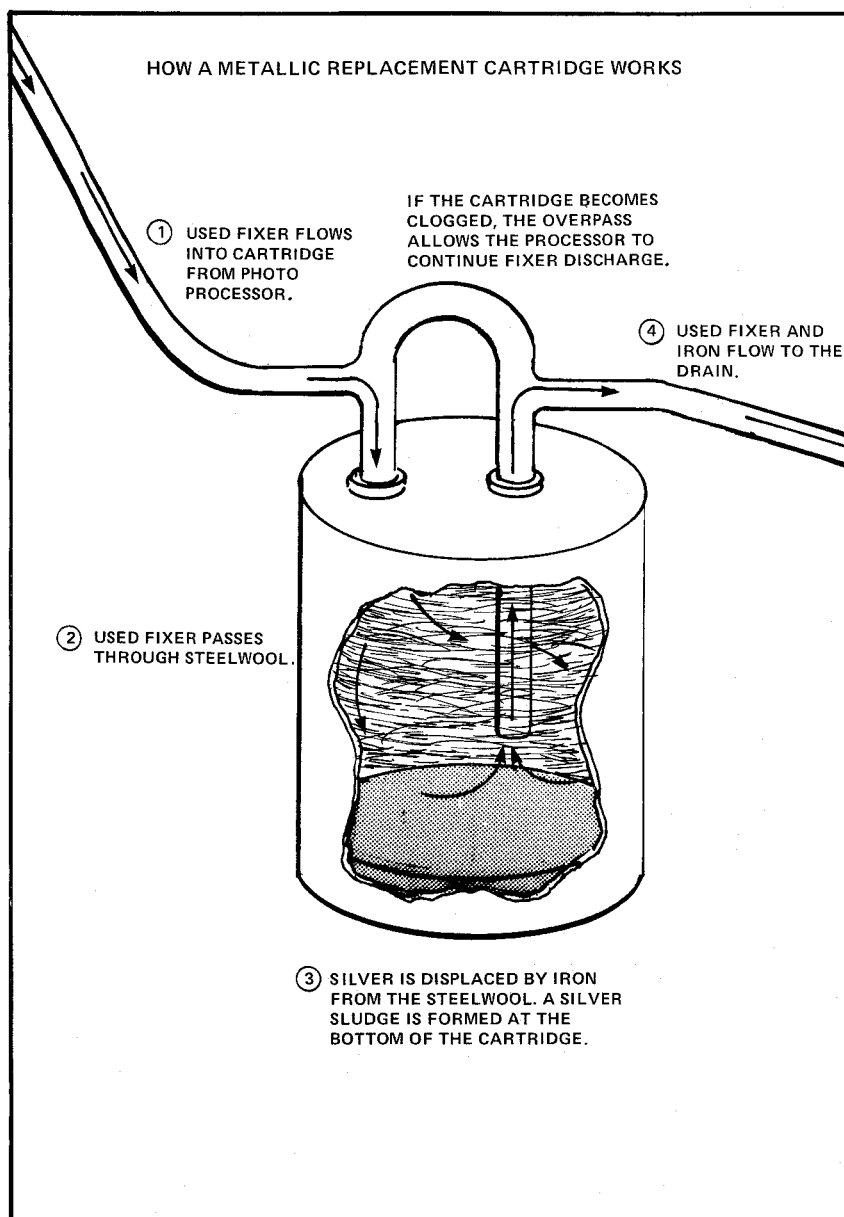
units in its 172 hospitals and 225 outpatient clinics. In 1980 the VA sold recovered silver for \$13,700,000 which only cost \$185,000 to recover, a return of \$74 for every \$1 spent.

Many innovative entrepreneurs have recovered silver from labs whose managers were not fully aware of the financial benefits. One firm offered "free" cleaning services for photo labs in return for recovered silver that was being poured down the drain. In a military lab, a resourceful sergeant recovered silver to operate a "free" coffee fund. In another lab, the recovery program financed the annual Christmas party. The Department of Defense has even recovered silver from lab drainage pipes in old hospitals since silver readily adheres to some metal surfaces. Ironically, lab personnel had used acid to clear pipes clogged by silver in some hospitals. In recent years, however, lab managers have become more sensitive to proper recovery, storage, and

disposal of silver-laden wastes because of the increased value of silver.

Recovering Silver in the Future

Silver recovery from photographic wastes will become increasingly important as new sources diminish and prices increase. The price of silver has been volatile in the last few years, reaching a high of over \$50 an ounce, then falling to \$9 an ounce in August 1981. However, the current price is still twice the 1977 price and will likely increase in the future. The current plan to sell 100 million ounces of silver from the strategic stockpile, as well as improved political and economic stability, are largely responsible for the current low price. Silver, like gold and platinum, has been a traditional store for value, and silver's current low price in relation to these other precious metals will likely not continue. Indeed, despite record prices for silver, the amount supplied by mining decreases each year because of diminishing sources. The long-range demand for silver in photography will likely increase because suitable substitutes for silver are not available. With increased prices, photo lab managers and home developers will place more emphasis on recovery to save money.



¹"Additional Precious Metals Can Be Recovered" (LCD-77-228, Dec. 28, 1977).

²"Civil Agencies Should Save Millions By Recovering Silver From Photographic Wastes" (PLRD-81-48, July 31, 1981).



Jane E. Altenhofen

Ms. Altenhofen is a management analyst with the Financial Institutions and General Government Activities Group in the General Government Division. She joined GAO in 1974 in the Kansas City regional office and was assigned for 4 years to the Far East Branch in Honolulu, Hawaii. She has a B.A. degree cum laude in accounting from Wichita State University in Kansas. She is currently pursuing a master's degree in public administration at American University.

The Birth of the "Banking Group": GAO's Mandate To Audit the Bank Regulatory Agencies

Americans have demanded that the Congress establish administrative agencies to meet the needs of a complex society. As these agencies increase in number and size, Americans have become uncomfortable with the great amount of regulatory power they have without direct accountability to the public. People must rely on the Congress to exercise control over the regulatory agencies and will often influence the Congress to take a more active role. Periodically various industries and agencies face intensified scrutiny, particularly when our economy is in a depression, recession, or recovery. The banking industry is at the very core of the economic well-being of our economy. Currently the banking industry is experiencing a turbulent period. This is causing the Congress to take a closer look at how the bank regulators operate. This article will discuss the changing role of the Federal Government in the banking industry and how GAO's mandate developed.

The Banking Industry

The U.S. banking system was nearly destroyed when over 9,000 banks closed their doors during the Great Depression. To stabilize the banking industry, the Congress passed the Banking Act of 1933 establishing the Federal Deposit Insurance Corporation (FDIC). The Congress believed that if they insured bank deposits, individuals would be assured that banks were safe and sound. This insurance would eliminate a major cause of instability in the Nation's money supply.

A half century later, federal deposit insurance is considered one of the most important structural changes in the banking system and is generally regarded as one of the most success-

ful pieces of legislation ever passed. FDIC has fulfilled their mission and is providing stability to the financial industry. The Congress provided the FDIC the authority to liquidate failed banks and weaker institutions. After closing a large number of banks in the initial years, the number of bank failures decreased to an average of five per year. Whenever possible, FDIC arranged for other institutions to purchase the assets and assume the liabilities of failed banks which caused in effect 100 percent insurance for most liabilities. Overall, 99.9 percent of all accounts in insured banks have been recovered by the depositors. Usually the assuming bank reopened at the failed bank within a few working days, minimizing the disruption to the communities.

Banks are one of the most regulated industries in the United States. A bank receives close supervision if problems are identified. For banks in really critical condition, the regulatory agencies attempt to find new management or arrange a merger. The FDIC only liquidates a bank as a last resort. The Depression is still fresh in people's minds and the possibility still exists that the banking industry could have another disastrous run on banks.

Agencies Not Subject to GAO Review

During the hearings on these bank failures, the Congress realized that they did not have sufficient oversight over the bank regulatory agencies. Some of these agencies are the Office of the Comptroller of the Currency (OCC), the Federal Reserve System (FRS), and the FDIC. These agencies do not receive appropriated funds and therefore are not subject to the

traditional controls exercised by the Office of Management and Budget and the appropriation process. These agencies get their income from fees paid by operating institutions or interest income earned from mandatory reserves. The Congress exercises control through GAO. But GAO did not have audit authority over OCC, FRS, and FDIC because they did not operate from Federal funds. Thus, the Congress had little control over the banking regulatory agencies.

The Federal Deposit Insurance Act was separated from the Banking Act in 1950. The act authorized GAO to audit the FDIC, but the scope of the audits was long disputed. FDIC said GAO could only audit financial records to determine whether the financial statements were fairly presented. The law did not authorize GAO to review bank examination activities and records. GAO maintained that it could not satisfactorily audit the accounts, financial transactions, and financial statements without having access to such records. Nor could GAO review the policies of the agencies without full access to these records.

Development of GAO's Audit Authority

Several congressional committees were concerned over large bank failures and requested GAO to study the bank regulatory agencies. In light of congressional interest, the bank regulatory agencies agreed in 1976 to allow GAO to conduct a review and evaluate the results of their programs and activities. The GAO report "Federal Supervision of State and National Banks" (GGD-77-1, Jan. 31, 1977), focused on the bank examination functions and measures taken to correct bank problems by those agencies. GAO reiterated its opinion that had been expressed before; GAO needed legislative authority to review the operations of the bank regulatory

agencies.

In January 1977, Benjamin Rosenthal, Chairman of the House Subcommittee on Commerce, Consumer Affairs, introduced H.R. 2176, a bill that proposed GAO be authorized to conduct reviews of FDIC, FRS, and OCC. After an extensive review in committee hearings and in the Congress, this bill was finally signed a year and a half later. This lengthy debate reflected the highly sensitive and political nature of the changing environment for bank regulators.

Opposition by Agencies

In March 1977, committee hearings addressed some very complex issues including separation of powers, congressional oversight, accountability, and access to private-industry records. Despite the lack of congressional oversight, the banking regulatory agencies continued to express their opposition. The FRS argued that it was strictly a nonpartisan organization whose functions were meant to be wholly divorced from politics. The FRS felt that this proposed banking oversight legislation would compromise FRS' ability to render objective, independent judgments on the course of monetary policy. The FRS also believed that the GAO efforts would be an expensive duplication of its internal control efforts. Committee members expressed their opposition to the FRS position several times. One member summed up the committee's opinion in the following remark:

You are a Federal agency and I, as a Member of Congress, have to tell my constituents, as I will, that I have no control.

Even though the committee tried to revise the bill to obtain FRS support, it became apparent the FRS would not support a bill in any fashion. GAO continued to maintain its position that legislation was needed authorizing audits of the Federal bank regula-

tory agencies, and this legislation was long overdue.

Limits on GAO

The FDIC, OCC, and the American Banker's Association (ABA) suggested that some amendments be made to the legislation. The ABA, FDIC, and FRS expressed their concern about Government access to sensitive records belonging to private industry. These concerns were the two most important provisions in the amendments. The first provision stipulated that GAO could *not* conduct separate onsite examinations of open insured banks to evaluate the accuracy of factual findings in examining reports. The second provision stated that GAO could *not* identify any bank customers, any bank, or provide details that could lead to a bank or a bank customer.

The House report stated that, although the operations of the regulatory agencies were governed by Federal laws and that operations inadequacies and regulatory failures had been documented time and again, there was inadequate or no authority for regular audits. GAO could be a valuable resource in guaranteeing the legality and propriety of expenditures and effectiveness of these Government programs. Some Members were concerned, however, that the controversy surrounding Bert Lance's banking practices was resulting in a "do something" approach. On the contrary, the House did not come to a resolution at this time.

When the House debated the bill again, three amendments were offered, two of which were refinements of clauses already in the bill. One amendment included in the authorized legislation was quite significant. GAO auditors were already prohibited from disclosing confidential material and information in an unauthorized manner by the general Federal confidentiality statute. This amendment extended the criminal provisions set

forth in title 18 U.S.C., section 1906, which states in part, "*Whoever, being an examiner, public or private, or a General Accounting Office employee with access to bank examination report information, discloses the names of borrowers or the collateral for loans to other than the proper officers of such bank shall be fined not more than \$5,000 or imprisoned not more than one year or both.*" The Senate intended this amendment would protect the privacy of individuals and banks without unduly burdening congressional committees in their oversight of Federal banking agencies.

GAO's Mandate

The House disagreed with the final amendment added by the Senate, but since enactment was vital they approved the revised bill in June 1978. The President signed the Federal Banking Agency Audit Act into law on July 21, 1978. The legislation provided GAO authority to audit the Federal Reserve Board, all Federal Reserve Banks, and their branches and facilities, the Federal Deposit Insurance Corporation, and the Office of the Comptroller of the Currency. The bill stated that GAO could *not* audit foreign central banks, foreign governments, and nonprivate international financing organizations, or monetary policy matters. Also GAO could *not* conduct onsite examinations of open insured banks or bank holding companies without the written consent of the agency concerned; and could *not* disclose information that would identify a specific customer of an open or closed bank or bank holding company, or identify a specific open bank or open bank holding company.

Current Review Efforts

GAO conducted the first review in 1976 of the bank regulatory agencies using a special task force composed

of staff from several divisions. The Federal Oversight of Financial Institutions Group was established within the General Government Division in response to the legislation. Twenty-four positions were authorized to establish permanent sites at OCC, FRS, and FDIC. Reviews of the Federal Home Loan Bank Board and the National Credit Union Administration are also conducted from these sites. These agencies regulate savings and loan associations and credit unions which together with banks are primary components of the financial industry. The agencies also *do not* receive appropriated funds because their income is obtained from operating institutions.

The Financial Institutions Group has produced a variety of reports addressing bank examinations, agency internal audits, and international banking. A total of 58 staff years, including time from other divisions and regional offices, is devoted to this issue area annually. Currently, national attention is once again being focused on economic issues.

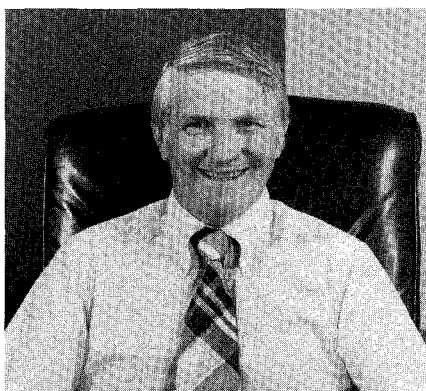
Currently GGD is reviewing how the regulatory agencies liquidate failed financial institutions. Over 88 percent of nearly 41,000 financial institutions are federally insured. Concurrently, financial institutions are becoming larger, they are becoming more complex, and more are being liquidated. The regulatory agencies requested that the Congress pass legislation to handle problem institutions. This review will inform the Congress how efficiently failed institutions are liquidated under current policies and procedures.

A survey is being conducted on problems in the savings and loan industry. There is general agreement that the thrift industry is particularly devastated by the economic conditions. However, there is no consensus on the severity of the problems or what actions the Congress and the Federal regulators should take, if any, to ease the situation. This survey will develop and review issues that should

result in regulatory or legislative changes.

Another survey is planned to explore the impact of investment banking restrictions imposed by the Banking Act of 1933—popularly known as the Glass-Steagall Act. This act separated commercial banking activities from investment banking activities to ensure depositor funds were safe from any potential abuses or questionable security transactions. These restrictions are seen as anti-competitive. With the renewed emphasis on the Nation's need for vigorous and efficient capital markets, the survey objectives are to understand the current commercial bank involvement in the equity market and to identify the possible impact of proposed changes in this involvement.

The evolution of GAO's audit authority over the banking regulatory agencies illustrates how the role of the U.S. Government in private industry can change within a relatively short time span. Congressional oversight, political independence, and public accountability take on different values in response to political and economic changes.



J. Dexter Peach

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Trends in Federal Regulation of the Energy Industry

In today's dynamic political environment, no industry—certainly not the energy industry—can afford to ignore the current happenings in Washington, D.C. Strong leadership by a new administration with majority support in the Senate and, at least on some issues, a working majority in the House of Representatives, is leading to major changes in the roles of the Federal Government in our society. Some of these changes are easily recognized; others are not so obvious. For example, press coverage has assured that all Americans are aware of the unprecedented budget and tax cuts recently enacted. There is less awareness, however, of the need for future budget cuts to accommodate the size and phasing-in of the tax cuts. And there is even less awareness of the effect of the present and future budget cuts, and other changes in Federal roles and activities on specific programs, geographic areas, and industries.

This article addresses recent and anticipated changes in the Federal regulatory scheme that affect the energy industry and possible outcomes of administration and congressional initiatives.

Trends in Federal Regulation

Since 1973 Federal involvement in energy regulation has increased dramatically. For example, the electric utility industry is now required to report to a total of 50 Federal agen-

cies, commissions, or offices. In a March 1981 report, "The Effects of Regulation on the Electric Utility Industry," GAO examined four utilities to determine their costs for complying with various State and Federal mandates. Just these four utilities reported actual expenditures to date and estimated future costs exceeding \$1.4 billion. Table 1 provides a breakdown of the actual capital expenditures by the utilities to achieve four categories of regulatory goals.

A wide range of views exists on the extent and need for energy regulation. Reexamination of the multitude of regulatory requirements is underway in the Congress, the administration, the States, and the industry. This reexamination will focus on

- the economic effects of Government regulations,
- overlap and duplication of regulatory requirements, and
- the cost/benefits of alternative methods of achieving environmental and economic goals.

