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Papers of the 7th International Congress of Supreme Audit Institutions

During the period September 7-16, 1971, the 7th International Congress of Supreme Audit Institutions was held in Montreal, Canada. The Congress was attended by delegations from 85 member countries of the International Organization of Supreme Audit Institutions (INTOSAI). This organization consists of the top national auditors of the 139 member countries.

INTOSAI had its beginnings in the early 1950's. In 1953, at the invitation of the Cuban Government, auditors general and their counterparts from about 30 countries met for the first

time in Havana. Thereafter, congresses were held at 3-year intervals (e.g., 1962 in Vienna, 1965 in Jerusalem, and 1968 in Tokyo).

The head of INTOSAI is Dr. Jörg Kandutsch, President of the Austrian Court of Audit.

The 7th Congress in Montreal was the first in which the General Accounting Office, representing the United States, participated actively. The U.S. delegation was headed by *Elmer B. Staats*, Comptroller General.

The agenda for the Congress was based on four main topics on which



U.S. delegation listening to one of the speakers at the 7th International Congress of Supreme Audit Institutions in Montreal. From the right: Roland J. Sawyer, Edward F. Tennant, Oye V. Stovall, Elmer B. Staats, and E. H. Morse, Jr.

participating countries were invited to submit formal papers in advance. Each topic was assigned to a committee which was responsible for conducting the sessions at which their topic was discussed. Each committee consisted of a chairman, a vice chairman, a reporter or *rapporteur*, and a secretary. To the *rapporteurs* fell the main job of reviewing and summarizing the papers submitted in advance, leading the formal discussions, and then summarizing the proceedings and proposing recommendations for the Congress to consider.

The four topics discussed were:

I. Recruitment and Training of

Personnel of Supreme Audit Institutions

II. Electronic Data Processing and Other Technological Aids

III. Management or Operational Auditing

IV. Implementation of Recommendations Made by a Supreme Audit Institution

Because the summary papers presented by the *rapporteurs* on these important subjects reflect views from many countries who are concerned with the advancement or strengthening of their national governmental audit functions, the *Review* is privileged to include them in this issue.

Recruitment and Training of Personnel of Supreme Audit Institutions

If it pleases you, I shall read each of the questions which make up this topic and follow this with a summary of the principal observations regarding the papers presented by the various countries as well as the respective recommendations.

QUESTION 1

The basis on which employees are presently recruited and selected. Is the Institution able to make its own choice independently or must it accept what its Government's Civil Service assigns to it?

Introduction

In any branch of public administration the selection of new employees is important but in Supreme Audit Institutions a program of recruitment and selection is of even more relevance since those employees must perform very complex duties assuming great

responsibility. The two aspects of this question—selection of personnel and independence in its application—have been treated separately and the following presents the various approaches taken from the working documents presented to this Congress under each subdivision.

Basis of Recruitment and Selection

The activities of the Supreme Audit Institutions, in spite of many similarities, do not appear to be very uniform as regards the recruitment and selection of staff. We have been able to classify, based upon the papers presented by the various countries, areas of particular importance covering the following topics:

- Competition
- Prior Preparation
- Examination
- Experience
- Initial Remuneration
- Trial Periods

Competition

Many of the Supreme Audit Institutions accomplish the recruitment

¹ Other members of the Peruvian delegation were: Alfredo CHAN León, Contador Público Colegiado, Supervisor in Accounting and Auditing; Hector CERPA Bustamante, Capitán EP Ayudante; Roberto DELGADO Vega, Assistant Director, Advisor in Accounting and Auditing; Dr. Manuel L. RODRIGUEZ, United Nations Advisor, and James Wesberry, Advisor—Institute of Public Administration of New York.

of personnel by means of open competition in which any citizen who meets the necessary requisites for public employment is recruited. Such competition is made public through the press and other media.

Prior Preparation

Some countries do not require more than a secondary school education as a requisite to employment for new staff members who are recruited to hold the lowest level positions. This criterion is based upon the fact that they consider it easier to train the new employee than one who has come with some experience. The proponents of this approach feel that governmental auditing is different from auditing in the private sector and requires special training which the young person without practical experience or university level studies will assimilate better. Other countries require a university degree as a minimum for the new employee. Two of the developed countries mentioned limiting recruitment to quality graduates.

The majority of the countries indicated that in order to occupy positions at various levels the recruit should possess specific knowledge according to the responsibility of the position sought. Some countries accept university students while they continue their studies. Others provide scholarships or "cadetships" which permit the new staff member to complete his basic professional training.

In the countries where the professional designation of public accountant is a university degree, this may be a requisite of employment. Other coun-

tries require a degree in law in order to enter the service of the Supreme Audit Institution. Beyond all doubt the two professional specialities most preferred in the recruitment of staff are accounting and law. However, in recent years some countries have considered widening recruitment to include professional specialists in business administration, economics, mathematics, computer sciences, statistics, and engineering. The latter of these constitutes an indispensable professional speciality of the functions of control of the Supreme Audit Institution, principally in the evaluation of the public works. In general such countries are the ones which employ operational auditing in addition to financial auditing.

The general trend is to require educational qualifications related to the work characteristics of the institution. There is a growing emphasis in requiring more adequate professional preparation for entrance into the service of Supreme Audit Institutions.

Many countries take advantage of training available from institutes or superior schools of public administration and in at least one case all new public employees are graduates from the national school of public administration. In one country an educational advisory panel is maintained to help the Supreme Audit Institution with its efforts to recruit the best available university graduates for its staff.

Examination

The majority of the countries reporting indicate that the basis of staff selection is by means of examination.

Others consider university graduation as the only prerequisite. The examination for recruitment generally includes aptitude and intelligence testing and many finish the selection process with a personal interview. Several institutions take advantage of psychotechnical examinations applied by professionals in this field. Many Supreme Audit Institutions apparently have considered that the mere fact the candidate has a professional degree is not sufficient evidence to become a governmental auditor. They require special examinations in the field of accounting (commercial and governmental), auditing (commercial and governmental), and/or legislative provisions.

In some countries where examinations are given for the certification of accountants the Supreme Audit Institutions require that the auditor candidate has passed such examination. Other countries consider such examination as evidence of additional knowledge in the field, but not as a prerequisite for obtaining employment. There is no doubt that such examinations can be useful in these countries.

We believe that it is the general opinion of the Supreme Audit Institutions that all candidates should be subjected to a written and/or verbal examination of their professional knowledge.

Experience

Under this topic there are two extreme points of view. Some countries prefer young graduates from secondary schools without experience. Others prefer to attract professionals with vast experience in other governmental

agencies. This latter concept is based upon taking advantage of fully trained persons who have many years of service in public administration. Staff thus are selected from among the personnel of the entities audited. The countries which are not in agreement with this concept indicate that the staff will not be completely independent if they audit the agency where they were previously employed. Nevertheless some of the countries believe that previous experience in public administration increases the professional quality of the staff.