It is too early to hypothesize on the outcome of the reexamination process. As one administration official said, these issues can turn into a "philosophical test of wills instead of a scientific or economic dispute." Certainly the challenge involved for all parties—the administration, the Congress, the industry, and the public—is not to let that happen.

The Reagan Administration

The new administration's regula-

TABLE 1

CAPITAL COSTS FOR REGULATORY COMPLIANCE (MILLIONS)

Protection of the Environment	\$531.1
Protection of the Public Health and Safety	111.9
Monitoring of Financial and Technical Operations	7.9
Protection of Worker Health and Safety6
Total	\$651.5

tory policies represent a significant shift in Federal energy policies and are based on three basic premises. First, the administration believes principal reliance should be placed on private market forces in achieving energy goals. Specific reference is made to oil and gas deregulation as providing sufficient incentive for private sector actions in fossil fuel research and development, synthetic fuels, conservation, and solar alternatives. Second, consistent with the assumption about private market forces, when additional incentives are needed, particularly for conservation and renewable programs, the best way to provide them is seen as tax incentives. Third, Federal regulations should be deemphasized or eliminated as a method to change patterns of energy production and use. This view extends not only to oil and gas price regulation, but also to regulations dealing with energy efficiency in buildings and appliances.

The Reagan Administration's primary concern about regulations is to assure that they are cost effective and that their benefits outweigh their costs. According to the recently issued National Energy Plan (Part III),¹ decisions about particular regulations will be based on the principles of limiting Federal involvement, increasing agency accountability for regulatory actions, putting greater emphasis on cost effectiveness in setting regulatory requirements, and generally reducing regulatory burdens on the private sector.

Early evidence shows that the administration is using several techniques to promote regulatory reform: writing new and rewriting existing regulations to more fully take into account their costs and benefits, changing existing legislation, and reducing budgets for regulatory agencies and activities. These techniques are discussed in the following sections.

Cost Benefit

The cornerstone of the Reagan Ad-

ministration's regulatory reform program is cost/benefit analysis. On February 17, 1981, Executive Order 12291 was issued requiring that a "regulatory impact analysis" be done for all major new and existing regulations. These analyses must be submitted to the Director of the Office of Management and Budget for review of their effectiveness in minimizing the regulatory burden prior to approval of any final regulation. The thrust of the executive order is to assure that regulatory action does not occur unless sufficient information is available to determine that the potential benefits to society outweigh costs and that the most cost-effective regulatory alternative is chosen.

While the requirements of the executive order seem straightforward, cost/benefit analysis is not. Much has already been made of the difficulty of quantifying the benefits of regulations. And the cost side of the equation can also present problems. For example, a recent EMD internal study looking into the costs of complying with environmental, health, and safety regulations in various smelting industries showed three different ways of defining costs:

- *Verifiable* compliance costs for which there are no offsetting benefits.
- *Net* costs of compliance after known benefits and offsets, such as the value of by-products, have been deducted from compliance costs.
- *Claimed* compliance costs that contain benefits and offsets, such as improved processing, which cannot be completely quantified.

In computing a cost/benefit analysis, it is not only necessary to identify initial regulatory costs but also to identify cost offsets and production benefits achieved from compliance before a final number is developed. If one cannot verify regulatory costs, the cost component of the analysis also becomes more suspect, and the decisionmaker must pay careful attention to the assumptions used in the analysis methodology. What all this means, of course, is that the basic

truth remains: cost/benefit analyses are just another decisionmaking tool which must be used with care.

The cost/benefit strategy has also run into difficulty in the recent Supreme Court decision which rejected the application of cost/benefit analysis to the Occupational Health and Safety Administration (OSHA) cotton dust standards. The administration singled out the cotton dust standards in March 1981 when it announced that it intended to review and possibly relax all Federal standards limiting employee exposure to toxic substances. The head of OSHA indicated at that time the cost/benefit analysis was a key tool in that review. But the Court ruled that the health of workers outweighs "all other considerations" (emphasis added) and that Congress intended that compliance be "part of the cost of doing business."² While the ruling applies only to OSHA, it does highlight the potential for conflict with other legislation.

Not to be outdone by the administration and the courts, in April 1981, 74 Senators introduced Senate Bill 1080. The bill would "...require Federal agencies to analyze the effects of rules, to improve their effectiveness and to decrease their compliance costs; to provide for periodic review of regulations..."³ While the bill varies from the executive order, the cost/benefit emphasis is essentially the same. Hearings were held by the Senate Committee on Governmental Affairs on June 23, 1981, with GAO testifying in support of the legislation.⁴ The committee approved the bill July 14. In the House a companion bill was approved by the House Energy and Commerce Subcommittee and referred to the Judiciary Subcommittee.

Changes in Legislation

Some of the administration's proposals for regulatory reform through changes in current legislation may have also run into trouble. Leaks of the administration's working drafts

on revisions to the Clean Air Act caused a broadside of congressional criticism including a characterization as a "blueprint for destruction of our clean air laws."⁵ Subsequently, in early August the administration released its position paper on the act establishing nine points which need to be taken into account in revising the act. As a political ploy, the administration is in effect telling the Congress to handle the specifics of rewriting the legislation within the parameters of these nine general principles. The nine principles contain important provisions for the energy industry:

- Parks and wilderness areas should remain protected by significant deterioration rules, but industries should be allowed to bring pollution into other areas whose air is cleaner than required as long as they don't push it above national ceilings.
- Requirements that new coal electric-generating plants achieve a particular percentage reduction in pollution from their smoke should be revised to allow uniform standards for emissions from all stacks.
- Research on acid rain should increase.

Surprisingly, the administration has dropped its proposed cost/benefit requirement for health standards adopted under the act. It is uncertain when the Congress will take final action on any reauthorization bill. A 1-year extension of the existing act is a possibility.

Pressure is also building for a complete reevaluation of our whole approach to nuclear regulation. Continuing delays in the licensing process have caused the new commission chairman, the Congress, and the President's Nuclear Safety Oversight Committee to question whether it is possible for the Nuclear Regulatory Commission (NRC) to do the detailed design review work historically demanded with the staff and funding available. Numerous congressional committees are looking at ways to expedite the licensing process, and at

GAO we are in the early stages of completing a broad review of NRC's approach to nuclear regulation. According to Chairman Palladino, NRC needs "a way of determining what is important and what isn't."⁶

Budget Cuts

The third technique being used by the administration to deemphasize regulation is cutting the budgets of regulatory agencies, including DOE's Economic Regulatory Administration (ERA), the Environmental Protection Agency (EPA), and the Council on Environmental Quality (CEQ). Table 2 shows the actual 1980 expenditures, estimated 1981 expenditures, the 1982 Reagan budget request, the 1982 Reconciliation Bill amount, and the 1982 House Appropriations Committee recommendation for the three agencies.

The 1982 budget request submitted by the Reagan Administration in February 1981 for ERA is only 18.8 percent of the amount authorized for fiscal year 1980. In the February budget submission, DOE indicated the cuts reflect "a shift towards reducing burdensome Federal regulations to allow rational decision-making based on market conditions."⁷ Consistent with this philosophy, the administration's budget proposal terminates activities to implement the Fuel Use Act and the Public Utilities Regulatory Policies Act (PURPA). The House Appropriations Committee and the Budget Reconciliation Bill both restore some funding in these areas, but not to prior levels.

The budget cuts will leave some regulatory agencies, such as EPA and CEQ, with only minimal staff to fulfill their regulatory role, leaving some activities necessarily undone. For example, CEQ staff years were cut from 49 to 16 by the administration with the House Appropriations Committee subsequently limiting CEQ's activities to those specifically required by statute.

GAO Involvement in the Regulatory Area

Over the years, the Energy and Minerals Division of GAO has reviewed regulatory issues from four perspectives:

- The effectiveness of Federal regulatory programs in achieving their statutory goals.
- Costs and other impacts of Federal regulation.
- Alternative ways of achieving Federal regulatory goals.
- The basis for establishing Federal goals in regulating industry.

In recent months we have issued reports and congressional testimony on several aspects of Federal regulation of the energy industry, including the costs associated with utility regulation, oil and gas deregulation, the Fuel Use Act, title I of PURPA, the development of Federal energy resources, and nuclear regulation. In these reports we have identified areas where Federal regulations have created problems for timely resource development. An example is the development of Federal coal reserves. Burdensome and unnecessarily complex leasing regulations have been identified as a problem in exploiting these plentiful resources. In other energy areas, such as the Fuel Use Act, EMD staff identified regulations that, because of shifting market conditions, are no longer needed. These actions are consistent with administration and congressional concerns. In many instances GAO has recommended that Federal agencies carefully consider the cost effectiveness of their regulations and their cost-benefit ratio before imposing additional requirements on industry.

A consensus seems to have been reached by the Congress and administration on the need for regulatory reform. This reform will place more emphasis on cost/benefit analyses, cost-effectiveness tests, and determining the basic need for Federal in-

Table 2
REGULATORY AGENCY BUDGET FIGURES
(THOUSANDS)

	<u>FY 80 Actual</u>	<u>FY 81 Estimate</u>	<u>FY 82 Request</u>	<u>FY 82 House Appropriations Committee</u>	<u>FY 82 Reconcil- iation</u>
Economic Regulatory Administration					
Fuels conversion	25,938	23,738	—	5,000	N/A
Utility programs	29,129	17,460	5,000	7,500	N/A
Compliance	70,340	67,336	11,900	45,100	N/A
Petroleum operations	13,063	13,235	3,600	3,600	N/A
Office of Hearings and Appeals	5,942	7,922	4,500	5,500	N/A
Emergency preparedness	3,910	1,000	2,000	2,000	12,200
Program administration	2,633	3,509	1,500	1,500	N/A
Total	<u>150,955</u>	<u>134,200</u>	<u>28,500</u>	<u>^a70,200</u>	<u>^a82,800</u>
Environmental Protection Agency	4,669	4,694	1,419	1,430	N/A
Council on Environmental Quality	2,982	3,345	1,419	1,430	N/A

Note a: Includes \$38,200,000 in deferred FY 1981 funding.

volvement in industry regulation. The thrust of this reform will be to limit Federal involvement and assure that Federal regulations which are adopted are cost-effective. Specifically how all this will translate into future actions is still unknown. Future regulatory decisions will, by necessity, be based on less-than-adequate data, with the

result of data inadequacies related to both costs and benefits. As the regulatory role of the Federal Government changes in response to administration and congressional initiative, GAO must be prepared to supply missing data in some instances and be able to evaluate the effects of these initiatives to be able to recommend further

actions to enhance our Federal regulatory posture. In an era emphasizing deregulation, we will be required to look not only at reducing the Federal regulatory burden but also at areas where increased Federal involvement may be justified to assure that national concerns are met and regulatory legislation properly carried out.

¹"Securing America's Energy Future." The National Energy Policy Plan, A Report to the Congress required by Title VIII of the Department of Energy Organization Act (Public Law 95-91). July 1981, p. 15.

²*American Texture Manufacturers Institute vs. Auchter*. Justice William Brennan writing, June 17, 1981.

³Regulatory Reform Act, Senate Bill 1080, introduced by Mr. Laxalt on Apr. 30, 1981.

⁴Statement of Milton J. Socolar, Acting Comptroller General of the United States, before the Committee on Governmental Affairs, United States Senate, on the Regulatory Reform Act (S. 1080), June 23, 1981.

⁵Representative Henry A. Waxman, Chair-

man, House Health and Environment Subcommittee. Statement to the Press, June 19, 1981.

⁶*National Journal*, Aug. 1, 1981, p. 1379.

⁷Department of Energy FY 1982 Congressional Budget Request. February 1981, p. 116.



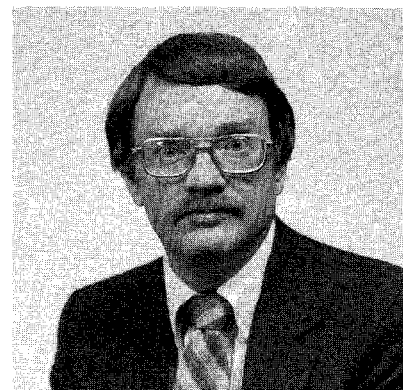
Carol Blimline

Dr. Blimline, the former manager of GAO's Counseling and Career Development Branch, now serves as a consultant to OOHd. She holds psychology degrees from Gettysburg College and Indiana University, with a Ph.D. in psychology from the University of Maryland. Dr. Blimline is a licensed psychologist (D.C.) and is an adjunct professor at George Washington University and the University of Maryland. She is a member of the American Psychological Association, the Maryland Psychological Association, the American Personnel and Guidance Association, and the National Association of Women Deans, Administrators and Counselors. Dr. Blimline received a Certificate of Merit from GAO's Personnel office in 1980 and the OOHd Director's Award in 1981.



Marlene Thorn

Dr. Thorn, formerly a counseling psychologist at GAO, now serves as the Director of Training and Development with the Corporation for Public Broadcasting. She received her bachelor's and master's degrees from the University of Florida and holds a Ph.D. in human development and counseling from the University of Maryland. Dr. Thorn is a member of the American Psychological Association, the American Personnel and Guidance Association, the American Society for Training and Development, and American Women in Radio. She is listed in *Outstanding Young Women of America*, 1979, and *World's Who's Who of Women*, 1981.



James Wilcox

Mr. Wilcox is the Administrator of the Advisory Referral and Counseling Branch, International Communication Agency. Prior to this position he served as a counseling psychologist with GAO. A recipient of degrees in psychology and counseling from George Washington University, Mr. Wilcox is currently finishing his doctoral dissertation in counseling there and is teaching courses in human development and counseling. Mr. Wilcox is a member of the Association of Humanistic Psychology, the American Personnel and Guidance Association, the Association of Employment Counselors, and is president of the Washington chapter of the Association of Labor-Management Administrators and Consultants on Alcoholism, Inc. He has received a GAO Outstanding Performance Award in addition to Certificates of Merit in 1980 and 1981.



Janet Wilson

Ms. Wilson joined GAO in June 1979 as a counseling psychologist. Prior to her work at GAO, she designed, developed, and implemented a system of program evaluation for all major in-country and overseas activities of the International Training Division of the U.S. Department of Agriculture. Ms. Wilson received a B.A. degree from the College of William and Mary, an M.Ed. degree from American University, and is currently a Ph.D. candidate in counseling at the Catholic University of America.

Counseling in a Government Agency: Interventions for Employees and Supervisors

The workplace is a legitimate and necessary arena in which mental health professionals can affect the quality of life. Since a substantial amount of individual time and commitment is spent on the job, the work experience can be a major source of personal stress or personal satisfaction. In addition, the coping skills and strategies developed at one time of life may not be appropriate for another time and place in life. The work environment places new demands on people who must learn alternate, more effective ways of coping.

As noted by Osipow (1979) and Gavin (1979), there are many forces influencing the current interest in occupational mental health: the popular press, advocacy by management and labor unions, legislative provisions, and a societal shift from a pure work ethic to a career/life planning emphasis. In addition, several studies relate various mental health issues to work-related concerns. For instance, many studies have shown the relationship between work and stress (Burke, 1976; McLean, 1974); other researchers have looked at the enormous cost of industry and business connected with alcoholism (Knox & Burke, 1975). A few researchers address organizational variables related to mental health factors (Morse, 1975) and others look at the relationship of career development issues to the work environment (Gould, 1978).

The writers agree that organizations have a legitimate interest in the growth, development, and best use of their human resources. The ways in which individual organizational careers are managed influence the long-range success for both the employee and the organization, the two being mutually dependent (Schein, 1978). Furthermore, the development of people is linked with the development of organizations (McAlindon, 1977). The more an organization can offer the opportunity for people to grow, achieve, and contribute, the more an organization can tap its

human resource potential effectively and accomplish its goals.

There are many ways an organization can help its employees realize their potential and begin to grow. One way is through developmental workshops offered during the work-life of an individual. Another is by addressing the career development needs of employees in a way which provides for individual assistance. A third way is providing individual counseling and crises intervention for troubled employees. The Counseling and Career Development Branch of the Office of Organization and Human Development (OOHD) has used all three interventions and has tailored their use to employees at all levels and at various adult development stages.

The population at GAO is as diverse as any large business or industry. GAO employs approximately 5,300 people; 3,300 work in Washington, D.C., headquarters, and roughly 2,000 work in 15 regions in the United States and other areas worldwide. GAO employees range from GS-1 clerks to Senior Executive Service administrators and include approximately 1,800 women and 3,500 men. Only a broad-based, comprehensive counseling and career development program can be effective in meeting the organizational and individual needs in such a complex environment. Following is a description of our organization's efforts to respond to employee needs while still undertaking our mission in a competent and efficient manner.

Developmental Workshops Address Employee Concerns

Through the developmental workshops offered by OOHD's Counseling and Career Development Branch, employees have an opportunity to enhance their potential and develop-

ment both on the job and in their lives outside work. These workshops, which are offered on an as-needed basis to divisions and regional offices, address a broad range of developmental issues:

- Stress Management Workshop
- Positive Communications Workshop
- Problem Recognition and Referral Workshop
- Career Planning Workshop for Employees
- Career Development Orientation for Managers
- Retirement Planning Workshop

The rationales for these workshops are as varied as their titles. One developmental intervention to help employees deal with the stress of everyday living and working is the Stress Management Workshop. Environmental stress and strong negative emotions, such as anxiety, depression, and anger, are closely associated with the presence of emotional disorder (Miner, et al., 1976). Many studies have dealt with the interacting relationship among stress, negative emotion, and various aspects of ineffective performance.

Anger, fear, or lack of self-confidence, all of which can also cause stress, may be the result of an inability or a fear to communicate needs in an assertive, positive manner. The Positive Communication Workshop is designed to assist employees in positively asserting themselves in interpersonal situations by learning and practicing the skills involved in active listening, positive confronting, and conflict resolution.

Another workshop that helps identify individuals with problems affecting personal and job-related performance is the Problem Recognition and Referral Workshop. Here supervisors acquire the skills and knowledge needed to identify employees with personal problems that may be affecting their job performance. By having supervisors learn the indicators for problems and how to refer

employees for individual counseling, the employees are given an opportunity to explore sources of assistance, either on the job or through community referral. Employee problems may involve such areas as marriage and family difficulties, alcohol or drug problems, life-stage transitions, or career-related issues.

Developing Human Resources

In addition to individual employee concerns, organizations are taking an increasing interest in the development of overall human resources. According to Argyris (1969), an organization must perform certain core activities to be effective: adaptation, goal attainment, and integration of individuals into their work roles. The more effective the careers of its employees, the more effective the total organization will be. For the best use of human potential to occur, the organizational environment must be rich and permit individuals to search, choose, and integrate their careers. Argyris (1976) further states that organizations may find it useful to design experiences that give individuals every opportunity to significantly influence the definition of their goals, the paths to these goals, and the degree of challenge in these goals.

One way that OOH is implementing this process is through the Career Planning Workshop. This workshop assists individuals in personal development by stressing individual career planning. GAO recognizes the importance of matching individual career and personal needs with the organization's needs and goals, and for this to occur most effectively, the manager or supervisor, as a human resource manager, must have the knowledge and skills to enable the individual and organizational match to occur. Career Development Orientation for Managers assists managers and supervisors in this responsibility.

The absence of meaningful work can be a major source of personal disturbance to individuals and their families (Moss-Kanter, 1977). People experience transitions throughout their lives, and a life change requires alteration in everyday patterns of behavior and thinking. This necessitates new information and new coping methods. In our society much of a person's identity is tied closely to work, and thus the transition to retirement is a major one. To help with this transition, GAO offers the Retirement Planning Workshop.

Harrison (1972) states that life and career planning interventions, such as the workshops developed and offered by GAO, are programs that allow individuals to examine attitudes and values about their functions and identities. Harrison suggests that an individual is more likely to seek internal and self-determined rewards after attending workshops which increase his or her sense of self worth, competence, and autonomy. Developmental workshops focusing on human developmental issues and needs have a place in the organization that sees the potential in effectively tapping its human resources.

Career Resource Center Provides Many Services

In response to the growing demand for careers to provide psychological success, personal fulfillment, and a viable balance between work and family life, many organizations have begun to offer a variety of career and life planning services which go beyond workshops. Such employee-oriented services include professional counseling, occupational interest testing, career information systems, and skills assessment centers. Organizational involvement in furthering the individual goals of employees through career planning activities can result in mutual organizational and individ-

ual benefits. The payoffs include increased productivity, improved job performance, reduced turnover, greater employee motivation, and personal satisfaction. (Miller, 1978; Schein, 1978; Walker & Gutteridge, 1979).

Faced with the challenge of providing effective career/life planning services to the GAO work force of 5,300 men and women at different life stages and career levels, the Counseling and Career Development staff developed a Career Resource Center composed of a series of self-managed career/life planning activities. The center serves a dual purpose. It enables the individual employee to develop and implement short- and long-range goals by working independently or by enlisting the help of a counselor or supervisor. The center is also intended as a tool to help managers assist in career development of staff.

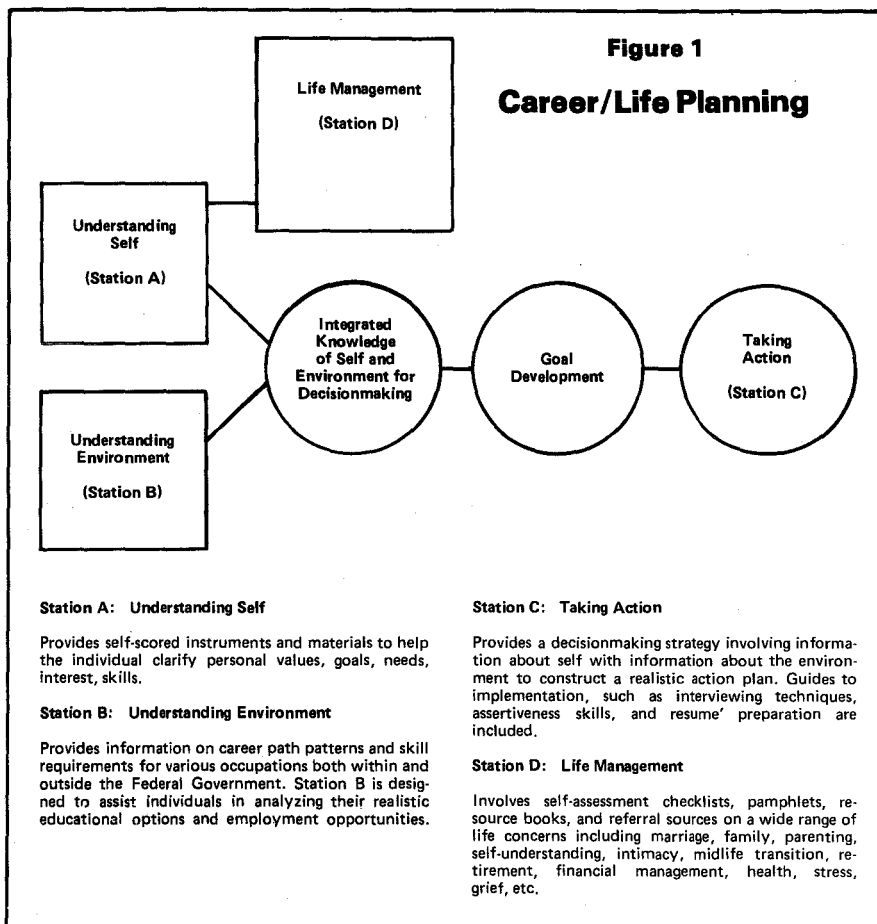
The Career Resource Center, established in February 1979, is available for use by all GAO employees in the Washington metropolitan area. The center's materials have been packaged for the 15 GAO regional offices throughout the country and are accompanied by an instructional manual for managers and supervisors who will be working as career planning facilitators.

The layout of the center includes four activity stations, each corresponding to one of the major phases of the career/life planning process. A diagram of the career/life planning process is presented in figure 1 showing CRC activity stations labeled A through D.

The GAO Resource Center was originally modeled from a similar user-oriented facility at the Goddard Space Flight Center and later modified and expanded by GAO psychologists to incorporate life-management components of career/life planning. The center is based on a holistic approach, addressing itself to all aspects of an employee life system and not simply to occupational concerns.

Although major business organiza-

Figure 1

Career/Life Planning

ments. The original program was established by Public Law 91-616, the Comprehensive Alcohol Abuse & Alcoholism Prevention Treatment & Rehabilitation Act of 1970, which gave each Federal Government organization the responsibility for maintaining appropriate prevention, treatment, and rehabilitation programs and services for alcoholism, alcohol abuse, and drug abuse among Federal civilian employees.

Since 1979 the CCD Branch's services have not only been expanded to include all social, psychological, and substance abuse problems but also career counseling and career development issues. This counseling approach offers a larger variety of services and should logically increase the effectiveness of the substance abuse portion of the counseling program.

The CCD Branch has counseled, referred, and consulted with GAO employees on problems and situations related to stress, alcohol and drug dependency, marriage, family, coworker and other interpersonal relationship conflicts, legal and financial concerns, retirement, career development, and many other life transitions and crises. The CCD staff also provides training, education, development, and other outreach programs on career, social, and mental health issues along with supervisory training and education in the identification of and assistance to employees with personal problems affecting the quality of work and worklife.

The rationale for an extensive counseling program came from several sources. A 1970 GAO report, "Substantial Cost Savings From Establishment of Alcoholism Programs for Federal Civilian Employees," estimated that alcohol abuse alone among Federal civilian employees costs the Federal Government from \$275 to \$550 million annually and that effective employee assistance programs for alcohol problems alone cut those costs in half. A 1977 GAO report, "Most Agency Programs For Em-

tions are now offering their employees a variety of career planning services, the effectiveness of these endeavors has rarely been measured. But one particular firm, Crocker Bank, has developed an extensive career counseling program that has brought results in measurable savings of \$1.6 million in 2 years. These results include reduced turnover, improved performance, and increased promotability (Jelinek, 1978).

The GAO Career Resource Center received a brief pilot evaluation during its first 2 months of operation. A random sample of 21 GAO employees completed the center's work materials and received two sessions with a CCD psychologist to evaluate and discuss results. Because of the brevity of the pilot, most participants were unable to complete all the phases of the career planning process. Nevertheless, all who participated indicated that they had gained from the experience. Mean ratings given by participants with respect to the overall effectiveness of the individual stations

ranged from 3.3 to 4.2 on a 5-point scale. Station C, "Taking Action," was awarded the highest effectiveness rating by participants. More rigorous efforts to assess the long-range value of offering career planning services to employees are still to be undertaken.

Skills learned through use of a career resource center may be applied to any life or career transition. Both the individual and the organization gain from career planning programs, particularly when organizational systems exist to support such programs.

Counseling for the Troubled Employee

In October 1976, the Comptroller General instituted GAO's Employee Assistance Program which offered all its employees counseling and referral assistance for the wide variety of personal problems experienced in our complex social and work environ-

employees with Alcohol-Related Problems Still Ineffective," recommended that agency officials consider establishing broad-based services since these proved to be the most effective alcohol and drug programs as well. Filipowicz (1979) cites a National Association for Mental Health finding that a \$17 billion annual productivity loss to U.S. business occurs due to emotional problems. Further, she advises that 85 percent of all industrial accidents are stress-induced. Thus, organizational counseling programs are not only humanistic endeavors but also cost-effective ones.

The CCD emphasis on training supervisors to recognize and refer troubled employees also has strong support. Uhlmann (1971) suggests that because supervisors see employees on a continuing basis, they are in excellent positions to identify persons who have or are developing personal problems. Supervisors can spot behavior changes, excessive leave usage, and deteriorating work performances. Further, supervisors have the administrative capability and responsibility to advise, direct, or even coerce employees to get professional assistance. Phillips and Older (1977) point out that employees with personal problems beget supervisors with personal problems. Anger, frustration, confusion, and ambivalence are frequent responses of bosses of the poorly functioning subordinate. Also, the supervisor may sympathize with the employee, and this "destructive compassion" prevents the supervisor from taking firm, helping action.

If a supervisor has a subordinate who is not able to perform satisfactorily, the supervisor can get assistance from the counseling program staff in dealing with the psychological and organizational barriers hindering problem identification and referral assistance. The intervention suggested for supervisors is fairly well outlined. If in normal supervision the supervisor notices that an employee has a personal problem, the supervisor can encourage the subordinate to seek

counseling. However, supervisors must keep in mind that many employees with severe problems such as alcoholism will not take the "friendly advice" to get help. But supervisors can take at least four important actions: 1) put the employee on notice that a work problem exists, 2) inform the employee of the counseling program services, 3) begin documentation of the work problem, and 4) give the employee a timeframe in which to improve the work problem.

If the troubled employee has not taken the initiative to deal with his or her personal problem, chances are the job situation will worsen. The most important action the supervisor can then take is to call the counseling office to discuss the situation and to get some ideas on proceeding to the next step—constructive intervention. Based on the documentation of the unsatisfactory job behavior, the supervisor confronts the employee and offers him or her a choice between appropriate disciplinary action or voluntarily discussing the situation with a counseling service staff member. If the employee accepts the referral to the counseling service, the disciplinary action can be deferred for a reasonable period in which the employee's job behavior can be reevaluated. This approach is extremely effective in getting people the help they need to return their job behavior to a satisfactory level. Eighty-five percent of those with alcohol problems and 90 percent of those with other personal problems have retained their jobs with GAO as a result of the constructive interaction process since the counseling program's inception. With employees' and supervisors' faith in the counseling program and with top management's support, constructive counseling interventions can occur.

CCD Services Are Unique

As this article suggests, the Coun-

selling and Career Development Branch has developed a comprehensive general counseling service for GAO employees. GAO's counseling service is unique among Federal agencies in that it combines both counseling and career development. This unique comprehensive service has led to many professional contacts for the CCD staff and has resulted in CCD psychologists serving as consultants to other similar programs in government, education, and private industry. CCD psychologists have also presented programs for the National Council on Alcoholism, the American Personnel and Guidance Association, the American Society for Training and Development, and the International Personnel Management Association. This professional recognition has been achieved in part by CCD's commitment to individual counseling and to an innovative program of outreach counseling.

During the past year, CCD services have expanded to provide many different outreach services ranging from career development workshops to lunchtime seminars to CCD briefings. The Career Resource Center has developed into a valuable tool for individual career development, and counseling and consultation activities have increased dramatically. Current monthly activity reports indicate that CCD psychologists are having approximately 180 individual counseling contacts a month and 100 consultation contacts a month. In addition, each aspect of CCD's program from individual counseling to the developmental workshops has been evaluated, improved, or revised on the basis of these evaluations and has been reevaluated where appropriate.

As Schein (1978) so aptly put it, long-range successes for the employee and the organization are mutually dependent. A healthy, concerned environment contributes to employee health, and healthy employees help foster a positive, productive environment. The Counsel-

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ing and Career Development Branch has attempted to add to both parts of this picture.



Frederick Gallegos

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The Need for a Better Trained EDP Auditor

Although the basic concepts of EDP auditing have been around since the 1960's (and several authorities will even say the 1950's), EDP auditing as a profession has come into its own in the 1970's. More and more frequently the want ads of most newspapers or even the business classified ads contain advertisements for EDP auditors, internal auditors with EDP audit experience, or accountants with EDP knowledge and qualifications. The demand for EDP auditors has grown quite rapidly over the last 4 to 6 years, especially with reported financial fiascos, such as equity funding, the Rifkin incident, the legal issues (such as the Foreign Corrupt Practices Act), and the pending Computer Security Protection Act. With the average dollar loss per crime or abuse running to about \$460,000 to \$780,000, private industry and government have realized that the computer is their soft underbelly. If they are shaking now, what about tomorrow? Who will the EDP auditor be? What training and credentials will he or she need?

Where Is EDP Auditing Going?

In general, we are in a technology evolution phase in the computer field. Many computer authorities say that during the 1980's and 1990's we will have to undergo a revolution in our way of thinking about and attacking EDP problems. The EDP auditor of today will be tomorrow's information systems auditor.

Today's EDP auditors, especially those with international organizations, are feeling the pinch of this future technology. Approaching the audits of distributed processing environments, data base architecture, networks, minicomputers, microcomputers, and processors are unlike the traditional installation reviews of yesterday. How does one approach an audit of today's advanced telecommunications, teleprocessing, distributed processing, OCR input, or microtechnology? Many auditors are struggling now to answer these questions and are attempting to find some explanatory method to approach a solution.

The future technology of the 1980's and 1990's points toward hardware and software advancements beyond our comprehension. The *Computer-world* magazine of December 31, 1979, presented a range of articles surveying the future. Even in retrospect, the issue cites, "The machines of the '70's become antiques of the '80's. They grow bigger, more powerful; we, in proportion, feel smaller. We question their limits—and ours." The information systems auditor of the 1980's and 1990's will test those limits in ways that we today do not think possible or achievable.

In short, the EDP auditing skills needed by the year 2000 may require extensive knowledge in

- telecommunications,
- teleprocessing,
- microcircuitry,
- firmware,
- embedded systems technology, and
- laws involving
 - privacy,
 - security and fraud,
 - interstate data transfer, and
 - international data transfer.

Telecommunications and Teleprocessing

Although some people may laugh, we are only a few years away from the first on-line, real-time financial information system. Developments in the fields of telecommunications and teleprocessing will shrink the communication barrier by a factor of 100 within the next 9 to 10 years. In recent discussions with several fellow EDP auditors in the banking industry, I was not surprised to hear that their organizations' ultimate goal is to have a real-time financial information system. In other words, if a transaction occurs in a California subsidiary, the transaction will immediately appear on the financial books of the New York holding company.

Telecommunications and teleprocessing involve a host of subtopics which the information systems auditor must be able to review adequately and capably. Examining the controls

in such systems requires a high level of technical expertise, and knowledge of telemetry transfer of data, cryptographics, and the security of telecommunications and teleprocessing will gain increasing importance.

Firmware, Microcircuitry, and Embedded Technology

Another area of technology's virtual explosion is in the new firmware, microcircuitry, and embedded technology that has recently entered the business community. Although such technology is not unusual in advanced weapons systems technology, its applicability to the business/information systems community is just now being felt. We are seeking an evolution of new systems technology that can be self-contained or shared in a distributed architecture. The orientation of such systems is toward a total integrated information system designed to tie information channels together.

Again, the challenges from these advancements are beginning to emerge. The information systems auditor must have the knowledge and skills to conduct audits or examinations of the firmware and microcircuitry and ensure that the information processing yields valid, reliable, and secure information for management decisionmaking. In an article in their recently published brochure, "Computer Auditing," Arthur Young & Company characterizes an audit in the year 2001 with the aid of embedded technology. Although they have stated that the article is fictitious, they indicate that many of the concepts discussed are realistic today with the available computer technology.