In general the staff of Supreme Audit Institutions require technical experience commensurate with the level of responsibility they assume. Several countries mention that it is almost impossible to find new staff members with practical experience in governmental auditing because their institution is the only one of this type in the country.

Initial Remuneration

Several countries mentioned that the problem of recruiting and/or retaining trained staff is due to the low salaries in public administration in general and in the Supreme Audit Institutions in particular. The countries which mentioned this problem are in agreement that the salaries for the staff of Supreme Audit Institutions are lower than those of the public and private sectors in general.

One country pointed out that the office of the auditor might be considered a training institution for recent secondary school graduates because the low salaries encourage the staff to

seek more lucrative employment in private enterprise and other public entities after completing their training.

Trial Periods

Perhaps the area of greatest agreement among the Supreme Audit Institutions is the utilization of trial periods of employment or in other words actual evidence of satisfactory work. The trial periods mentioned were from 3 to 30 months depending upon the level of responsibility as well as previous experience in public or private administration. Almost all the Supreme Audit Institutions reporting utilize trial periods for their new personnel before their permanent employment.

Independence in Selection

The majority of the Supreme Audit Institutions are subject in one manner or another to uniform regulations governing recruitment for the public administration of the nature of "Civil Service." Some are exempt from the general provisions or have special rights or understandings which permit greater measure of independence. Others are required to accept the candidates proposed. One country has a special board for the audit service which is independent of the civil service commission.

Some of the approaches tending to solve the problem of independence of staff selection within the legislative framework of each country regarding the civil service are as follows:

- The Auditor General consults with the civil service board.

- The Auditor General may attend meetings of the civil service board and ask questions of the candidates.

- The Auditor General accepts the staff members proposed by the civil service board reserving the right to reject them if after a period of probation it is determined that they do not meet the requisites necessary for their position.

- The Auditor General has the authority to release any employee who is not satisfactory.

- The Auditor General proposes candidates to the civil service board.

- In spite of a lack of independence under the existing legislation in certain countries, a mutual understanding and cooperation exists regarding the importance of adequate audit personnel in such manner that the civil service board and the Auditor General jointly make the selection or the board accepts the persons recommended by the Auditor General as a result of separate recruitment.

In summary it may be said that many Supreme Audit Institutions have achieved independence in the selection of their staff personnel even though subject to national civil service legislation. We consider that the best approach appears to be a close cooperation between the Supreme Audit Institution and the civil service board.

QUESTION 2

A description of how its staff is trained. If this is left to the Supreme

Audit Institution to arrange, which method does the Institution employ: (1) in-house training, (2) special courses designed for the Institution itself, or (3) in the same manner as the staffs of international accounting firms are trained, that is, articling for a professional degree.

In order to focus upon the development of this classification of training, we should clarify that in type (1) we include the preparation of the auditor within the Supreme Audit Institution in all forms including preparation by working as well as that through schools, seminars, etc., which might function within the institution.

The second group (2) includes basically the preparation of the auditor in institutions outside of the Supreme Audit Institution.

In all systems the human element plays an important role, because the systems are closely related to said element; consequently we can see the necessity for paying due attention to all staff members charged with achieving the required efficiency in the area of fiscal control.

The important function of auditing the administration of public funds, which is the responsibility of Supreme Audit Institutions, is not only related to addition and subtraction, but to other aspects more profound such as determining the correct involvement of funds, verification of accuracy of operations, and in general evaluating all administrative actions. Thus the reputation of the persons in charge of administering and managing public resources is in our hands. For this rea-

son, this topic is even more important. Achievement of this goal requires a highly capable, well-trained, morally upright staff in order that it be possible to perform their duties with high efficiency.

It is worthwhile to mention that all of us are in agreement regarding the training of personnel as this is the common denominator and a very difficult task for the institution or for outside entities which specialize in this field, whether they be within or without the country.

In-House Training

Training is carried out in some countries by grouping the personnel according to category and years of service in the audit institution and for this purpose establishing groups of officials and/or employees who have recently entered the service, those of middle-level category, and the higher officials.

The *first group* requires that its training be oriented primarily toward learning the functions of the Supreme Audit Institution as well as introductory courses in governmental auditing, accounting, budgeting, etc. The *second group* should have more advanced courses including courses in governmental accounting and auditing in much more detail than for the first group as well as report writing, electronic data processing, etc.

At the *highest levels* the orientation of the training programs is directed toward aspects of management and administration. Some countries make no



Brigadier General E. P. Oscar Vargas P., Comptroller General of the Republic of Peru, speaks on the topic of recruiting and training. Other members of the committee responsible for this topic, from the left: Errol W. Gregoire, Auditor General of Trinidad and Tobago; Jaime Robayo, Deputy Comptroller General of Colombia; Fernando Ch'esa, Procuratore Generale della Corte dei Conti and Chairman of the committee. At right, other members of the Peruvian delegation.

distinction by classes in their presentations.

The training process is generally carried out based upon a theoretical formation using for this purpose various techniques of staff training such as seminars, discussion groups, assigned reading, films, etc., and complementing said preparation with practical experience, i.e., by means of on-the-job training, under the supervision of an experienced official. Some countries have considered it necessary to rotate personnel within the institution in order that the auditor gain experience and knowledge in the various sections of the public administration.

Several countries maintain their own school or institute within the Supreme Audit Institutions to train personnel. Others have shown interest in the creation of such institutes. However, this appears not to have been practical due to the lack of the human and economic resources necessary, for which reason

they have been limited to offering isolated courses when the circumstances have demanded.

In staff training it is important to emphasize that, since fiscal control is one of the most important functions of the state, it is necessary to emphasize the knowledge of control techniques and the legislation which guides the actions of the public administration, for which reason the techniques of control are closely related to the legal system of each country. Actually, the duties of the auditor require that he have know-how not only in accounting but in the interpretation of legal provisions. This accounting-legal function will be achieved without prejudicing the development of the professionals in their respective fields; therefore their role transcends the limitations which result.

It should be expressed that many countries consider that training should be constant or permanent in order to

imbue the employees with the new techniques of control.

Special Courses Designed for the Institution Itself

There are two principal types of courses: (1) courses designed for training the professional auditor and (2) courses designed for further professional development.

With respect to the first type, some countries state that their personnel are trained by sending them to outside institutions charged with the preparation and training of public officials. These institutions are created for the purposes indicated as part of the public administration of each country.

Referring to the second type, we have observed that the highly specialized courses are generally given in learning institutions outside the Supreme Audit Institution either within or without the country. There is an aspect which we may introduce in reference to the preparation by the universities of future accounting professionals before their graduation.