Legal Requirements

If you think the information systems auditor has his hands full with the two prior areas discussed, the legal requirements evolving over the next 20 years will have tremendous repercussions in the field. Again, one

must look at what is happening in European countries and consider their concerns for information privacy and security. Luxembourg, Austria, and West Germany see computerized data as a potential weapon, if in the wrong hands. Therefore, they have enacted strong laws to ensure that individual data and the access to the dissemination of information is controlled and protection guaranteed.

The Privacy Act of 1974, the Foreign Corrupt Practices Act of 1977, and the pending Federal Computer Security Protection Act are stepping-stones to more comprehensive legislation. The information systems auditor will need to understand these laws clearly and apply them in evaluations of automated systems.

Current Information Systems Auditor Training

The skills needed in developing a capable information systems auditor of the future are largely undefined at this time. Our society has approached this need in a fragmented order. Various professional societies, educational institutions, government agencies, and the "Big Eight" audit firms have tried to assess these skills, but their efforts have been largely fragmented and lacking in coordination and cohesiveness. Their results have been very good in some areas but weak in others.

Professional Societies

Among the professional societies which have contributed to the advancement and awareness of the EDP audit role in the organization are the American Institute of Certified Public Accountants, the Institute of Internal Auditors, the EDP Auditor's Association, and the EDP Auditor's Foundation for Education and Research.

On the examinations for certified data processor (CDP), certified internal auditor (CIA), certified management auditor (CMA), and certified public accountant (CPA), questions

about information systems auditing frequently appear to test the examinee's knowledge or understanding. The EDP Auditor's Foundation for Education and Research sponsors the certified information systems auditor (CISA) program, which is designed to signify a level of competency in the field of information systems auditor.

It should be recognized that GAO has contributed in many ways to the programs cited above in the information systems auditing area.

Educational Institutions

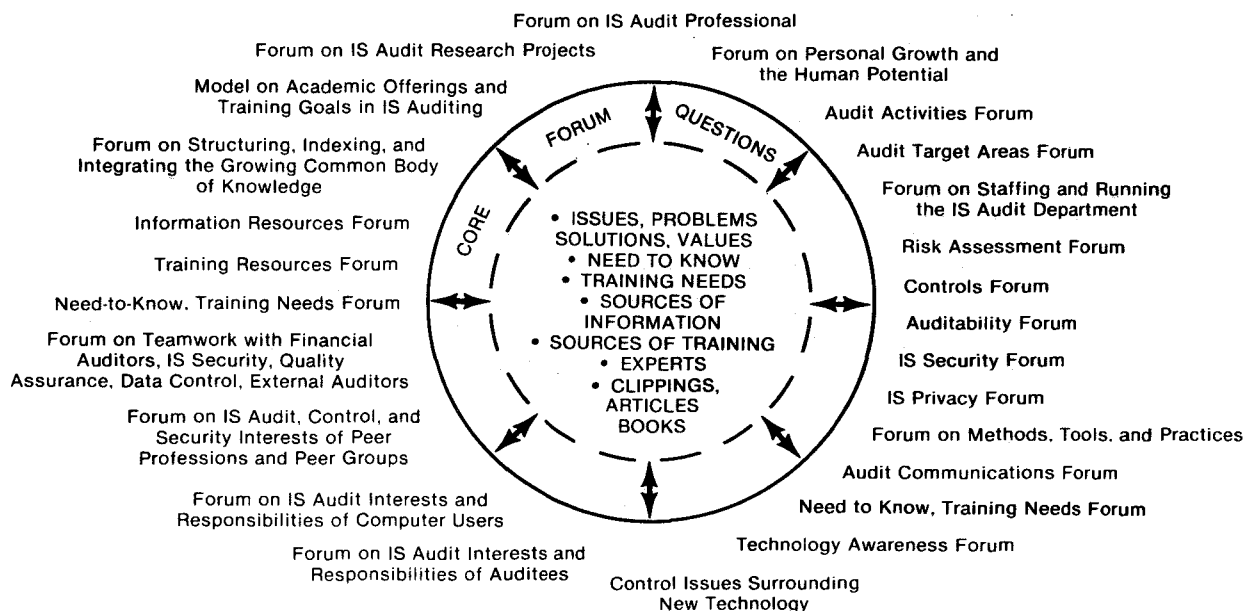
Universities and colleges are taking steps to meet the educational needs of the information systems auditor and the general auditor. Audit-related information systems courses are being given by such institutions as the University of Minnesota, New York University, Columbia, UCLA, University of Houston, Case-Western Reserve University, and many others. In fact, more than 775 educational institutions throughout the United States offer an information systems auditing course.

Perhaps one of the newer academic programs which focuses on the training and developmental needs of the information systems auditor is the master of science in business administration program (option-EDP auditing) offered by California State Polytechnic University, Pomona. This is a comprehensive educational program designed to develop the skills and capabilities of graduates in accounting, auditing, and information systems. GAO and other leaders in the field of information systems auditing contributed to the development of this program.

Government Agencies

The education sector is not alone in furthering the development of the information systems auditor and the generalist auditor. GAO has been among the leading advocates of information systems auditing. Many of GAO's

Figure 1*
CREATING AN INFORMATION SHARING NETWORK FOR THE
IS AUDITORS OF THE EIGHTIES



*EDP Auditor's Update (Jan./Feb. 1981).

ADP-related reports attest to the use and application of information systems auditing concepts. GAO has taken many steps to train its auditors in the fundamentals and understanding of computer-based systems auditing.

Other Federal agencies, such as the Naval Audit Service, the Department of Agriculture, and the Air Force Audit Agency are taking similar steps in developing educational programs to train their auditors. Developing such a program is not an easy task given the continual changes in computer technology and the need to maintain relevant training courses.

The "Big Eight" Audit Firms

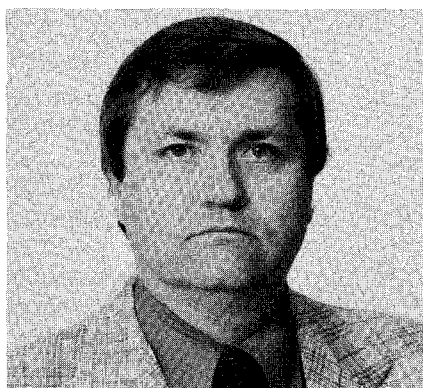
The major eight private accounting firms have been instrumental in con-

tributing to the advancement and awareness of information systems auditing. Arthur Andersen, Touche Ross & Co., and Arthur Young, to name a few, have fairly comprehensive internal programs to develop the knowledge level of their audit staff in information systems auditing concepts. The innovations and the contributions of the "Big Eight" firms to the audit community in this area have been applauded over the years.

A Centralized Future?

Perhaps one day the knowledge, experiences, and capabilities in this field will be shared and communicated through some centralized source. Perhaps the information systems auditor will have access to a learning center to exchange knowledge with others and to develop this discipline to its fullest potential. Fig-

ure 1 depicts a concept which illustrates the elements for such a learning center.



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Governmental Audit Standards: Effect on Evidence Collection and Analysis

The Comptroller General recently issued the 1981 revision of the *Standards For Audit of Governmental Organizations, Programs, Activities and Functions*. While for the most part these standards have existed since 1972, my observations indicate their greatest effect has been to expand the scope of audits rather than to change the way audits are actually done. By this I mean that the standards have tended to push auditors toward doing economy and efficiency and program results audits but have not as yet caused them to search out and adopt improved sampling or data collection and analysis techniques. As will be discussed, and as indicated by the standards, extensive knowledge and experience with these techniques is required to do expanded-scope audit work.

Standards are only a foundation upon which to build. Adopting and endorsing the standards will not have an effect on auditing until guidance, procedures, and a feedback mechanism are in place. These management controls will help auditors interpret what the standards mean, how they can be introduced into the audit, and whether they are being achieved. The full impact of the standards on the auditing profession has not been realized yet because efforts are only beginning, even in GAO, to implement them. For example, the standards themselves state that "They include concepts and areas of audit coverage which are still evolving [but] are vital to the accountability objectives sought in auditing governments and their programs."

The purpose of this article is to explore the standards as they affect four major areas of an audit: (1) selecting items to examine, (2) collecting data, (3) analyzing data, and (4) interpreting data. A discussion points out the problems which the standards attempt to address, describes some methods which will help audits comply with the standards, and shows the

benefits, both in improved quality and reduced costs, to those organizations implementing them.

Who's Covered? You!

Before discussing the impact of the standards on the evidential process, it is important to understand their far-reaching nature. The first chapter of the standards details the organizations and operations they cover:

- The standards are mandatory for all audits of Federal organizations, programs, activities, functions, and funds received by contractors, non-profit organizations, and other organizations.
- OMB has incorporated them into executive branch audit criteria.
- Federal law requires the Inspectors General to comply with them.
- Non-Federal auditors, when auditing any phase of Federal operations, must conform to them.
- GAO has recommended that they be used in audits of State and local operations regardless of whether the audits are done by government auditors or by public accountants.

Additionally, the standards have been adopted and received powerful endorsement from the Institute of Internal Auditors and the AICPA. Commenting on the AICPA's Management Advisory Services guidelines, the GAO standards state:

The guidelines indicate that public accountants engaged to perform a government audit in accordance with GAO standards may be expected to do far more than in the past. The public accountant will be called upon to use not only his financial auditing and accounting skills, but a variety of other skills as well.

The Standards Affect Both Quality and Cost of Audits

The purpose of the standards is to

increase both the scope and quality of audits of governmental programs. While better planning and improved reporting may result in improved quality with little appreciable increase in the cost of the audit, this may not always be true when it comes to collecting and analyzing evidence. Auditing, under even the best of circumstances, is labor-intensive. Like other organizations, those engaged in auditing must continually make trade-offs between the quality and the cost of the product. Because the standards increase the scope of audits, especially those involving efficiency and effectiveness and program results, methods and techniques new to most auditors will be required if the standards of quality are to be achieved at a reasonable cost.

For example, in a program results audit of a multilocation program, factors influencing program outcomes may be numerous, have complex relationships, and vary by location. Even under these circumstances, as shown below, the sixth examination standard charges the auditor and the audit organization with responsibility for obtaining

Sufficient, competent, and relevant evidence...to afford a reasonable basis for the auditor's judgments and conclusions regarding the organization, program, activity, or function under audit.

The elaboration on this standard discusses various types of evidence—testimonial, physical, documentary, and analytical—and concludes that whatever the type, the evidence should be sufficient and competent. As alluded to already, sampling, data collection, data analysis, and data interpretation will become more technical and more complex if the goal of quality at the lowest cost is to be achieved. My experience indicates that the same conditions of increased complexity

apply to the effect of the standards on economy and efficiency audits.

Sampling as a Basis for Obtaining Evidence

The relationship between achieving a quality audit under the standards and correctly applying sampling techniques cannot be overly stressed; this is true regardless of the type of evidence being collected. Not only does sampling provide the representativeness needed to help assure sufficiency and competence of the evidence, but also just as important, it is necessary for computing the error range for the impact of audit findings and for performing statistical analysis. Additionally, the use of sampling can decrease the amount of work required to achieve audit objectives.

Some considerations in selecting a sample for a program results or economy and efficiency audit include whether the locations should be randomly selected, whether the individuals or cases (the units of analysis) should be randomly selected, and whether a simple or a complex sample will be required. Decisions on these points, whether made purposefully or through lack of knowledge, affect the rest of the assignment. For example, a decision to cover too few locations or to select locations on an other-than-random basis requires a report qualification that the results are limited to only those locations included in the audit. A nonrandom selection of cases requires a qualification in the final report that the results are limited to only those cases examined. The failure to use a random sample in case or location selection has several additional limitations which also lower audit quality. These include the inability to calculate characteristics—means, medians, and modes—of the national population when locations are not randomly selected, or of the populations at the locations visited when

cases are not randomly sampled. Additionally, sampling errors cannot be calculated nor can statistical methods and techniques be used in analyzing the data.

Doing economy and efficiency and program results audits invariably brings a need for increasingly complex samples. Thus, the need for knowledge and experience in working with complex sampling problems also increases. For example, taking the same size samples at locations where the number of cases varies greatly, often necessitated by audit staff and cost limitations, prohibits aggregating the audit results unless the data is properly weighted to correct for possible biases caused by the differences that might exist among the various locations.

Additionally, economy and efficiency and program results audits usually involve complex objectives, which also cause the required sample plan to be more complex. For example, suppose the audit objective is to determine whether individuals receiving housing benefits live in better quality housing than those of similar income who do not receive the benefits. Almost always, it is of interest to know whether the program's results differ by race or sex of the head of household or by some other variable of interest. While a simple random sample large enough to include these groups could be taken, a more complex sample involving subsamples by group of interest provides acceptable results and at a lower cost in audit resources. Again, such an approach requires knowledge of sampling and proper care in analyzing and presenting the data.

As discussed above, the failure to sample properly can result in excessive cost to accomplish the audit's objectives or cause the data to be inadequate or even incorrect. Any of these problems has a devastating impact on the standards of sufficiency and competency of evidence and

could lead the auditor into making erroneous conclusions and/or recommendations.

Standardized Collection Techniques Reduce Costs, Improve Data Quality

Under the standard dealing with audit scope, the auditor is warned that

A program results review [I would add economy and efficiency audits too] may involve several different sites and different auditors at each site. In these cases the work should be coordinated and the review techniques should be uniform. To do otherwise would be uneconomical and might lead to wide variations in the measurements of similar projects by different auditors.

The impact of failure to comply with this standard is addressed under competency of evidence:

To be competent, evidence should be reliable and the best obtainable through the use of reasonable audit methods. In evaluating the competence of evidence, the auditors should carefully consider whether there is any reason to doubt its validity or completeness.

As discussed above, appropriate sampling techniques are an obvious first step in responding to these requirements, but only a first step. As suggested in the standards, collection of data on a large scale often means that central control over the data collection must be established. Attempts to apply these concepts have caused auditors continually involved in these types of audits to seek new data collection methods to supplement the usual personal interviews, taking of copious notes, and

manual preparation of other working papers. Additionally, alternative approaches have had to be substituted for the traditional methods of recording data collected from personal observation and the records of organizations being audited. Regardless of whether the data for the audit came from individuals or records, the new methods had to either improve the quality of the data or reduce data collection costs to be acceptable.

Two of the data- or evidence-collection techniques used to help assure standardization have been mail questionnaires and highly structured interviews. The structuring technique has been used in face-to-face, telephone, and computer-assisted telephone interviews. Both of these techniques have been used to obtain data that might normally be collected through expensive and time-consuming, nonstructured personal interviews. Each method also provides a high degree of central control and uniformity in the data collected. Of equal importance, these techniques, where properly applied, almost always result in collecting the opinions of a greater number of individuals, allowing for accomplishing more extensive objectives.

Similarly, standardized collection techniques have been introduced into the process of collecting data from agency records. The two most common techniques used are (1) specially designed, forms and decision rules for use by individual auditors in determining the data to collect and the method of recording the information and (2) obtaining required data from the organization's computer files, either on tape or cards. Regardless of whether the data is collected from individuals, records, or agency computers, a major goal of these new techniques is to collect data in such a way that it can be shown to be consistent, reliable, and valid while at the same time being in a form that facilitates computer analysis.

While these techniques may sound complicated and somewhat time-consuming, failure to use them carries its own risks and penalties. Without a standardized and rigorous data collection methodology, validity of measures cannot be established and reliability and its inherent concept of consistency are not assured. Failure to provide for these conditions voids the assumptions underlying the use of statistical inference, making the data unusable for analytical purposes. The lack of standardized collection procedures also precludes computerizing the data for subsequent analysis, causing a more expensive and lengthy analysis process. Finally, failure to use standardized collection techniques may cause reductions in the scope of the audit, a condition that requires extensive qualification in any resulting report.

Computerization—More On Quality and Cost Saving

Experience also shows that economy and efficiency and program results audits require collecting more data on or from more individuals, cases, or organizations than does financial auditing. These audits also require more sophisticated analysis techniques. Whether faced with processing large amounts of data or doing extensive analysis, computers can speed the process. In the first instance, knowing and using the computer can result in substantial savings in cost and staff days. In the second, while cost and time savings are a major consideration, the important point is that computers are often the *only* way to do the required analysis. Two additional points should be underscored: (1) if the sampling plan is flawed or the data is not standardized properly when collected, computers will not benefit the subsequent analy-

sis and (2) when the use of computers is discussed here, the reference is to using them to perform mathematical and statistical functions which historically have been performed manually by auditors. This second point refers to the fact that, in this context, using computers has nothing to do with auditing an organization's computer activities.

The importance of the distinction between using computers as an audit tool and auditing a computer system is that in auditing a computer system the emphasis is on skills, such as programming, computer system design, computer utilization measurement, and system controls. When used as an audit tool for performing program results and economy and efficiency audits, using the computer emphasizes knowledge of constructing data bases, manipulating data, and most importantly, applying mathematical and statistical techniques to both the analysis and interpretation of the data collected. It is not unusual for managers of auditing organizations to assign auditors with technical expertise in computers or statistics as if their knowledge and abilities were interchangeable. Close scrutiny of the results of the work performed in these circumstances demonstrates that this is not true.

The principal advantage of using computers on these audits comes from their ability to do extensive data manipulations, to transfer data between widely scattered locations, to produce the data required to compute sampling errors, to quickly and accurately weigh data when stratified or cluster sampling is used, and/or to perform other statistical and mathematical procedures, such as model building. Additionally, auditors with experience in computer analysis can often use data from existing computer data bases, reducing the cost and time of their audits by eliminating some or all of the expensive manual data collection processes.

Audit organizations and individual

auditors who cannot work in this environment face increased difficulty in complying with the standards applicable to evidence. Areas where shortfalls are experienced include increased cost and time delays due to (1) manual preparation of schedules and summaries, (2) the travel required when staff in different locations need access to the audit papers, (3) the necessity of manually developing data for computation of sampling errors, (4) physical collection of data when obtaining it from existing computer files is possible, (5) the problems or inability to perform the statistical and mathematical procedures required, and (6) the use of manual computations on assignments where data must be weighted for accurate presentation.

Improving the Quality of Analytical Evidence

The standards use the term "analytical evidence" in referring to one type of evidence. This term has a unique connotation in economy and efficiency and program results audits. In these types of audits, conclusions and recommendations often rest on the preponderance of evidence and the inferences made from the data collected. As the complexity of the audit objectives increases, the difficulty of achieving the standards of sufficiency and competence of evidence also increases. The proper use of statistical and mathematical techniques can contribute greatly to mitigating this problem.

Supporting the conclusions and recommendations in this auditing environment often requires the computations of descriptive statistics—means, frequencies, modes, and other measures of distributions—on a large number of separate variables. It is also frequently necessary to determine whether significant differences can be established between the loca-

tions or groups from which the samples were drawn. For example, does a significant difference exist in the effect of the housing subsidy discussed earlier when race is considered? In other instances, it is important to know which factors are the most important in explaining why something happened. Modeling techniques, such as regression, discriminant, and other forms of multivariate analysis can be used in drawing inferences in these cases.

Failure to use proper analytic techniques can jeopardize compliance with the evidence standards. Lack of adequate statistical knowledge could result in failure to perceive the effect of problems caused by the distribution of the data. It could also prohibit the audit staff from making accurate statements about associations and functional relationships needed to substantiate conclusions and recommendations. While judgments play a role in every phase of any audit, lacking appreciation and knowledge of analytical techniques relegates the entire process of drawing conclusions and making recommendations to raw, and perhaps unverifiable, judgment.

Implications

As indicated by the above discussion, full implementation of the audit standards will have an enormous impact on what auditors do and how they do it. From my observations, most individuals and organizations engaged in auditing are not in a position to do an audit that will meet the evidence standards because they have not developed the technical capability required to audit using new data collection and analysis techniques. Although the section of the audit standards that deals with auditor qualifications provides that the standards

...apply to the skills of the audit organization as a whole and not necessarily

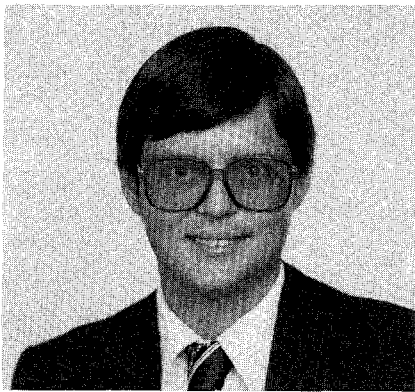
to individual auditors. [and also that] if an organization possesses personnel, or hires outside consultants, with acceptable skills in such areas as accounting, statistics, law, engineering, and actuarial science, each individual member need not possess all these skills....

I believe it is clear that the standards,

when viewed in total, require auditors and audit organizations to develop expertise commensurate with their normal duties and responsibilities.

As stated in this article, the need for knowledge and ability to use sampling and other statistical methods in economy and efficiency and program results audits is pervasive. Additionally, the various steps in planning the

evidence collection process—from sampling to data interpretation—is highly dependent on each preceding step being correctly implemented. My feeling is that the organizations and individuals in the auditing profession will have to undergo a reorientation in professional development if the objectives of the Governmental Audit Standards are to be achieved.



Bob Robinson

Mr. Robinson is a GAO evaluator in the Energy and Minerals Division and is assigned to the Conservation and Renewable Energy Group. Joining GAO in 1973, he first worked in the Washington regional office. Mr. Robinson received a B.A. degree in economics from the University of Maryland and is a member of Phi Beta Kappa and the American Academy of Political and Social Science.

Alcohols— The Automotive Fuels of the Future?

With memories of long gasoline lines fading into news of current world oil supply gluts, it is not surprising that a sense of fuel security should be edging its way back into the American consciousness. Except for the tripling of prices, the current situation is much the same as it was after the 1973 oil embargo. Following the market shock caused by the Iranian revolution and subsequent Iran/Iraq war, gasoline is once again readily available and the perception of inexhaustible supply is beginning to re-emerge.

The fact is, though, sooner or later world oil supplies will be exhausted. Further, as domestic supplies diminish and we come to rely more on unstable foreign supplies, we will be subject to unpredictable supply curtailments and all the national security and economic disruption implications such curtailments entail. In the midst of this forecast, however, alternative fuels—in the automotive sector at least—stand ready to fill the gap.

Since 1978, Energy and Minerals Division's Renewable Energy Staff has conducted considerable review work dealing with one of the most likely such alternatives—alcohol fuels. Evaluators on the Renewable Energy Staff frequently review technologies that seem to ever remain just over the horizon of practicality. Continually it seems we look at a new technology for which great hopes are held and find major obstacles that will prevent the technology from making a significant contribution in the foreseeable future to the Nation's energy supplies. Consequently, when we began our work in the alcohol fuels area, we looked upon the claims of the fuels' vocal proponents with a jaundiced eye. However, after 3 years' work it is apparent that in alcohol fuels there is realistic cause for optimism. We have reported that alcohol fuels can be produced in *commercial* quantities, with *available* technology, at reasonably *competitive* costs in the form of either ethanol or methanol.

Ethanol: A Partial Solution

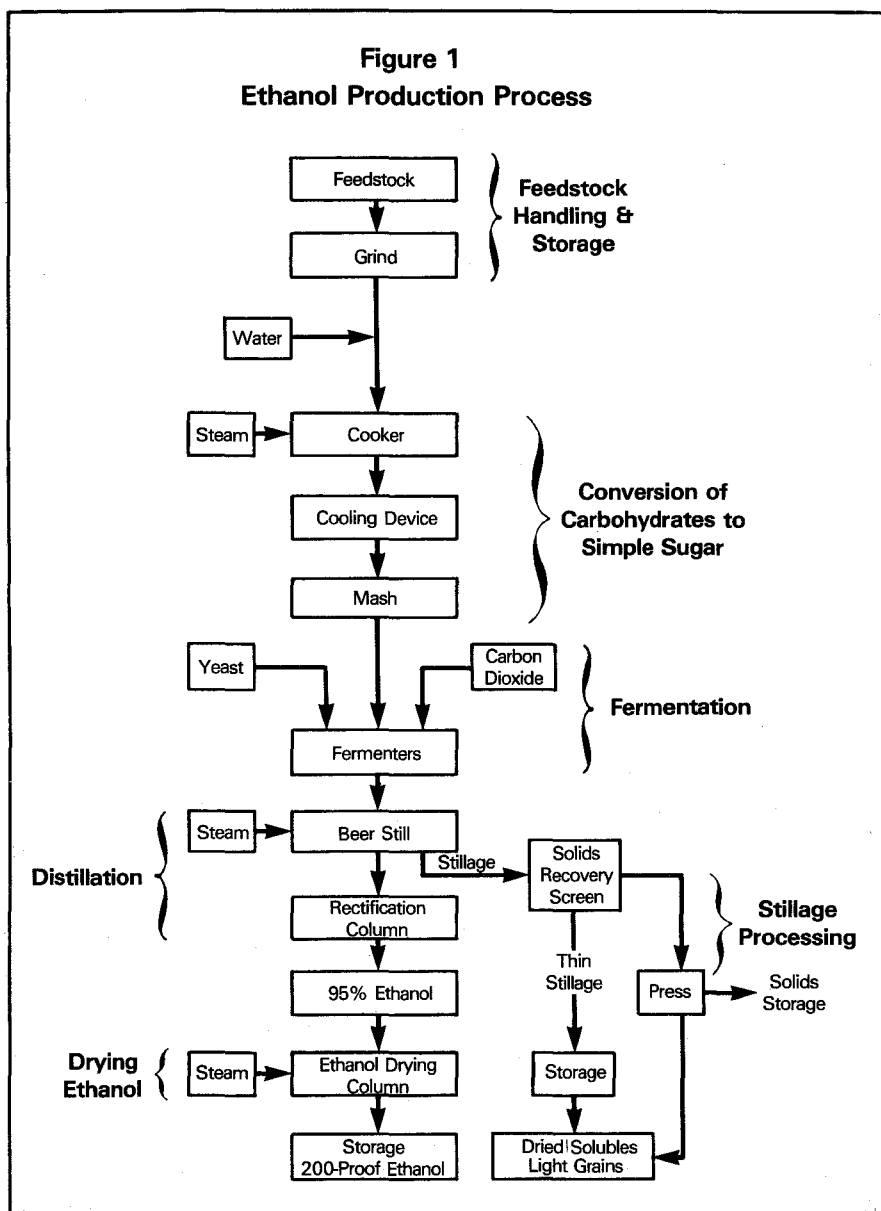
Ethanol, sometimes referred to as grain alcohol, is made for fuel purposes primarily from grains, such as corn or sorghum, sugar crops, or food wastes. The process for producing ethanol from these materials is, as moonshiners and Government "revenueurs" can testify, well known and relatively simple. The essence of the process can be seen in figure 1.

Used in the form of gasohol—a blend of 10 percent ethanol and 90 percent unleaded gasoline—ethanol is already helping to extend gasoline supplies. From a small start in the Midwest, gasohol is now being marketed almost nationwide. At the end of 1980, ethanol was being produced at a rate of about 100 million gallons a year, and producers were selling all they could produce. By the end of 1981, production capacity is expected to double.

Ethanol's use to date has shown it to be a good automotive fuel. Predictions by some oil companies of adverse effects on automobile performance and durability have proved to be groundless. Each of the big three automakers have stated that ethanol's use in the form of gasohol will not void new car warranties, and gasohol marketers have reported few customer complaints. Moreover, ethanol's high octane properties help reduce knock and ping in many cars. These properties have made ethanol a valuable gasoline blending component and have helped maintain ethanol sales in the current period of gasoline glut when the need for ethanol as a gasoline extender has diminished.

At a current sales price of about \$1.80 a gallon, ethanol is considerably more expensive than wholesale gasoline prices, but as newer, more efficient production plants are put on line, the real price of ethanol has begun to decline. Even at \$1.80 a gallon, however, ethanol prices are competitive with the prices of other con-

Figure 1
Ethanol Production Process



could replace gasoline altogether. Unlike ethanol, there is no shortage of raw materials with which to produce methanol. Today most methanol is made from natural gas for the chemicals industry. However, methanol can also be produced from coal with commercially available technology. The essence of the process for producing methanol from coal can be seen in figure 2.

More importantly, the methanol process can use almost any quality coal. Even high-sulfur coals which are difficult to use in direct burning can be used because sulfur is removed during the methanol process. Accordingly, sufficient domestic coal reserves exist to allow enough methanol production to totally replace gasoline for over 100 years while still allowing for a doubling of demand for existing uses. Further, the technology for producing methanol from renewable materials, such as trees, is close at hand. Commercialization of this technology would further expand methanol's production potential.

Although little fuel-grade methanol is being produced today, cost projections for producing methanol from coal are very attractive as well—in the range of 50 cents a gallon in 1980 dollars. Methanol contains only about one-half as much energy as gasoline, so to make methanol costs comparable to gasoline costs, this cost estimate needs to be doubled to about \$1.00 a gallon. Nonetheless, with wholesale unleaded gasoline costs running about \$1.10 a gallon, methanol costs would still be highly competitive.

Methanol also makes an excellent automotive fuel. Like ethanol, methanol can be blended with gasoline in small proportions and used in existing engines. However, methanol's best use will likely be as a straight fuel in modified engines. While not being used by the public, straight methanol is the standard fuel used in Indianapolis 500-type race cars. Methanol was chosen by car drivers because it provides these cars with the power

ventional octane-boosting components of gasoline, such as toluene and benzene, made from oil. Consequently, in combination with Federal and State tax incentives, gasohol is being sold at prices competitive with unleaded premium gasoline, and even without tax breaks, the economics of ethanol for use as an octane booster are becoming quite favorable.

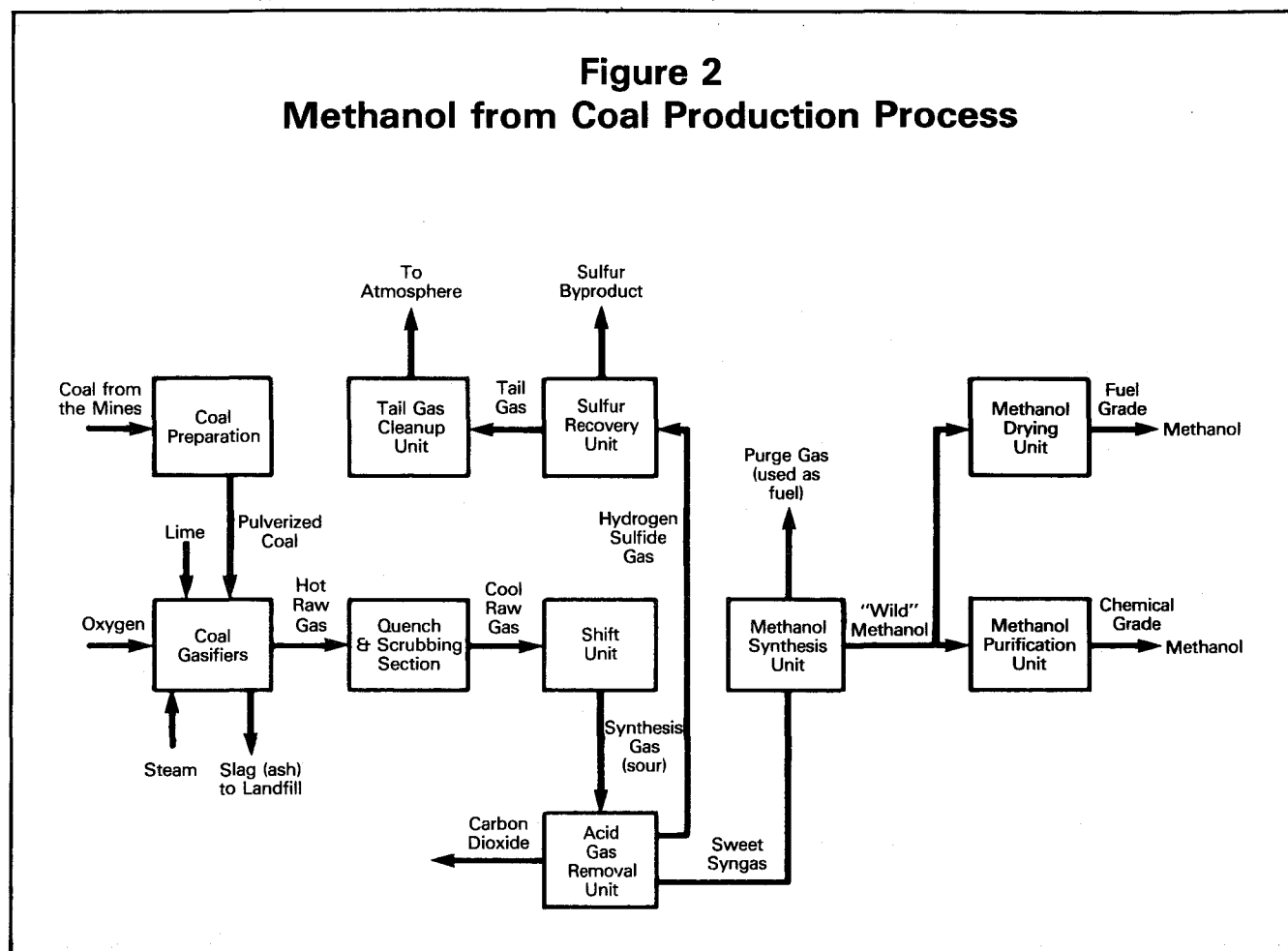
While sales have steadily increased, ethanol is today substituting for only a small fraction of total gasoline consumption, which in recent years has exceeded 100 billion gallons a year. Moreover, because of limitations on the amount of excess agricultural

crops and other materials from which ethanol can be produced, ethanol's future in this country will likely be restricted to a limited, although valuable, gasoline extender or octane-boosting component. A more complete substitute for gasoline will have to be found elsewhere.

Methanol: Possibly a Permanent Solution

Methanol—sometimes referred to as wood alcohol—may be that substitute. Methanol can quite reasonably be suggested as a fuel that potentially

Figure 2
Methanol from Coal Production Process



they need and because the fuel presents less of an explosion hazard than gasoline. As racing fans can testify, however, pure methanol does have a drawback—when it is ignited it burns with an invisible flame. Methanol fires are therefore difficult to fight. To prevent problems in future public use, a coloring agent would have to be added to the fuel. Methanol is also a poison, so to prevent inadvertent ingestion of the fuel as drinking alcohol, an additive with an unpleasant odor would also have to be added.