We all know that in spite of the fact that the field of fiscal control is based upon the same fundamentals as the audit of private enterprises, it has in addition its own peculiar characteristics which require that the professional who comes to work in the Supreme Audit Institution (and in general in the public administration) should possess knowledge of this area acquired during his university career. For this reason it would be useful if the Supreme Audit Institution of each country could suggest that the universities

offer studies in the fields of accounting and auditing so that the graduates could gain knowledge related to the peculiarities of public administration; the functions of the Supreme Audit Institution; the standards, procedures, and techniques of governmental auditing; the legal provisions related to the audit process; the process of determining responsibilities; etc. This should facilitate their integration whether their eventual functions are part of either internal or external control.

It is unquestionable that the technical advances in the field of fiscal control require that the staff of the Supreme Audit Institutions update their knowledge constantly. However, as we have already observed, some countries indicate obstacles of economic or technical nature which impede this activity.

Therefore, it would be valuable for INTOSAI to sponsor the creation of one or more international institutes of technical training for governmental auditors which would permit the combining of human and economic resources making possible the development of modern technical training programs in the control of public finances.

The Supreme Audit Institution of the Republic of Peru would be willing to expand its programs of technical training to include the personnel of Supreme Audit Institutions of other countries, establishing in the City of Lima, with the approval of INTOSAI, an international institute or superior school of governmental auditing.

The financial resources to permit the technical training which I have men-

tioned might be obtained in various manners such as by contributions by the country members of INTOSAI with the support of international organizations or institutions which show interest in this activity.

However, it will be immediately asked, "What financial resources will we be able to arrange in order to shape the idea of these institutes?" I believe that in this area INTOSAI is a little behind with respect to other activities in the world.

In the regional area of South America we have, for example, organizations which unite, annually or on a permanent basis, professionals in different types of activity. For example, we have the case of an association of tax administrators of all the countries which meets annually in different places, and has its headquarters in one Latin American country, permitting the interchange of ideas and solutions to problems. If this can occur in the area of taxation, it is worth saying that in our area, to my way of thinking, a solution of this type should be arranged also in the area of public finance, or governmental auditing.

In order to achieve this, the member countries of INTOSAI might contribute annually an amount of money, so that it is not Austria alone which acts in this direction. This would not be an expenditure, but an investment, since we shall receive notable benefits as a result of this contribution. These contributions might be augmented by the international organizations or institutions which show interest in this activity.

Articling for a Professional Degree

As regards the portion of the question relating to training being given in the same manner as the staffs of international accounting firms, some countries have manifested that the peculiar conditions which are required for recruitment do not justify this application.

Also under this point we should consider the suggestions which several countries have made regarding the interchange of professional staff members among the Supreme Audit Institutions in order that they receive both theoretical and practical training over definite periods of time.

In consideration of the high degree of specialization in certain areas of fiscal control which has been achieved by some Supreme Audit Institutions, it would be well to take advantage to the maximum of the concept of an exchange of ideas and experiences, which was a fundamental in the formation of INTOSAI. Better than the mere exchange of documentation would be an exchange of audit staff for purposes of theoretical and practical training in specialized, highly developed fields in order to increase the diffusion of technical knowledge among the country members of INTOSAI.

Undoubtedly the more developed countries could contribute more than the developing countries but it would be interesting to know in each Supreme Audit Institution the techniques and procedures employed in the control of public finances.

As an example we might mention

that the Peruvian Supreme Audit Institution will shortly send two auditors invited by the State Comptroller of New York to participate in the daily activities of his office as a program of practical on-the-job training for a period of one year.

QUESTION 3

Comments by the institution on the kind of training it favours, e.g., program and performance auditing in addition to or as compared with financial auditing, systems analysis work, the application of automatic data processing capabilities in audit performance, etc.

Introduction

The opinions expressed re this question are more oriented toward the new fields of control than to the traditional financial audit. By no means did any country suggest that new concepts should replace financial auditing. It may be stated that the Supreme Audit Institutions are in agreement that training should still be directed principally to this field and that training in other fields should be considered complementary to and not as a substitute for training in financial auditing.

New Training Concepts

Regarding program and performance auditing—operational auditing, administrative auditing, efficiency auditing, etc.—some countries indicated that they had no plans in this area as

they considered it not to be a function of the Supreme Audit Institution or that they had no legal authority therefor. Many countries expressed their interest in extending their training programs to include operational or administrative auditing. Very few countries indicated that they have training programs in this type of audit. This indicates that there exists a need for professional training in this field.

The use of governmental funds must be related, in addition to mathematical accuracy and legality, to the efficiency of public spending.

A great interest in the field of electronic data processing and the necessity of training technical personnel in this new field have also been observed. Some countries indicated that they have initiated such training, taking advantage of available courses given by equipment manufacturers. Others pointed out that such courses were more directed toward programmers than auditors and thus they have developed their own courses.

Other Comments

Some entities put equal emphasis upon the importance of training in legal matters as well as accounting, recommending for the governmental auditor a training based upon the combination of these job areas.

Also mentioned were the lack of training centers and materials. Some interesting suggestions referred to the use of practice cases during training as well as the possible preparation of a compendium of forms of training employed by each Supreme Audit Institu-

tion, and/or compilation of a summary of the total training and audit experience in the form of a handbook of audit practice. Other methods mentioned include the necessity of continuous training, guarantees and awards, night university courses, collaboration with schools of public administration, training in foreign languages, etc.

As a very interesting contribution, we cite the opinion of one Supreme Audit Institution regarding the importance of the use of the chartered or certified public accountant. In court cases resulting from defalcation or special investigation, the prosecution could be at a distinct disadvantage if our officer in the witness box did not have that qualification when the defense could produce a chartered accountant so qualified. It is obvious that the Supreme Audit Institution must maintain a well qualified group of auditors to match those of similar qualification in the private sector.

QUESTION 4

Other interesting aspects

Under this item we might mention that in view of the coordination which should exist between internal auditing and external auditing, it would be useful if the training programs carried out by the Supreme Audit Institutions could be extended to the personnel of the agencies audited in order to unify technical criteria governing the field of fiscal control. This position is sustained by the fact that the system of control is based upon two points of

view—internal control and external control. These are oriented toward obtaining an efficient public administration as an instrument of development, thus the necessity of placing emphasis upon the training of the personnel concerned with internal control which facilitates the action of the Supreme Audit Institution in its functions of external control.

The great diversity of criteria regarding governmental auditing and accounting which exists in theory and in practice, both among the various country members of INTOSAI as well as among international organizations and advisors, requires, in addition to emphasizing compliance with generally accepted auditing standards, a unifying force by means of the promulgation of standards of governmental auditing. It would be useful, for example, to establish a uniformity of criteria regarding the audit of international loans among all the financial organizations and entities which make such loans.

In the field of governmental accounting, there is a great need to define and make known basic principles which should be observed in addition to the generally accepted principles of accounting of the private sector.

Recommendations

Recommendation 1

In the recruitment and selection of technical personnel of the Supreme Audit Institution, the following conditions should be considered.

- The candidate should be required to possess sufficient capabilities in order to grasp the knowledge relative to his field of work, according to the category of the position which he is to occupy as determined by a manual of job classification and should possess advanced or basic university level training. In the case of supporting technical duties, a university degree in the respective field of specialty should be required.
- The candidate should be evaluated prior to his acceptance.
- All new candidates should be contracted for a probationary period.
- If the recruitment depends on another public agency, the Supreme Audit Institution should retain the power to approve or reject the candidate proposed, except when the candidate is furnished by an organism whose ability to select him is duly recognized.

Recommendation 2

Supreme Audit Institutions should seek the creation of training centers within their own organization, which in addition to practical experience will deepen the knowledge of their personnel, whenever technical and economic resources permit.

Recommendation 3

It would be useful within the ability of each Supreme Audit Institution which maintains a training center to provide scholarships for studies by the staff of other Supreme Audit Institutions.

Recommendation 4

The Supreme Audit Institutions in each country should approach the centers of higher education, requesting that they establish academic programs oriented to the formation of professionals trained both in law and accounting, and that they place more emphasis in courses related to the areas of fiscal control and governmental auditing.

Recommendation 5

In order to be more effective and dynamic, INTOSAI should sponsor one or more international institutes of fiscal control for the purpose of providing a permanent and continual association among the member countries of INTOSAI, by means of specialized courses, seminars, exchange of publications, didactic material, training programs, professors or instructors, lecturers, etc. Such institutes should operate in coordination with the regional working groups, and with other international organizations, composed of or related to other Supreme Audit Institutions.

Recommendation 6

It would be advisable that the Supreme Audit Institutions program an interchange of professionals, one with another, for purposes of technical and practical training over definite periods of time, working jointly with the staff in nonconfidential areas of activity of the inviting institutions.

Recommendation 7

In order to unify technical criteria

among personnel concerned with internal and external control, it would be useful for the staff training programs which are carried out by Supreme Audit Institutions to be eventually extended to the personnel of the agencies audited.

Recommendation 8

INTOSAI should serve as a unifying organism in the fields of governmental auditing and accounting through the establishment of standards which ensure the compatibility of concepts among the Supreme Audit Institutions, as well as among international organizations and advisors.

Conclusion

Much of the content of these recommendations reflects the opinions of the various countries of the world. All of them, including your speaker, are convinced as to what was expressed so emphatically by Mr. Henderson, President of the Congress, that the labor of INTOSAI thus far has been limited to a very narrow frame, a frame which should be greatly expanded. According

to what he said, we should have great hopes that this will be done. This is a request which we make and which I, in particular, make. I do not know if the other countries in the same condition as Peru will do so, but we do believe that we should insist that INTOSAI take a course which tends toward collaboration and assistance in a much wider manner than that which has been achieved to date. This is the opinion of the President of this Congress and I applaud such opinion.

EDITOR'S NOTE:

Of particular interest about this paper is the speed with which it had to be prepared. The originally assigned discussion leader for this topic was the Comptroller General of Chile. He was unable to attend and at the last minute the Peruvian delegation, after arrival in Montreal, was asked to handle the subject. This meant examining and assimilating 40 papers on this subject from other countries and preparing a summary and appropriate commentary on them, with recommendations. Adding to the time pressure was the fact that this topic was the first on the agenda. The Peruvian delegation did an outstanding job under the circumstances and received many complimentary remarks on their performance from other delegations.

Electronic Data Processing and Other Technological Aids

Introduction

The object of this report is to coordinate, present, and comment on the points of view expressed in the submitted papers on Electronic Data Processing and other technological aids.

For the sake of completeness, because some of the papers refer to different computer technologies and because the development of computing machines always had a significant influence on EDP applications, I will dwell for a moment on the history of computers.

After a long prehistory of mechanical, relay, and primitive electronic calculating machines, the first electronic computer with a stored program became operational in 1949 at Cambridge University in England. It was influenced by work done at universities in the United States, where the famous mathematician John von Neuman conceived the idea of the stored program—as well as some other fundamental principles of the modern computer.

Machines of this era are generally referred to as comprising generation zero of computing systems. This period extended until 1951 when the first

commercially produced machines were delivered to customers. Machines of this time were characterized by vacuum tube technology, less than 10,000 addressable location memories, and add times on the order of 100 microseconds. This was the generation one family of machines.

In 1958 transistor technology came on the scene and generation two of computing systems was born. During this period core memories approached 100,000 addressable locations and add times dropped to a few microseconds. At the same time significant advances appeared in direct access storage devices. By the end of this period in 1965, some systems were capable of add times on the order of 1 microsecond.

In 1965 integrated circuitry appeared bringing with it the third generation of computing systems. By then high speed memories of up to 1 million locations were possible. Sub-microsecond add times and—in the case of some manufacturers—sophisticated operating systems making possible an effective use of these big machines, combined with advanced direct access memories and new data-handling techniques, brought computing to a new level of utility and added a new dimension to the use of computerized data

¹ Other members of the Swedish delegation were: Ebbe Magnander, Deputy Auditor General; Sven Ivar Ivarsson, Head of Department; Ake Pernelid, Managing Director; and Alfred Bretschneider, Audit Director.

processing. These developments served to broaden the applicability of data processing across an ever-widening range of human activity.

The cost/performance ratio of computing systems has become increasingly favourable. Furthermore, new and improved types of peripheral equipment have extended the scope for automation. Mass production of external devices such as terminal units with stored programs and fast, very large direct access auxiliary storage units are technical prerequisites for the large information systems with integrated data banks currently being planned. These systems are often characterized by data collection at the source, real-time updating of files, and in most cases real-time access to information. A case in point is the seat reservation system used by airlines and railroads.

The rapid development of machines has unfortunately not been accompanied by an equal advancement of systems design. Nor have the organizational consequences imposed by the technology been resolved. The main difficulty in the creation of large EDP systems now is insufficient planning and analyzing capability of systems designers (caused by lack of education and techniques) and the inadequate guidance and control exercised on EDP projects by management. In other words, our ability to harness technology has not kept pace with the soaring potential.

Fields of Application of Recordkeeping by EDP

EDP was introduced for administra-

tive purposes in the 1950's (i.e., in the broad sense of implementing public and corporate policies), and the quantitative development since then has been very fast and surpassed all the early expectations.

The opportunity to rationalize administrative work was an important motive for applying EDP in governmental operations. To a large extent the computers have been used to carry out the repetitive parts of such work thereby making personnel available for more imaginative purposes; in other words, a continuation of the unit record mechanization process. In many cases, too, EDP has made it possible to attain objectives which had been unattainable by other means. The same primary motives existed for the development of administrative EDP systems in other sectors of society.