Compared to gasoline, as with ethanol, methanol has extremely high octane ratings. Engines designed to take advantage of these octane ratings can operate perhaps 25 percent more efficiently than comparable gasoline engines. Further, such engines produce much lower regulated emissions. Just as important, the engine modifications necessary are not major and do not require new technology.

In fact, straight alcohol fuel engines are being produced on assembly lines in Brazil today by American automakers for the Brazilian market. These same automakers say straight methanol cars could roll off American assembly lines in 5 years at moderate incremental costs if the decision to produce such cars was made.

Obstacles to Methanol Use

Methanol is a fuel which can be produced in vast quantities from domestic resources at competitive costs and used very efficiently in engines modified for its use. Why then is it not being used? There are several explanations. First, methanol is a new fuel, and no infrastructure is in place for its production, distribution, and use. Economically scaled methanol from coal production plants

will cost a billion dollars or more. The associated distribution facilities add even more to the cost. In periods of high interest rates, mobilizing the risk capital necessary for such ventures is extremely difficult and will not be attempted without sure markets for the product. Currently no such markets exist since cars designed to use methanol are not being produced. However, from the carmakers' standpoint, methanol cars will not be produced until there is a readily available fuel supply. The existing "Catch 22" situation can only be resolved through simultaneous conversions in both the fuel and automotive industries—an extremely difficult feat.

Second, the fuels industry has little incentive to attempt such a major undertaking when it is making large profits producing and selling gasoline—a product familiar to the industry. Few corporations outside the major oil companies possess both the capi-

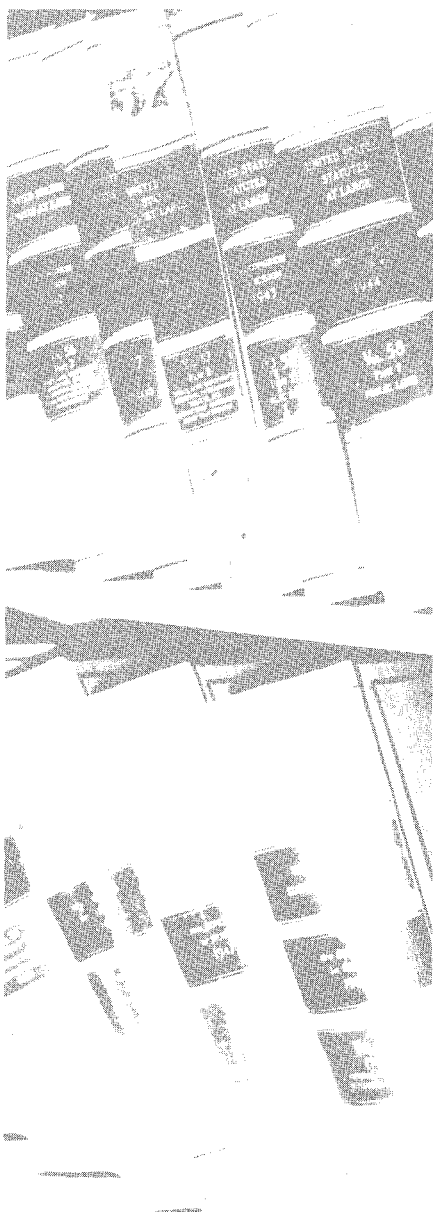
tal and know-how necessary to put a methanol plant on line. As long as these corporations can generate, with relatively little risk, large profits by making products from foreign oil, it is not reasonable to expect that they will allocate large sums of money to produce alternative fuels, such as methanol.

Conclusions

Alcohol fuels are a ready solution to automotive fuel shortages which almost certainly will face this country in the years ahead. Ethanol, used as gasohol, is helping to stretch gasoline supplies today and in addition is being increasingly recognized as a valuable gasoline octane-boosting component. Methanol, with virtually boundless production potential, could ultimately become, with existing technology, a permanent replacement for gasoline. It is unlikely, given the structure and condition of the U.S. automotive fuels industry, that alcohol fuels will reach their full potential for some time. Nonetheless, it is comforting to know that in alcohol fuels, we have an option to pursue that can keep us from being stranded when the oil runs out.



Judith Hatter



Legislative Developments

Omnibus Budget Reconciliation Act of 1981

On August 13 the President signed into law the Omnibus Budget Reconciliation Act of 1981 (Public Law 97-35). This massive legislative enactment contains twenty-seven titles. Seven of these titles contain provisions relating to GAO.

Title III, pertaining to banking, housing, and related programs, amends the National Consumer Cooperative Bank Act providing for orderly conversion of the Bank from a mixed-ownership Government corporation to a private bank, owned and controlled by its cooperative stockholders. The Farm Credit Administration and the GAO are given authority to examine and audit the Bank. Reports resulting from these audits and examinations are to be forwarded to the Congress.

Title IV—Human Services Programs, contains at section 635 the Head Start Act which, among other things, extends the program. GAO is given access to records of financial assistance belonging to recipients under the act.

Section 671, the Community Services Block Grant Act, requires the Comptroller General, from time to time, to evaluate the expenditures by States of community services block grants to ensure that expenditures are consistent with the provisions of the subtitle and to determine the effectiveness of the States in accomplishing the purposes of the subtitle.

The Comptroller General may conduct an investigation of the use of funds received by a State to ensure compliance with the provisions of the subtitle. GAO is also provided access authority to records.

Title IX—Health Services and Facilities, adds a new title XIX to the Public Health Service Act. Part A provides for preventive health, health services, and primary care health block grants. Part B provides for alcohol and drug abuse and mental health services block grants, and Part C for primary care

block grants. Each of these parts contains identical requirements that the Comptroller General is to evaluate the expenditures by States to ensure consistency with the provisions of the part and certain required certification.

Each State must prepare an annual report on its activities including information required by the Secretary after consultation with the Comptroller General.

The Comptroller General may also conduct investigations of the use of funds received by a State to ensure compliance and certification requirements.

Title XI—Transportation and Related Programs, contains at Part 5—United States Railway Association, amendments to the Regional Rail Reorganization Act of 1973. By these amendments the Comptroller General is made a statutory member of the United States Railway Association Board of Directors.

Subtitle F of title XI contains the Amtrak Improvement Act of 1981. Section 602 of the Rail Passenger Service Act is amended by adding a new subsection (1) requiring that before February 1, 1982, the Department of Transportation, in consultation with the GAO, the National Railroad Passenger Corporation, and the Department of the Treasury, is to submit to the Congress legislative recommendations for how best to relieve Amtrak of its debt to the Federal Government.

Title XVII pertains to Civil Service and Postal Service Programs; Government Affairs Generally. A new subchapter II is added to chapter 45 of title 5, United States Code, establishing awards for cost savings disclosures. The Comptroller General is to review the awards made and procedures used in making the awards to verify the cost savings.

Chapter 2—Block Grant Funds, of subtitle C of title XVII contains a provision for access to records by the Comptroller General for the purpose of evaluating and reviewing the use of block grant funds, consolidated assistance, or other grant programs estab-

lished or provided for.

Title XXI—Medicare, Medicaid, and Maternal and Child Health, contains the Medicare and Medicaid Amendments of 1981. The Comptroller General is to conduct a study to determine the extent (if any) to which the average cost of efficiently providing routine inpatient nursing care to individuals entitled to benefits under title XVIII of the Social Security Act exceeds the average cost of providing such care to other patients. The Comptroller General is to submit a final report containing the results of the study to the Congress within 6 months after the date of enactment of this act.

The Medicare and Medicaid Amendments of 1981 also require the Comptroller General, in consultation with the Advisory Committee for Intergovernmental Relations, to conduct a study of Federal medical assistance percentage formula and of adjustment of target amounts for Federal Medicaid expenditures. The report to the Congress on the study is required no later than October 1, 1982.

Subtitle D of title XXI contains the Maternal and Child Health Services Block Grant Act and requires that the Comptroller General evaluate the expenditures by States to ensure consistency with the provisions as in the other parts of the law pertaining to block grants.

The Secretary of Health and Human Services, in consultation with the Comptroller General, is to examine an alternative formula for allotments of funds which might be used as a substitute for the method of allotting funds under section 502 of the Social Security Act.

Title XXVI—Low-Income Home Energy Assistance, authorizes the Secretary of Health and Human Services to make grants to States to assist eligible households with the costs of home energy. The Comptroller General is to evaluate the expenditures by the States to ensure consistency and to determine the effectiveness of the State in accomplishing the purposes of this title. The Comptroller General may also conduct an investigation of

the use of the funds received.

VA Patients Ombudsman

On June 18 Congressman Leon E. Panetta of California introduced legislation (H.R. 3971) to direct the Comptroller General to assign employees of GAO to serve as ombudsmen for patients in Veterans Administration facilities.

Consulting Reform and Disclosure Act of 1981

On July 9, Congresswoman Geraldine A. Ferraro of New York introduced H.R. 4089 to clarify the authority for appointment and compensation of experts and consultants and to provide statutory guidelines concerning the award of contracts for the procurement of consulting services, management and professional services, and special studies and analysis.

As a part of her justification for the legislation, Ms. Ferraro stated:

****I believe that the 20-year history of agency mismanagement of consulting services contained in 30 critical GAO reports demonstrates why this legislation is necessary. A GAO report received by the Human Resources Subcommittee last year cited serious and pervasive problems in consulting contracts in six civilian agencies. The most recent GAO report which I received concerned consulting type contracts in DOD. In that report GAO found that several of the management support services contracts reviewed have preempted DOD's prerogative in directing national defense and in management and direction of the armed services.****

Cost Overruns

Senator William Proxmire of Wisconsin introduced S. 1604 to require the enactment of special legislation to continue the expenditure or obligation of funds on any major civil acqui-

sition whenever the cost of such acquisition has increased or, on the basis of estimates, will increase by 25 percent or more.

The Comptroller General would be responsible for determining cost growth statistics based on data furnished by the appropriate departments and agencies and, when any project runs over the limit of 25 percent, notifying the Congress and the agency responsible.

¹Cong. Rec. Vol. 127, (July 9, 1981), p. H4188.



Diane E. Grant



Reflections

Since *The Staff Bulletin* stopped appearing in March 1960 and *The GAO Review* was not published until the winter of 1966, here are several interesting items taken from the 1962 winter issues of *The Watchdog*. Twenty years ago:

- A report was submitted in February 1962 to the Congress on our review of the Veterans Administration education and training programs administered for the benefit of Korean conflict veterans and war orphans. The report concluded that effective control over education and training allowances would be provided by (1) periodic notification to the veterans of their attendance requirements and reporting responsibilities and (2) periodic certification by veterans of their attendance and number of dependents claimed—each an essential requirement in determining entitlement to such allowances.
- We also reported to the Congress in January 1962 that the Navy procured about \$3.2 million worth of spare parts which could have been obtained by disassembling excess aircraft engines of a particular type on hand in its supply system. The Navy records on June 30, 1961, also indicated an additional need for about \$5.3 million worth of spare parts which could have been obtained from the 972 excess engines then on hand. After reexamination the Navy arranged to reclaim needed spare parts from 380 of the excess engines. It was then estimated that about \$4.9 million worth of such parts could be obtained at a cost of \$285,000 for reclamation.

Ten years ago, in the Winter 1972 issue of *The GAO Review* and winter editions of *The Watchdog* you will find that:

- Mr. Staats announced in February 1972 the following realignment of GAO: the Civil and Defense Divisions were discontinued and replaced by six new audit divisions, each having a Government-wide responsibility for assigned programs and functions. The new divisions were Logistics and Communications, Procurement and Systems Acquisition, Federal Person-

nel and Compensation, Resources and Economic Development, and General Government.

- The Financial and General Management Studies Division was assigned responsibility for GAO reviews of accounting systems in operations.
- The Transportation and Claims Divisions were consolidated into a single division and the Transportation and Traffic Management Review function (TRATMAR) was reassigned to the Logistics and Communications Division.
- The Field Operations Division remained unchanged but was assigned additional responsibility. The International Division remained unchanged except that responsibility for the review of accounting systems in operation was assigned to the Financial and General Management Studies Division.
- Three new positions of Assistant Comptroller General were established. One of these superseded the position of director, Office of Policy and Program Planning. Three new offices were established under this Assistant: the Office of Policy, the Office of Program Planning, and the Office of Internal Review.
- One Assistant Comptroller General was to be responsible for four divisions which were concerned with reviews of Federal management functions—financial, logistics and communications, procurement systems acquisition, personnel and compensation.
- The other Assistant Comptroller General would have similar responsibilities for the three domestic program divisions.
- Also established was an Office of Federal Elections to discharge the Comptroller General's responsibilities under the Presidential Campaign Act.
- The overall objective was to allow GAO to continue to grow soundly and to perform its broader responsibilities with greater effectiveness.
- Mr. Staats named Ellsworth H. Morse, Jr., Thomas D. Morris, and A.T. Samuelson as Assistant Comptrollers General.
- Mr. Morse was in charge of Policy and Program Planning and also had

responsibility for the Office of Internal Review with Lloyd G. Smith, director; Office of Policy with Allen R. Voss, director; Office of Program Planning, William J. Conrardy, director; and the Office of Federal Elections.

- Mr. Morris was in charge of the General Management Reviews Group, with Logistics and Communications Division, J. Kenneth Fasick, director; Procurement and Systems Acquisition Division, Richard W. Gutmann, director; and the Federal Personnel and Compensation Division.

- Mr. Samuelson was in charge of the Domestic Programs Group, with the General Government Division, Victor L. Lowe, director; Resources and Economic Development Division, Henry Eschwege, director; and the Manpower and Welfare Division, Gregory J. Ahart, director.

- The Transportation and Claims Divisions were consolidated into a single division with Thomas E. Sullivan as director. The International Division, Oye Stovall, director; Office of Personnel Management, Leo Herbert, director; Office of Administrative Planning and Services, Clerio Pin, director; the Information Officer; and the Office of Legislative Liaison remained the same.

- Alexander A. Silva, Jr., director, Civil Rights Office, was appointed to the Office of Personnel Management in GAO.

- Fred D. Layton, director, European Branch, was designated associate director for financial management in the Division of Financial and General Management Studies, effective November 1971.

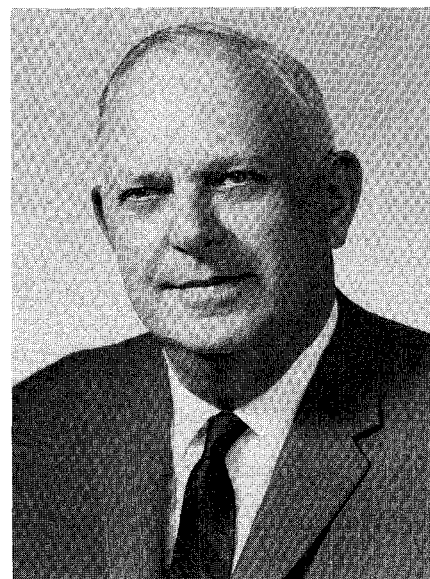
- Clerio P. Pin, Assistant Comptroller General, was designated director of the Office of Administrative Planning and Services, effective December 1, 1971.

- Jimmy J. Bevis, assistant manager, Washington, was designated assistant manager, Dallas, effective October 17, 1971.

- Clifford I. Gould, director, Federal Personnel and Compensation Division, was designated assistant manager, Kansas City, effective August 16, 1971.

- Gregory J. Ahart, director, Human Resources Division, testified before the Subcommittee on Buildings and

Grounds, Senate Committee on Public Works, September 23, 1971, on two bills which would significantly change the method of funding and construction and operating costs associated with meeting the space needs of the Government. S. 2479 and S. 1736 amended the Public Buildings Act of 1959 and the Federal Property and Administrative Services Act of 1949 to (1) require using agencies to budget and pay for the use of space and related services and (2) authorize the General Services Administration, subject to congressional and executive branch controls, to use the resultant receipts to finance its public buildings operations.



Lawrence J. Powers.

Lawrence J. Powers died on October 16, 1981. Mr. Powers had a long and distinguished career of Federal service, working with GAO for 20 years, the last 13 as Assistant to the Comptroller General before his retirement in 1972. He will be fondly remembered and profoundly missed.

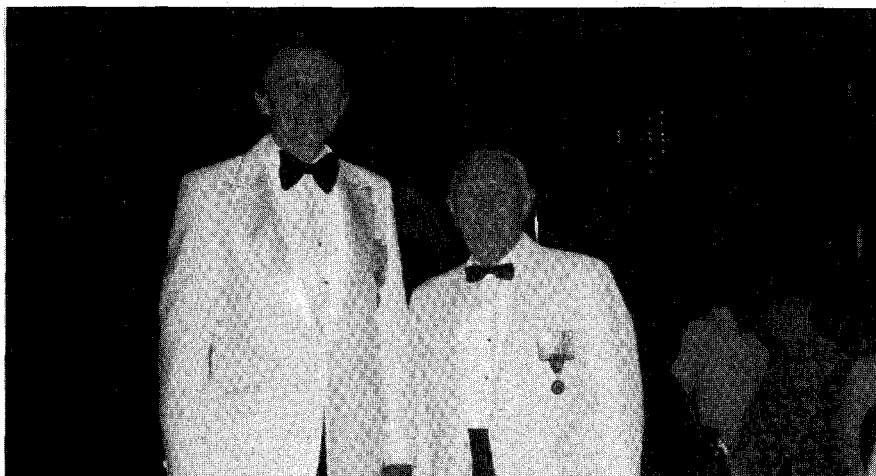
Alumni Update

Mr. A.T. Samuelson (former Assistant Comptroller General), pictured here with Mr. Frank V. Subalusky, CED, at the National Association of Accountants' (NAA) International Conference in Honolulu, Hawaii, was elected to the Board of Governors of

the Stuart Cameron McLeod Society (SCMS) for a 2-year term ending June 1983.