Other attractive properties of automation were the speed and accuracy of computer applications and the prospect of adding a superstructure producing refined information of great potential importance to governmental decision-making. Sometimes the transition from manual to computerized procedures was deliberately accelerated in order to promote a technology in the making.

The rapid evolution of computer technology since then has made new fields of application practical. A general characteristic of the past decades was the routine processing of large quantities of comparatively simple information. Manual or unit record routines for recording, accounting, payroll, stock control, statistical computations, and so on were converted to electronic processing. The technique

used has chiefly been batch-processing, usually causing a considerable accumulation of transactions to be processed serially.

In the seventies electronic data processing will be integrated into administrative work in a more uniform and complete way. The development of very fast central processors, large direct access storage units, advanced terminals, and data communication equipment during the last years renders an increased use of major on-line systems possible. This implies a radical change in the conditions of systems design. The evolution of data banks for real-time use is partly a consequence of these changed technical conditions.

Now many operators—in principle independent of the location of the computer—can use it simultaneously. From remote terminals they can inquire about information which is stored in the direct access units of the computer and receive the requested information within seconds. In the same almost instantaneous way the users can update a file by changing its content according to a transaction. Further, a number of computers can be linked together to form a working system.

The consequence of this linking of computers is that a computer engaged in batch-processing or a user operating a remote terminal is not confined to information stored in one computer but can retrieve information that is stored in a number of computers.

The transmission of data between different locations will be of considerable extent. This is illustrated by the fact that the cost of transmitting data in some American EDP systems is of

the same order of magnitude as is the processing proper.

According to available information, American telephone companies anticipate receipts from data transmission to exceed the receipts from conventional telephone traffic in the not too remote future.

In an environment of advanced applications such as the one outlined here and foreseen in the submitted papers, some conventional audit problems will take new form and some new ones will develop. Briefly, a cross section of this kind of new consideration is the following:

- Questions of privacy and of authorization will be a matter of deep concern.
- An important task will be to administer continuous control to ensure that all transactions are entered in the accounts.
- As applications become more integrated there will be fewer intermediate printouts and the auditors will have greater need to acquire a real understanding of the system and of its basic technology.
- With data collection at the source it is often expedient to keep vouchers at the place of registration.
- On-line systems are even less flexible than the familiar off-line systems. While this may seem surprising at first glance, it is a consequence of the complex relations between design of terminal units, programs for data transmission administration, and application programs in the central computer.

- Transactions that were not foreseen when the system was originally designed can be very hard to incorporate later, if the system was not endowed with a planned and systematic flexibility to some degree.
- The rigidity is in fact a compelling reason to participate in the feasibility study if anyone wants to exert major influence on such a system without causing a great increase in cost. I shall have more to say on this subject later on.
- The possibility of creating terminal and/or computer networks requires a careful scrutiny of procurement policy for EDP equipment and of other coordinating measures for the application of EDP in the State. Thorough study and analysis employing a “global” philosophy is indicated to insure maximum cost/performance efficiency over the totality of all EDP systems in the State.

On the other hand, the development of EDP applications also confers benefits on auditing:

- The unfailing accuracy of a properly tested EDP system makes detail checking unnecessary.
- The proper documentation of an EDP system makes available very precise information on the routines.
- Mechanized routines make use of EDP for audit purposes a practical proposition.

It is clear from the descriptions of applications presented in the papers that the tendency is for increasingly

integrated and extensive applications of electronic data processing to government administration.

However, the national papers vary so much in the amount of detail they contain that it is impractical for me to sum them up in any systematic fashion.

Many of the applications fall into the fields of official statistics, budgeting and accounting, supply, transport, personnel administration, internal revenue, social welfare, the educational and judicial systems, supply and demand on the labour market, and registration of vehicles.

Participation of the Supreme Audit Institutions in Planning and Installation of EDP Systems

As used herein, the term “planning” has very broad import, and includes goal formulation, resources allocation, time scheduling, systems design, and the like.

In many of the submitted papers it is not made clear if direct participation by the Supreme Audit Institution in the planning of EDP systems is authorized by the laws regulating its activities.

In many cases, however, the Supreme Audit Institutions do participate in some or all of the stages of planning, construction, and tests leading to the installation of EDP systems affecting accounting procedures.

Since some Supreme Audit Institutions, mainly under the head of operational or effectiveness auditing, evaluate the planning when the EDP system is already working this may have feed-



Lars Lindmark, Auditor General of Sweden and rapporteur speaking on electronic data processing and other technological aids. Other members of committee, from the left: Dadang Suprajogi, Chairman of the Supreme Audit Board of Indonesia; Jorgen Bredsdorff, Auditor General of Denmark; Frank Suttle, Comptroller and Auditor General of Ireland and Chairman of the committee. At right, other members of the Swedish delegation.

back effect on the future planning of EDP systems.

Thus most Supreme Audit Institutions in one way or another have influenced the development of individual EDP systems.

Only a few of the papers mention use of internal audit services to monitor some of the audit aspects of systems development. The reasons for this are not clear since internal auditors are often familiar with the details of the subject matter of the proposed EDP system and might well need first-hand knowledge of the system that close participation in the project could give them.

The stage of an EDP project when audit involvement should begin must be chosen with respect to the complexity of the system. In the development

of a simple magnetic tape-oriented system, it may be possible to specify audit demands as late as the systems design stage without causing significant increases in cost. In the development of more advanced systems, involving complex hierarchies of manual routines and machine programs, perhaps even specially designed hardware, as is the case with some real-time systems, it is risky not to participate in the feasibility study. The general tendency among Supreme Audit Institutions is to come in at a very early stage of the project.

Effect of EDP on the Auditing Work of the Supreme Audit Institutions

Some Supreme Audit Institutions

have established special units inside their own organizations for the handling of EDP problems encountered in auditing activities. These specialists sometimes seem to be engaged in auditing investigations in the manner of consultants under the direction of the audit official responsible for the total investigation.

They are also independently employed in EDP-oriented inquiries and studies of a more general nature.

This organizational assignment of EDP specialists is not meant to limit the distribution of EDP technical knowledge in the institutions, but rather to make available a pool or nucleus of qualified experts which individually could not be employed full-time in the various fields of audit responsibility.

In some cases this need of experts is met by employment of consultants. Experience with EDP consultants employed in audit matters * * * is not always satisfactory. The judgements of some Supreme Audit Institutions on the quality of consultants' work indicate that continual guidance and control must be exercised on the contributions made by consultants. The individual consultants also should be selected with care, since their quality varies even in genuine consulting firms.

This suggests to me that the safe employment of EDP consultants always presupposes availability of basic know-how in the client-user organizations, depending on the nature of the assignment.