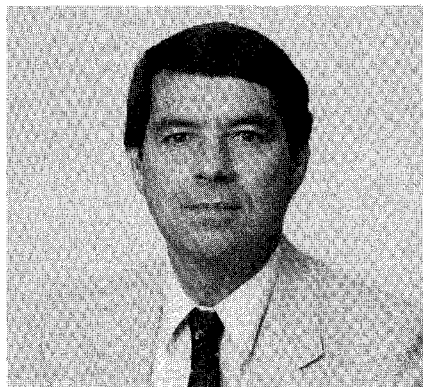
The SCMS is comprised of past national NAA officers and directors. The Society, established in 1934, serves as a repository of experience and knowledge that can be called upon by the current NAA officers and directors.

All current and former GAO employees wish "Sammy" the best in his new position of responsibility in NAA. NAA, with its 350 local chapters throughout the United States and its foreign affiliates, has a total membership of some 95,000 members.



A.T. Samuelson (r.) and Frank Subalusky at NAA's International Conference in Honolulu.

GAO Staff Changes



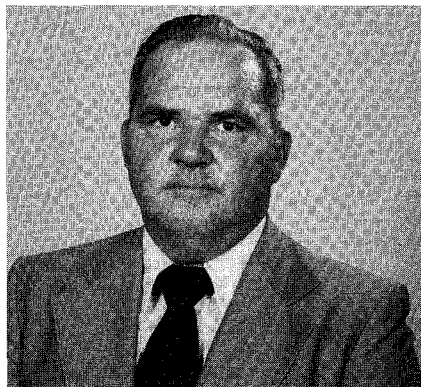
James L. Howard

Mr. James L. Howard, associate director, Energy and Minerals Division, was designated to replace Mr. Thomas P. McCormick as director, Office of Policy. Mr. Howard assumed his new duties on September 7, 1981.

Mr. Howard received a B.S. degree in business administration from Bloomsburg State College in Bloomsburg, Pennsylvania, and also attended George Washington University for specialized courses. In 1977 he attended the Executive Development Program at Dartmouth College.

Since joining GAO in 1964, Mr. Howard has had diverse assignments including responsibilities for audits at the Federal Aviation Administration, U.S. Forest Service, Federal Highway Administration, and the Nuclear Regulatory Commission. He has served as associate director (Nuclear Energy, DOE Management and Administration) since 1980.

Mr. Howard has received Outstanding Performance Awards in 1975 and 1977, a Director's Award in 1978, and a Certificate of Merit in 1979.



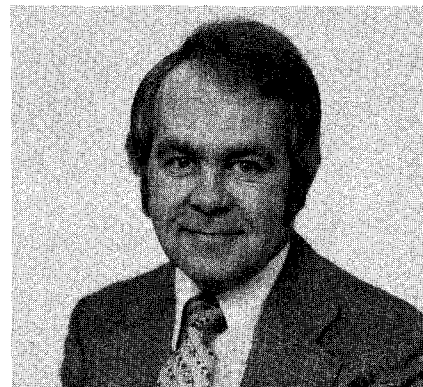
Oliver W. Krueger

Mr. Oliver W. Krueger was selected for the position of associate director in the Community and Economic Development Division with the responsibility of directing GAO functions in the Transportation Program.

Mr. Krueger received a B.S. degree in accounting from Ferris State College in Big Rapids, Michigan, and also attended the University of Michigan for specialized courses. In 1974 he attended the Executive Program in business administration at Columbia University, and in 1980 he attended the Federal Executive Institute's Program in Executive Leadership and Management.

Since joining the GAO in 1959, Mr. Krueger has had diverse assignments with the Detroit regional office and the Community and Economic Development Division. His assignments have primarily been in the areas of transportation, environment, food, and land use.

Mr. Krueger is a member of the American Institute of CPAs, the Michigan Association of CPAs, the National Association of Accountants, and the Association of Government Accountants. He received a Director's Award in 1981 and was awarded GAO Meritorious Service Awards in 1961, 1976, and 1981.



Thomas P. McCormick

In July 1981 Mr. Thomas P. McCormick was selected to be the regional manager of the San Francisco regional office. Before that Mr. McCormick was the director of the Office of Policy.

Mr. McCormick joined GAO in 1963. He has had a diversity of experience with GAO including assignments at the Veterans Administration, the Department of Justice, the National Institutes of Health, the Atomic Energy Commission, and the Department of Defense. Before being designated director of Policy in February 1981, Mr. McCormick was a senior associate director in the Human Resources Division.

Mr. McCormick is a graduate of St. Vincent College, Latrobe, Pennsylvania, and received his M.A. degree in public administration from American University. He is a CPA (Virginia) and a member of the American Institute of CPAs. In 1972 he received a Group Meritorious Service Award, the GAO Career Development Award in 1973, and a Meritorious Service Award in 1976.

Other Staff Changes

NEW ASSISTANT DIRECTOR

International Division (European Branch)

Jerry D. Huffman

NEW ASSISTANT REGIONAL MANAGER

Field Operations Division (Atlanta)

John P. Competello

NEW SUPERVISORY GAO EVALUATOR

Energy and Minerals Division

Lucille B. Perholtz

Federal Personnel and Compensation Division

Harold J. Johnson, Jr.

International Division

Joseph F. Murray

NEW SUPERVISORY GAO ACCOUNTANT

Community and Economic Development Division

Victor S. Rezendes

NEW SUPERVISORY SCIENCE POLICY ANALYST

Program Analysis Division

Mary R. Hamilton

NEW ATTORNEY-ADVISER GENERAL

Office of the General Counsel

Kenneth M. Mead

REASSIGNMENTS

Accounting and Financial Management Division

Thomas F. O'Connor

Human Resources Division

John W. Lainhart, IV

Institute for Program Evaluation

Wallace M. Cohen

International Division

Thomas R. Brogan

Retirements

Martha Ford	Clerk	Accounting and Financial Management Division
Iva Sessoms	Claims Examiner	Accounting and Financial Management Division
Vanessa Hood	Clerk	Office of Publishing Services
John Kingery	Evaluator	FOD-Los Angeles
Willis B. Levie	Evaluator	FOD-Atlanta
Mary D. Smith	Evaluator	Federal Personnel and Compensation Division
Arthur B. Litke	Consultant	Accounting and Financial Management Division
Rose Drucker	Technical Adviser	Accounting and Financial Management Division
William Goos	Evaluator	FOD-Denver
David Nichols	Evaluator	FOD-Los Angeles
Patsy Vandiver	Supervisory Auditor	Procurement, Logistics and Readiness Division
Mary A. Esperancilla	Claims Examiner	Accounting and Financial Management Division

New Staff Members

The following new staff members reported for work during the period June 19, 1981, through September 18, 1981.

Office of the General Counsel	Dempster, W. J. Gibson, Lyn H. Joseph, Barbara A. Knox, Vincent Lim, Lucious Morrow, Charles W.	New York Law School College of William and Mary Commonwealth of Massachusetts Villanova University Rutgers Law School Howard University
General Services and Controller	Maris, Ruth Ann	Consumer Product Safety Commission
Office of Organization and Human Development	Johnson, Howard N.	Howard University
Accounting and Financial Management Division	Roos, Patricia	Funding System Corporation
Federal Personnel and Compensation Division	Abner, Marion E.	Department of Energy
International Division	Crissman, Donna R. Spivack, Berel	Self-Employed Washington State University

REGIONAL OFFICES

Atlanta	Farmer, Mary Sue	Atlanta University
New York	Atkinson, Daphne E. Murray, Sheila E.	St. Martins' Press Department of Education
Kansas City	Meek, Mary J. Reed, Ada K.	Department of Energy Self-Employed
Washington	Crisp, Joyce D. Jenkins, Ivy Zelenski, Stephanie L.	Dart Drug Automated Datatron Inc. Ellis April, M.D.

Professional Activities

Office of the Comptroller General

Milton J. Socolar, Acting Comptroller General, addressed: Association of Government Accountants' 31st Annual Symposium, Miami, June 3.

American University Washington Semester Program, Sept. 8.

John D. Heller, Assistant Comptroller General for Policy and Program Planning, addressed the following groups:

OPM Executive Seminar on Public Program Management on "Role of GAO in Program Results Studies," Kings Point, N.Y., Aug. 6.

American University students on "The Expanding Role of the General Accounting Office," Washington, Sept. 10.

Harry S. Havens, Assistant Comptroller General for Program Evaluation:

Chaired a panel at the Evaluation Research Society Annual Meeting. The discussion was "Integration of Evaluation and Budgeting — Can it be Done?" Austin, Tex., Oct. 1.

Spoke at the Third Annual Senior Financial Management Seminar, sponsored by the Graduate School, USDA. His topic was "Program Evaluation," Washington, Nov. 23.

Office of the General Counsel

Rollee H. Efros, associate general counsel, participated in the FBA Annual Convention, as moderator of the panel on "The Crucial Role of Appropriations Statutes and Financial Policies in Federal Government Procurement: New Developments and Problem Areas," and also spoke on "Overview of Legislative Funding Restrictions: The Rules of the Game," during the panel discussion, in Denver, Sept. 7-11.

Seymour Efros, associate general counsel, participated as Chairman of the Government Contracts Commit-

tee in the Federal Bar Association Annual Convention in Denver, Sept. 7-11.

Ronald Berger, assistant general counsel, addressed an Office of Personnel Management seminar on ADP source selection on the GAO bid protest process and ADP cases, Aug. 13.

Michael J. Boyle, senior attorney, spoke before procurement seminars for GAO auditor/evaluators, Aug. 20 and 26.

Charles L. Browne, III, attorney-adviser, attended:

The Annual Meeting of the American Bar Association in New Orleans, Aug. 6-12.

The Federal Bar Association Convention in Denver, Sept. 8-11.

Herbert I. Dunn, attorney-adviser, attended the FBA Annual Convention as GAO delegate to the Executive Council, Capitol Hill Chapter, and member of Board of Directors, Division of Younger Lawyers, in Denver, Sept. 8-11.

Marilynn M. Eaton, attorney-adviser, participated as a panelist at the 10th Annual Convention of the National Association of Minority Certified Public Accounting Firms' Workshop on "Procurement of CPA Services by Federal Agencies," in Memphis, Aug. 26.

Sylvia L. Shanks, attorney-adviser, attended the National Bar Association Convention in Detroit, July 27-31.

Accounting and Financial Management Division

Wilbur D. Campbell, acting director, gave the keynote address on "A New Era in Federal Information Management," at the Special Conference on Implementing The Paperwork Reduction Act—Public Law 92-511, College Park, Md., July 14.

Ronald J. Points, associate director:

Was elected to the National Council on Governmental Accounting (Executive Committee).

Spoke at the annual Association of

Government Accountants Symposium on "Government Accounting Standards," in Miami, Fla., on June 30.

Received the Authors Award from the Association of Government Accountants for his participation on the Task Force for "Internal Controls in Government," June 29.

George L. Egan, associate director: Participated in the National Intergovernmental Forum on the progress of implementing OMB Circular A-02, Attachment, Washington, Aug. 4.

Spoke on "Single Audit," at Deloitte, Haskins and Sells 1981 Urban Mass Transit Industry Conference, Washington, Aug. 25.

Spoke on Fraud, Waste, and Abuse before the Baltimore Federal Executive Board's Risk Assessment Seminar, Baltimore, Aug. 28.

Virginia B. Robinson, associate director:

Spoke on "Accounting Priorities at the Federal Level—A Question of Perspective," before a conference of the National Institute for Management Research in Washington, July 15.

Was appointed to the National Board of Directors, Association of Government Accountants.

Joseph J. Donlon, senior group director:

Spoke on "New Financial Management Techniques," before the National Training Conference for Federal Fiscal Technicians in Bethesda, Sept. 4.

Was appointed cochairman of the Certification Committee of the Association of Government Accountants.

W.A. Broadus, group director: Was appointed to the American Institute of Certified Public Accountants' Auditing Standards Advisory Council and to the Management Advisory Services Practice Standards Subcommittee.

Was appointed to the Visitation Committee of the Accreditation Council of the American Assembly of Col-

legiate Schools of Business for 1981-82.

Kenneth Pollock, group director: Spoke on GAO's Computer Auditing Standards at the EDP Auditors Association's 9th International Conference in Washington, June 22-23.

Was selected for Seminar Chairman for Washington Chapter of the Institute of Internal Auditors for fiscal years 81 and 82.

James Watts, group director: Spoke on "Computer Related Fraud: Current Issues and Direction" before the 40th International Conference of the Institute of Internal Auditors in Phoenix, June 8.

Spoke before the Sixth National Conference of the American Institute of Certified Public Accountants for CPAs in Industry in Atlanta, May 7.

Spoke on "Achieving Greater Economics in Data Processing in the Federal Government," before the Intergovernmental Council on Technology of Information Processing in San Francisco, June 10.

Robert A. Pewanick, group director, was selected to be a member of the Association of Government Accountants' National Bylaws Committee.

Ronald Boothe, systems accountant, was appointed GPO liaison for the Northern Virginia Chapter of the Association of Government Accountants.

George Englert, systems accountant, was appointed Newsletter Editor for the Washington Chapter of the Association of Government Accountants.

Joseph Jacques, systems accountant, was appointed Meetings Director of the Washington Chapter of the Association of Government Accountants.

Kenneth W. Leland, systems accountant, received a silver emblem from the Baltimore Chapter of the National Association of Accountants for 25 years of membership.

Raymond C. Kudobeck, systems accountant, was selected to be Chairman of the Employment Referral Service for the Washington Chapter, Association of Government Accountants.

Sophia S. Ku, systems accountant,

was selected to be Meetings Director for the Baltimore Chapter of the Association of Government Accountants.

David B. Shumate, systems accountant, was selected to serve as chairman of the publicity committee of the Washington Chapter, Association of Government Accountants.

Steven Merritt, computer specialist, chaired a panel on "Innovation in Software Development," at the 20th Annual Joint National Bureau of Standards/Association for Computing Machinery Symposium at the University of Maryland, College Park, on June 18.

Lee S. Beaty, systems accountant, was appointed Secretary and Arrangements Committee Chairman for the Washington Chapter of the Association for Systems Management's 1981-82 program year.

Paul S. Benoit, computer specialist, was selected by the editors for inclusion in the recently published 1981-82 18th edition of *Who's Who in the East*, a biographical reference publication.

Norma K. Drake, computer specialist, was elected President, Washington Chapter Association for Systems Management. Secretary/Treasurer, Division Council 6, Association for Systems Management.

Ronald Kozura, computer specialist, was elected to the Board of Directors for the Washington Chapter of the Association for Systems Management.

Community and Economic Development Division

Steve Keleti, supervisory evaluator, was interviewed by Lynn Flester of the U.S. Chamber of Commerce on GAO's reviews of the Small Business Administration, in Washington, June 26. The interview, which was videotaped, will be edited and combined with similar interviews of Rep. Parren Mitchell, Chairman of the House Small Business Committee, and Michael Cardenes, SBA Administrator, into a Chamber-sponsored TV program, "Washington Update."

Roy Kirk, supervisory evaluator, was

a panelist at a workshop on "Public Land Acquisition and Alternatives," sponsored by the Subcommittee on Public Lands and Reserved Water, Senate Committee on Energy and Natural Resources, in Washington, July 9. He was also interviewed by Dave Ottalini of Haniscope Broadcasting Corporation about GAO's report, "National Direction Required for Effective Management of America's Fish and Wildlife." The interview will be broadcast on television stations in Wyoming, Montana, and California.

Stan Czerwinski, evaluator, spoke on "Techniques for Evaluating Assisted Housing Programs," before the Policy Analysis Workshop of the University of Massachusetts' Masters of Public Administration Program, in Amherst, June 30.

Dennis Parker, evaluator, spoke on "Current Status of State Problem Identification: The GAO Perspective," at the Transportation Research Board Conference, in Kings Point, Oh., Aug. 4.

Mike Ogles, evaluator, participated in a panel discussion on "Water Resources Research: Future Direction," before the Interstate Conference on Water Problems, in Baltimore, Aug. 19. He also participated in a panel on "Water Reuse Needs and Funding," at the Water Reuse Symposium II, in Washington, Aug. 24.

Energy and Minerals Division

J. Dexter Peach, director, spoke: On "Trends in Federal Regulation Research and Development," before the Electric Research Advisory Council of the Electric Power Research Institute, Aspen, Co., Aug. 18.

Before the Society of Petroleum Engineers, American Institute of Mining and Metallurgical Engineers, on "GAO's Work in Oil, Gas, and Synthetic Fuels," in Washington, Sept. 15.

Flora Milans, group director: Was elected vice-chairman for Programs, Society of Petroleum Engineers.

Was elected Chairman, Housing

and Entertainment Committee, Eastern Regional Committee, Society of Petroleum Engineers.

Bill Kruvant, supervisory economist, participated in a panel on energy policy held by the Western Economics Association, July.