There is some agreement among Supreme Audit Institutions that auditing

in an EDP environment implies knowledge of such fields as:

- Planning techniques
- Systems design
- Hardware selection
- Programming
- Implementation

Training in these fields given to the officers responsible for the examination of EDP projects and systems takes the form of courses and seminars, sometimes at university level.

The problem of keeping in touch with practical problems in the field of electronic data processing is commented on by Australia, Belgium, and Israel.

In the latter country, the State Comptroller recently decided that each year one of the examiners in the special EDP unit would be sent for two months of practical training in a computer installation, preferably a service bureau. While measures such as these are likely to render auditing realistic and penetrating, they may also strengthen different career expectations among the personnel concerned.

In addition to the intensive training provided for EDP audit specialists, introductory lectures or courses are often given to a greater number of the staff members.

As to the aim of EDP training, the paper from Great Britain seems to be in accord with what is implied by many of the Supreme Audit Institutions. The British paper states that training can and should enable the auditor to appreciate the options that are open to him so that he can tailor

the audit to the particular system with which he is concerned.

As to auditing of data and of administrative systems, the introduction of EDP has not as yet had any major impact on the guiding principles of Supreme Audit Institutions.

As regards the methods of auditing EDP systems, a distinction must be drawn as to whether an audit is mainly performed for the purpose of financial auditing or for the purpose of evaluating the effectiveness, efficiency, and economy of the system. In the latter case the system must be regarded as one of several tools used by the agency to fulfill its missions. In other words, basic audit objectives and methods are not changed.

Obviously, it is necessary to have good knowledge of EDP, planning, and systems design, but that is another matter.

A natural part of the auditing efforts here outlined is the coordination needed between the various State-operated EDP systems in order to achieve maximum effect and economy.

When reviewing an EDP system mainly for purposes of financial auditing, special attention is given to the following:

- That the procedures for handling input and output data are satisfactory and complied with.
- That logical checks and checks of reconciliation are systematically used to control the entire data flow.
- That some audit trail is preserved.
- That the system is properly documented.

—That it is operated in accordance with pertinent rules and regulations concerning separation of duties, use of modified programs, and safekeeping of files containing programs and data. This inquiry might have to be repeated regularly.

Obviously, consideration is not restricted to those parts of the system operated within the EDP department, but extends to the entire system.

In the literature, the principal methods used to accomplish the objectives of financial auditing are often called "auditing around the machine" and "auditing through the machine." Actually, the case should not be stated in either of these extreme terms. The two methods have little interest except as illustrative simplifications. The auditor has to get his facts. Depending on the nature of the system with which he is concerned, as well as on the availability of resources, he should be free to select any technical method or combination of methods he judges to be effective.

The most common way to test an EDP system is to follow transactions through the process. These transactions can be selected at random or can be specially compiled. In any event, it is necessary to have some knowledge of the application programming of the system in order to limit the size of output to be checked: in the first case to determine the statistical sample, and in the second case to decide which combinations of varying parameter values should be included in the test files.

It should be noted that the cost of

running artificial test transactions or live data through the system is often small compared with the cost of checking the results of such runs and also compared with the cost of creating the peripheral test files needed. If the results have to be computed anew for different runs, the cost of the method will be prohibitive. In the case of artificial check transactions, unintentional effects on files are a problem in most systems.

As noted earlier, the EDP project, when audited, can be operationally viewed like any other technical mission—for instance, a road construction project. The planning factors are the same in principle.

There is one considerable difference, however, in that the project for administrative data processing often interferes with the workings of administration itself. This is true for the mechanization process, and it is also true as regards the resulting administrative system. In both cases serious malfunction will have the side effect of disturbing day-to-day administration.

As such defects can always be traced back to faulty or insufficient planning and to the way in which objectives have been determined, some Supreme Audit Institutions examine the planning and installation process to make sure that the proper sequence of steps was followed.

Adequate planning involves breaking the mission down into small activities for which the resources can be more easily estimated. These activities should be gathered into logical, professionally recognized structures such as the feasibility study, the systems de-

sign phase, the test of the completed system, the implementation process, and the followup.

Employment of EDP in Auditing Activities

This subject may be considered a special case of the effect of EDP on auditing discussed earlier. It seems to have been studied by many Supreme Audit Institutions.

Among computer programs at present used for audit purposes, I should mention programs of the type that select and print out entries for subsequent examination. The selection is based on comparison of data in the entry with limits which are defined by the auditor, or it is based on statistical sampling methods or on a combination of both.

More advanced generalized audit programming is mentioned in the paper from the United States. The possibility of requesting computer programs for audit purposes to be incorporated in the original application programming is mentioned by France and New Zealand. This is probably a good principle when the audit computer program is meant to be integrated in the system of application. It involves the least risk of unacceptable lengthening of the computer runs and guarantees that the program can be technically maintained by the unit responsible for the maintenance of application programming.

Access as needed to the computer installations of the audited agency does not seem to be a problem. Supreme Audit Institutions are not gener-

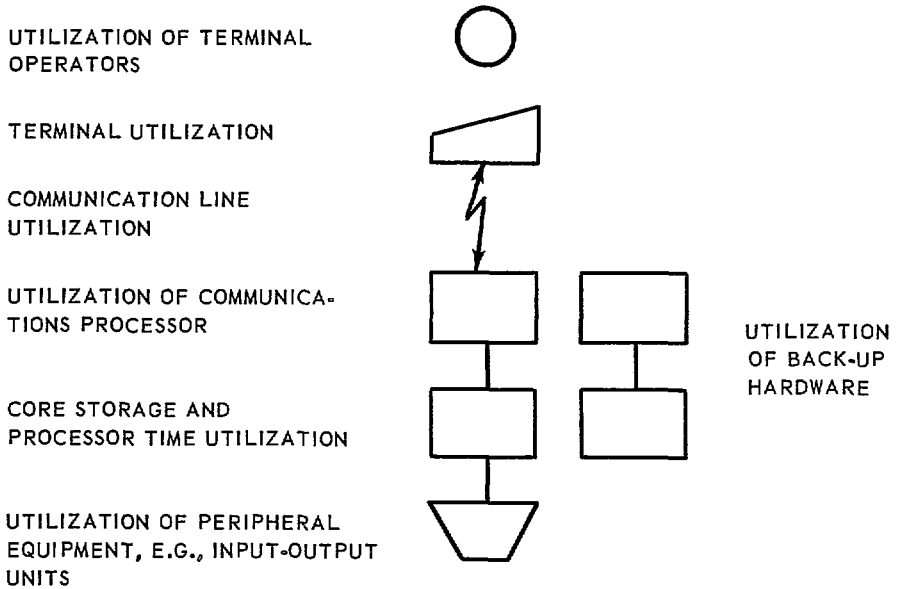
ally equipped with their own computers, though. Neither do they feel any immediate need of computer installations.

Utilization of EDP Facilities

The degree to which EDP installa-

tions are utilized is a technically complicated matter, and effectiveness auditing in this field calls for very specialized knowledge.

The critical factors for the utilization of real-time systems can be illustrated in the following way:



Optimum utilization is a matter of properly balancing these functions so as to maximize the throughput/cost ratio of the system.

What is said here of real-time systems is partly valid for batch-processing systems, too. The optimizing process is not different in principle.

The kind of accounting needed to do justice to all the utilization factors and their relationships is rather complicated. This is particularly true if the computer system allows for the execution of multiple processes at the same

time. However, reasonable solutions to this problem do exist and are accurate enough to suit the requirements of the optimizing process in question.

It is the opinion of comparatively many Supreme Audit Institutions that EDP systems are not satisfactorily utilized and that the use of computers should approach 3 shifts. Obviously this requirement is not feasible for real-time systems that must be dimensioned to peak loads and to the defined standard of service.

It is a fairly general feeling that

agencies ought to share computer facilities to a higher extent, thereby increasing the utilization of machines. Another aspect of coordination is the use of extramural service centers. Coordinating the procurement and utilization of computers is often the function of one or more units outside

the Supreme Audit Institution, sometimes created by that institution on its own initiative or in response to the findings of audit projects.

An important comment from Venezuela, finally, is that the utilization of computers must be seen in relation to serviceability of output data.

No Question About It

* * * Certainly the businessman thinks in terms of accrual accounting; even a person who knows nothing whatever about books thinks in terms of accrual accounting.

For example, if you knew nothing about accounting and were asked to state your living expenses for one month, you would not stop to find out whether or not you paid your rent this month or last month; you would give us the statement of what your rent was going to cost you per month, that is, you would undoubtedly give a rate of expenditure.

Everyone thinks in terms of the accrual basis of accounting; consequently, it seems to me that is what should be emphasized from the standpoint of putting accounts to the greatest use, whether it be in business or in government.

Eric L. Kohler, CPA

Executive Officer, Petroleum Administration
for War.

At Conference on Federal Government
Accounting sponsored by the
American Institute of Accountants,
New York City, December 3, 1943.

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Management or Operational Auditing

I think it would be well to start with a few comments about the terminology of the subject we are talking about. It has been our experience that the terms "management auditing" and "operational auditing" have no generally accepted meaning. Viewpoints vary greatly as to what the nature and scope of such audits embrace. We have another term in the United States which is also frequently used. That term is "performance auditing."

All of these terms are likely to be used whenever there appears to be a need to establish a distinction between "financial auditing" and auditing which goes beyond financial transactions and accounting records and examines into the operating, managerial, or administrative performance of an organization.

The suggested definition sent to the Supreme Audit Institutions as a basis for discussion of this subject at this Congress reflects this distinction. It defines "management audit" as "a constructive assessment of future alternatives available to an organization." These alternatives are in turn further interpreted as being those based on "analysis of stated objectives, past

management activities and current problems."

This definition is quite broad. In fact, it strikes me as so broad as not to be really definitive as to what the objectives of a "management audit" should be.

For purposes of discussion here, I would like to suggest that we consider the total audit job as consisting of financial auditing, management auditing, and program auditing.

—Financial auditing would be concerned primarily with financial transactions, accounts, and financial reports.

—Management (or operational or performance) auditing would be concerned primarily with the efficiency and economy with which resources are managed and consumed.

—Program auditing would be concerned mainly with inquiring into the results or benefits being achieved by an organization and evaluating whether programs are meeting the objectives set by the legislature or other authorizing bodies.

Each of these types of audits would include checking into compliance with applicable laws and regulations. A complete audit would embrace all three types and could be considered as a

¹ Other members of the U.S. delegation were: E. H. Morse, Jr., Director, Office of Policy and Program Planning, GAO; Oye V. Stovall, Director, International Division, GAO; Roland J. Sawyer, Information Officer, GAO; Edward F. Tennant, Auditor General, Agency for International Development; and J. W. Lowe, Internal Auditor, International Monetary Fund.

comprehensive audit of an organization's overall performance.

Another observation that I would like to introduce early in this discussion is one of a cautionary nature. The office which I head—the United States General Accounting Office—has accumulated much successful experience in management auditing. However, we have learned how to accomplish this only gradually, and to a considerable extent by trial and error—some efforts being more successful than others.

I believe that management or operational auditing to be successful must start modestly and expand slowly. There must be a gradual development built on experience gained—the auditor must walk before attempting to run. That gradual development and transition from purely financial or fiscal-type auditing calls for an increased involvement of staff members who have some acquaintance with such fields as administration, engineering, economics, etc. This is needed for a good understanding of operational problems. In examining into management or operational problems, and the effectiveness of governmental programs, the financial auditor is no longer on his home ground. He is in the territory of the manager who knows that territory much better than he does. Therefore, it behooves the auditor who is expanding his efforts beyond financial and accounting matters to develop his competence gradually but surely.

From a careful reading of the papers distributed by 35 Supreme Audit Institutions before this Congress convened, it is quite evident that the ex-

tension of auditing practice beyond financial matters varies greatly among our members.

Twenty of the thirty-five papers received on Subject III indicated that they had—I repeat, they did have—legal authority for such extended auditing practice. Fourteen of these twenty countries also reported that they conducted management audits as a regular practice and reported on the results to their legislative or parliamentary authorities. Thirteen others noted that such auditing was conducted only occasionally. In seven cases, it was reported that no authority has been provided to conduct such audits.

An interesting observation made in one paper relates to the definition of the scope of management auditing suggested as a basis for discussion at this Congress. That paper raised the basic question of whether management auditing as a constructive assessment of future alternatives available to an organization was a logical extension of financial auditing. It argued that this was a responsibility of management itself and not that of the independent auditor. The paper stated further that if the auditor finds that the job is not being done, he should point that out and suggest that it be done but he is neither entitled nor qualified to do it himself.

None of the other papers raised the question quite this sharply but I believe it is a good question and it suggests that we might want to recommend changes in the proposed definition.

Another country stated that it was undecided as to whether management

auditing "in the full sense" should be undertaken and was looking forward to learning the views of other Supreme Audit Institutions on the question. This reservation also suggests a question about the scope of the so-called management audit as suggested in the definition submitted as a basis for discussion here.