Rosellen McCarthy, evaluator, was selected as an "Outstanding Young Woman of America for 1980" in recognition of personal and professional accomplishments. The selecting committee consisted of members from such groups as the National Federation of Business and Professional Women and the American Association of University Women.

Marianne Kah, management analyst, spoke on "Can Underground Coal Mining Productivity Be Improved?" before the American Mining Congress Coal Convention, St. Louis, May.

Federal Personnel and Compensation Division

Joseph J. Kline, group director, and **William Bosher**, assignment manager, spoke on GAO's role in reviewing training programs for the civilian work force before the Interagency Advisory Group, Office of Personnel Management, July 24.

General Services and Controller

Susan B. Burtner, deputy director, spoke on "Marketing Information Services," before the University of Maryland Alumni at a seminar held at the College Park campus, Sept. 19.

General Government Division

Daniel Harris, assistant director, and **John Gunner**, senior evaluator, discussed the report "Streamlining Legal Review of Criminal Tax Cases Would Strengthen Enforcement of Federal Tax Laws" (GGD-81-25, April 29, 1981), before the Tax Section of the American Bar Association, Washington.

Rachel B. Hathcock, senior evaluator, was appointed by the Prince William County Board of Supervisors to serve on the Consumer Protection Commission during the period September 15, 1981, through September 14, 1984.

John Butcher, senior evaluator, was a panelist at the Information Resources Management Round Table on "Reducing and Controlling Paperwork," sponsored by the *IRM* magazine, 3M Corporation, and the Association of Records Managers and Administrators, Washington, Sept. 10.

Linda L. Harmon, GAO evaluator, was elected in June 1981 to a 2-year term as a National Director of the National Association of Accountants (NAA). In April 1981 she was also elected the Principal of the Potomac and Chesapeake Council of NAA which covers chapters in Maryland, Washington, D.C., and parts of Virginia, West Virginia, and Pennsylvania.

Human Resources Division

Carl Fenstermaker, group director, and Dr. Murray Grant, chief medical advisor, along with **Ron Vieregge**, senior GAO evaluator, and **Phil Godwin**, GAO evaluator, Detroit, briefed the Congressional New Drug Review Commission on the results of our review of the Food and Drug Administration's efforts to speed up the drug review process, in Washington, Sept. 21.

Institute for Program Evaluation

Eleanor Chelimsky, director: Delivered an invited address entitled "Making Evaluations Relevant to Congressional Needs" to the American Psychological Association's annual convention in Los Angeles, Aug. 24.

Spoke on current issues in program evaluation with Professors Lee Cronbach (Stanford) and Thomas Cook (Northwestern) at the American Psychological Association's

convention in Los Angeles, Aug. 24.

Heber Bouland, group director, spoke on "Changes in Seafood Processing Technology," at the 1981 summer meeting of the American Society of Agricultural Engineers in Orlando, Fla., June 24.

Kwai Chan, group director, and **Marianne Pietras**, social science analyst, presented a paper entitled "Assessment of DOD's Joint Testing and Evaluation Program," at the 47th Military Operations Research Society meeting in Washington, July 7.

Wallace M. Cohen, senior group director, was the invited chairman of the National Institute of Public Affairs Panel "Managing with Scarce Resources: Program Evaluation," for Presidential Management Interns in Easton, Md., July 8.

Joseph F. Delfico, associate director:

Spoke at the Eastern Evaluation Research Society Conference, University of Pennsylvania, on "Evaluation and Federal Policy: A Two Way Causal Relationship," in Philadelphia, May 11.

Addressed participants at the International Monetary Fund's public finance course on "Program Evaluation in the U.S. Government," in Washington, July 15.

Spoke at the American Association of Colleges for Teacher Education seminar on block grants on "The State of the Art in Block Grant Program Evaluation," Sept. 10.

Terry E. Hedrick, evaluator, co-authored a background paper for the Committee on National Statistics, National Research Council, entitled "Guidelines for Sharing Social Science Data," Aug.

Arthur J. Kendall, statistician, co-authored a paper entitled "Developing an Empirical Typology of Counties in Five Western States," which appeared in *Socio-Economic Planning Sciences*, Vol. 15.

Waverly E. Sykes, principal operations research analyst, spoke on "Models, Data, and War," before the Gaming and Simulation Working Group, 47th Military Operations Research Symposium in Washington, July 7.

Olga Towstopiat, social science analyst:

Presented a paper entitled "Measuring Observer Agreement with Log Linear Models," at the American Psychological Association convention held in Los Angeles, Aug. 28.

Spoke on "Procedures for Conducting Federal Program Evaluations," at the annual meeting of the American Psychological Association—Division 18 (Psychologists in Public Service), Aug.

Coauthored an article with J. Bergen and J. Luiten entitled "A Computer Program for Multidimensional Contingency Table Construction," which appeared in *Educational and Psychological Measurement*, Vol. 40.

Heather E. Wiltberger, social science analyst, presented a paper entitled "Selections from Youth Employment Study," at the Economics Section of the Research Forum, White House Conference on Youth in Washington, May 18-19.

Carl E. Wisler, deputy associate director, spoke on evaluating the delivery of program services before the American Association of Budget and Planning Analysts in Washington Sept. 10.

International Division

Frank Conahan, director:

Was the invited guest speaker at the Secretary's Open Forum, Department of State, in Washington, Aug. 12. His talk, "A Critic's View of the Management of Foreign Affairs," dealt with GAO's longstanding and continuing involvement with the foreign affairs community. Following his prepared remarks, he answered questions about GAO/ID from a large and diverse audience.

Discussed "The Role of the GAO in Foreign Policymaking" at American University's Washington Foreign Policy Semester, Sept. 10.

Frank Zappacosta, senior group director:

Chaired a Board meeting as Chairman of the Board of External Auditors of the Organization of American States, held in Asuncion, Para-

guay, Aug. 3-Sept. 5. Accompanied by **Jesus Martinez**, auditor, they discussed the Board's Annual Report for 1980.

Presented a case study in operational auditing at the INTOSAI Conference as the U.S. representative, held in Vienna, Austria, Sept. 14-25. He was accompanied by **Fred Layton**, director, European Branch.

Gretchen Bornhop, **Sheila McCall**, and **Mark McLachlan**, GAO evaluators, participated in a program on "Accounting and Auditing Careers in Government," conducted jointly by the University of Hawaii Accounting Club and the Association of Government Accountants, Honolulu, Oct. 15.

James Hamilton, evaluator, chaired a technical workshop on "Worldwide Developments in Governmental Financial Management" at the Association of Government Accountants' National Symposium in Miami, June 29. Members of the panel included the Comptrollers General of Mexico and Nicaragua. Hamilton is Vice-Chairman of AGA's International Affairs Committee.

William Slot and **Allan Hovey**, supervisory evaluators, conducted a class session of the Advanced Consular Course at the State Department's Foreign Service Institute on the role of GAO and on ID's Report to the Congress "U.S. Consular Services to Innocents—and Others—Abroad: A Good Job Could Be Better With a Few Changes," June 1. Hovey, with **John Redell** and **Stephen Hachten**, supervisory evaluators, conducted a similar session at the Institute, Jan. 21.

Joint Financial Management Improvement Program

Susumu Uyeda, executive director: Gave a presentation on "Presidential Financial Management Issues," at the Financial Management Symposium sponsored by the Department of Defense in Fredericksburg, Va., July 22.

Gave a presentation on productivity

improvements in finance and accounting operations for the OPM's Management Science Training Center's senior managers training course in Washington, July 29.

Gave a presentation on JFMIP's project on FAADS pass-through grant information system at the National Intergovernmental Audit Forum in Washington, Aug. 4.

Gave a presentation on JFMIP's recent projects at the HUD's Regional Finance Director's Meeting in Washington, Aug. 19.

Kenneth Winne, senior project manager, passed the CPA examination in Washington.

Mission Analysis and Systems Acquisition Division

Walton H. Sheley, Jr., director, spoke on "Systems Acquisition Management" at the National Institute for Management Research Symposium in Washington, July 15.

Donald E. Day, senior associate director:

Participated in a panel discussion on "Personnel and Training Factors in Systems Effectiveness," at the National Security Industrial Association's annual meeting in Absecon, N.J., June 29-30.

Briefed the State Comptroller of Israel on "Major Weapon Acquisition in the Department of Defense," Washington, July 9.

Together with **Marvin Casterline**, senior evaluator, briefed the Defense Science Board's Special Summer Study Group on Operational Readiness concerning GAO's report "Effectiveness of U.S. Forces Can Be Increased Through Improved Weapon System Design," San Diego, Aug. 4.

Raymond A. Hautala, group director, spoke on "The Need to Maximize Use of Remotely Piloted Vehicle Technology to Save Lives and Dollars," before the Eighth Annual Symposium of the Association for Unmanned Vehicle Systems, Washington, July 22.

Lester C. Farrington, Jr., group direc-

tor, discussed "GAO's Role in Test and Evaluation," at the Defense Systems Management College, Fort Belvoir, Va., Aug. 27.

Office of Organization and Human Development

William Anderson, GGD; **Joseph Comtois**, AFMD; **Frank Conahan**, ID; **George Egan**, AFMD; **Paul Lazar**, OOH; and **Everette Orr**, PLRD; participated in a training program on basic auditing concepts and methods for the Inspector General's Office of the Department of State, Sept. 8 and 9.

Personnel

Felix R. Brandon, II, director, spoke on "The Nature of the Executive Experience," before candidates for the Senior Executive Service at the Denver Executive Development Seminar, July 23.

Procurement, Logistics and Readiness Division

Don Horan, director, participated in the Developmental Diagnostic Center—a component of the Executive Candidate Development Program designed to develop SES candidates, in Washington, Aug. 10-12.

John Landicho, senior associate director, discussed GAO's report on the Industrial Base, on a panel sponsored by the Executive Intelligence Review, in Washington, Sept. 30.

Clark Adams, group director, participated in a panel discussion on cost accounting standards maintenance and contract profit limitations, before the Machinery Financial Reporting, in Arlington, Va., June 11.

Ron King, senior evaluator, participated in a meeting of the Executive Planning Committee for the International Conference on Computers and Computer Graphics in the Building Process, Building Research Advisory Board, National Academy of Sciences, in Washington, Sept. 10.

Program Analysis Division

Kenneth W. Hunter, senior associate director:

Was elected President of the National Council of Association for Policy Sciences which serves as coordinating body for professional societies in the Washington area.

Was elected Vice-President of the American Association for Budget and Program Analysis.

Chaired a workshop on "The Impact of National Policy Changes on the Policy Sciences," sponsored by the National Council of Associations for Policy Sciences, Washington, May 28.

John Luke, group director, and **Marion Jackson**, evaluator, conducted a workshop at American University's Fourth Annual Federal Information Institute on Federal Databases, Washington, June 12. They discussed access to and use of GAO's Congressional Sourcebooks.

Field Operations Division

Office of the Director

Francis X. Fee, director, addressed participants of the Wayne State University Washington Seminar on "The Internal Operations of the General Accounting Office," Detroit, June 19.

Atlanta

Elkins Cox, evaluator, spoke on the role of the General Accounting Office in program evaluation to the Evaluation Staff of the Social Security Administration, Atlanta, Aug. 25.

Chicago

Verne Gilles, senior evaluator, was elected president of the Minneapolis-St. Paul chapter of the Association of Government Accountants for the 1982 program year. He will be assisted by

Gerald Kelly, a senior evaluator, who will serve as a program director, and by **Cynthia Rasmussen**, **Curtis McJunkin**, and **Darrell Rasmussen**, evaluators, who will serve as directors of socio-economics, publications, and activities, respectively.

Cincinnati

Arthur Foreman, evaluator:

Addressed the Cincinnati Club on computers, EDP Auditing and Fraud, Cincinnati, Sept. 11.

Was the speaker at the meeting of the Cincinnati Chapter of the Association of Government Accountants, Oct. 15. His topic was techniques for identifying computer fraud.

Elmer Taylor, assistant regional manager, and **Robert Murphy** and **Robert Kissell**, evaluators, participated in a press conference with **Walton Sheley**, director, MASAD, in conjunction with the release of a MASAD report entitled "Countervailing Strategy Demands Revision of Strategic Force Acquisition Plans," Washington, Aug. 4.

Dallas

Frank Borkovic, assistant regional manager, and **Jerald Boykin**, senior evaluator, conducted a seminar on operational auditing for the advanced auditing class and discussed GAO's mission and organization before the officers of the University Accounting Society, Texas A&M University, Apr. 30.

Francis Langlinais, senior evaluator, has been elected Regional Vice President, Association of Government Accountants, Southwestern Region, for fiscal year 1982.

Denver

James K. Meissner, evaluator, discussed "Future Water Supplies," before the Colorado River Basin meeting of the League of Women Voters, Denver, July 27.

Herman H. Velasquez, evaluator, discussed GAO's evaluation of social

programs with three representatives of the Mexican Government agency equivalent to GAO (Contaduria Mayor de Hacienda de La Camara de Diputados), Denver, Aug. 24-28.

Joseph J. Buschy, evaluator, together with **L. Michael Ogles**, CED, represented GAO on a water resources research panel at the Joint Interstate Conference on Water Problems, Baltimore, Aug. 19.

Detroit

William F. Laurie, evaluator, submitted a paper entitled "Need for Meals: A National Perspective," which was presented at the Joint Annual Meeting of the Gerontological Society of America and the Canadian Association on Gerontology, Toronto, Nov. 8-12.

Kansas City

Donald Birkman, evaluator, spoke on "Auditing Word Processing Programs," at a word processing seminar held by the GSA National Archives and Records Service, Kansas City, July 28.

Los Angeles

Don Freidman, supervisory evaluator, spoke on "Civic Financial Planning" before the Huntington Beach City Council and Operating Board of Directors, July 8.

Fred Gallegos, management science group supervisor:

Spoke on "EDP Audit Career Paths," at the Ninth Annual International Conference of the EDP Audit Association, Washington, June 23-24.

Taught a graduate level course on "Survey of Data Processing," at California State Polytechnic University, Pomona, during the summer session.

New York

Bernard Rashes, evaluator, spoke on "A Career in Federal Service," at the New York Institute of Technol-

ogy, Apr. 21.

Rudolf Plessing, evaluator, and **Nicholas Zacchea**, senior evaluator, conducted a seminar on "GAO Duties and Responsibilities and Its Current Organizational Structure," at City University of New York, Apr. 13.

Harry Taylor, evaluator, spoke on "The Role of GAO in Auditing Federal Programs," at a meeting of the Fort Monmouth Chapter of the National Contract Management Association, June 25.

Philadelphia

Ralph Carlone, regional manager, spoke to the Citizens' Committee on Investigations on GAO's efforts related to waste, fraud, and abuse in Federal programs, Cherry Hill, N.J., July 16.

Gary L. Johnson, evaluator, has been selected by the Pennsylvania Institute of Certified Public Accountants—Pittsburgh Chapter, to serve on its committee for members not in public practice.

San Francisco

Jeff Eichner, evaluator, assumed office as Western Regional Vice President of the Association of Government Accountants, July.

Jack Birkholz, evaluator:

Was a panelist for a workshop on preparing for performance and fiscal audits at the annual meeting of the Society of American Archivists, Berkeley, Sept. 3.

Was coauthor of an article on Intergovernmental Audit Committees that appeared in the August 1981 issue of *The Internal Auditor*.

Art Davis, evaluator:

Together with **Randy Jones**, evaluator, taught a cardiopulmonary resuscitation training class for employees of West Coast Life Insurance Company, San Francisco, Aug. 20.

Taught cardiopulmonary resuscitation training classes for employees of the Internal Revenue Service, San Francisco, Aug. 27, and for a group at a District Health Center of

the city of San Francisco, Sept. 10.

Discussed career opportunities in accounting at a career day sponsored by Horizons Unlimited of San Francisco, July 23.

Elliott Smith, evaluator, spoke on the subject of fiscal conditions in U.S. cities at a conference on Urban Economics, Politics, and Policy at San Francisco State University, Oct. 1.

Seattle

Charles D. Mosher, senior evaluator, was appointed a member of the National Water Resources Policy Committee, American Water Resources Association, Jan. 1981.

Donald A. Praast, senior evaluator, was elected president of the Seattle Chapter, Association of Government Accountants, for the 1981-82 term, Apr. 1981.

James L. McMullin, senior evaluator, and **Charles H. Shervey**, evaluator, along with **John Ols**, GGD, discussed GAO's review of the use of court reporters in District Courts, at a meeting sponsored by the U.S. Judicial Conference's Subcommittee on Supporting Personnel, Hyannis, Mass., June 8.

Stephen J. Jue, technical assistance group manager, was elected Operational Vice-President for Publications of the EDP Auditors' Association and Trustee of the EDP Auditors' Foundation at the EDP Auditor's Association's Ninth International Conference, Washington, June 21-24.

Annual Awards for Articles Published in The GAO Review

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

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

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

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

Statement of Editorial Policy

This publication is prepared primarily for use by the staff of the General Accounting Office. Except where otherwise indicated, the articles and other submissions generally express the views of the authors and not an official position of the General Accounting Office.

Proposals for articles should be submitted to the Editor. Staff should concurrently submit a copy of their proposal letters to liaison staff who are responsible for representing their divisions and offices in encouraging contributions to this publication.

Articles should be typed (double-spaced) and generally not exceed 14 pages. Three copies of the final version should be submitted to the Editor. Article subject matter is not restricted but should be determined on the basis of presumed interest to GAO staff. Articles may be on technical or general subjects.

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