Management Auditing Concepts

At this point, I think it would be appropriate to outline the approach to management auditing we follow in the United States General Accounting Office. Basically, our general approach is not really much different than that we would follow in an audit confined to financial matters. The following broad steps would be performed for almost any type of audit:

1. A preliminary survey of the activity being examined should be made to obtain necessary background and other working information for use in making the audit. I would like to add here simply that what this amounts to is that, to save time in the long run, we can be more selective and thus avoid situations where we would be chasing rabbits when we might be chasing elephants or bears.
2. The basic charter or assignment of responsibility for the activity being examined should be studied to ascertain the authorized purposes and related authorities of the activity and any applicable restrictions or limitations. In

this respect, we need to involve legal staff in questions of legal authority. Legal staff can also assist in examining the legislative history of the program to determine the full intent of the legislature authorizing the program.

3. The management system should be examined by studying the policies established to govern the activities under examination, testing the effectiveness of specific operating and administrative procedures and practices followed, and fully exploring any important problem areas or weaknesses encountered.
4. Reports on results of the audit work performed should then be prepared and submitted to those responsible for receiving or acting on the auditor's findings and recommendations.

In identifying problem areas to examine into, the auditor has several techniques available. Here are some techniques that are employed by auditors in my office.

Making surveys

By obtaining and studying information on how an activity is supposed to be carried out or how a procedure is supposed to work, key features or procedures can usually be identified that appear difficult to control or to be susceptible to abuse.

Reviewing management reports

These can be valuable sources of information on possible problem areas for the auditor to look into.

Reviewing internal audit or inspection reports

These are invaluable sources of information. Of particular interest to the external auditor are those which bring to light important findings on which the management has not acted.

Making physical inspections

These can be very useful ways to observe possible inefficiencies or problems that should be analyzed and studied. Examples of such problems would be large accumulations of supplies or materials, idle or little used equipment, idle employees, disposal of apparently good and usable materials, and the like.

Making test examinations of transactions

This is a very useful way to obtain a practical working insight into the efficiency of procedures and their effectiveness in assuring that things are done in the way and with the results intended.

Holding discussions with agency officials and employees

Frank and open discussions with such persons can provide the auditor with much valuable information. The degree of success in obtaining useful information in this way is greatly dependent on the auditor's reputation for independent and constructive inquiry. If he is regarded with fear because of overly critical reporting in the past, this source of information may not be productive.

When the auditor finds a problem area that he believes he should examine into, his job becomes one of obtaining all pertinent evidence and doing an adequate amount of analytical work to:

1. Identify specifically what the problem is; that is, what is deficient, what is defective, what is in error, and the like.
2. Determine whether the condition is isolated or widespread.
3. Determine the significance of the deficiency in such terms as increased or unnecessary costs, loss of revenues, loss of property, ineffective performance of work, or other effects.
4. Ascertain the cause or causes for the condition.
5. Identify the persons in the organization responsible for the deficiency.
6. Determine possible lines of corrective or preventive action and formulate constructive recommendations.

The auditor should review his findings with management officials responsible for the operations being examined so that he will have the opportunity to obtain as much information as possible that bears on the problems and to formulate his conclusions in the light of the detailed knowledge of the officials responsible for the performance being reviewed.

The auditor must consider all pertinent factors in appraising performance. Also, to be effective and to be accepted as a constructive force, he must be fair, objective, and realistic.

For example, he must use a different standard when evaluating a new program from that used to evaluate one that has been in existence for a long time. Above all, he must avoid making judgments and conclusions on performance based solely on hindsight.

If these concepts are followed and if the auditor considers all significant factors bearing on a problem, he can make reasonable judgments concerning the discharge of specific kinds of management responsibilities. These judgments can be of value in promoting desirable improvements in management performance, and they can be useful to third parties in connection with their evaluations of such performance.

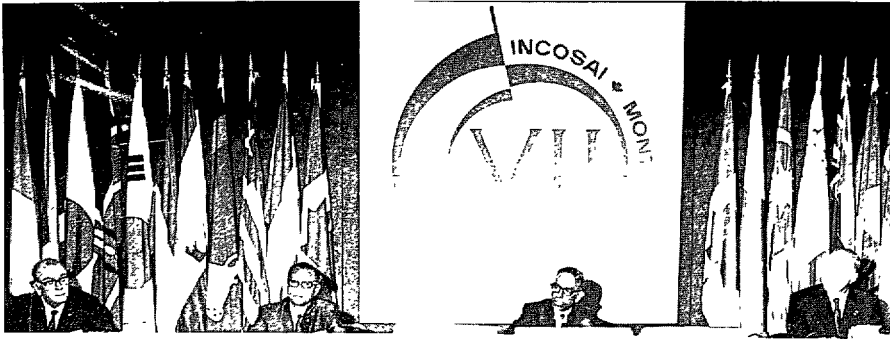
Some of the papers submitted raise the question as to whether it is appropriate for auditors to engage in management or operational auditing, citing the fear that this type of auditing interferes with management's operations. Our experience has been that when properly conducted, audits of management performance need not—and certainly should not—result in interference. They should always be conducted with a view towards not only identifying problems or weaknesses, but also with a view towards assisting management in improving its operations. We have much testimony that many of our reports have been useful to managers who have accepted our recommendations with resultant financial savings and improved operations. Another point to be emphasized is that neither the external nor the internal auditor should participate directly in management decisions.

Relationship Between Internal and External Audit

In commenting on the relationship between internal audit and the external audit, the papers submitted showed widely varying views. In many cases, the work of internal auditors is given consideration in fixing the scope of the external audit, and effective cooperation exists. In other cases, the roles and responsibilities of the two groups are considered to be quite separate, and there is no particular interrelationship or coordination.

In a few cases, it was noted that government departments have no internal audit but it was also brought out that there is interest in establishing such systems. I believe this is a most important point. A strong internal audit system is an essential part of a good management system. Because of this, the external auditor should do all he can to promote the establishment and development of good internal audit systems. Such systems not only aid managers in improving their operations but they make it easier for the external auditor to concentrate his audit efforts on those problem areas most demanding of attention from the standpoint of efficiency and economy in the use of scarce public funds.

This is the view we have embraced in the United States General Accounting Office and I think it important enough to dwell on it a little more. To the fullest extent possible, the external auditor should utilize available internal audit work rather than directly perform all of the work himself. He should also be familiar with the opera-



Committee members in charge of discussion of management or operational auditing, from the left: Hendrick R.P.A. Kotzenberg, Comptroller and Auditor General of the Republic of South Africa; Kamnung Janlekha, President of the Audit Council of Thailand; S. Ranganathan, Comptroller and Auditor General of India; and Elmer B. Staats, Comptroller General of the United States.

tions and findings of any other internal review activities, such as inspection, investigation, appraisal, or management analysis, that may exist in large organizations.

Normally, there should be little duplication between the work of the external and internal auditors. The internal auditor should be performing his work as part of the management's system of operation and control. In contrast, the audits made by the external auditor are *independent* appraisals of (1) the manner in which government agencies discharge their responsibilities and (2) the effectiveness of their control systems, including internal audit.

The external auditor should maintain a close working relationship with the agency internal auditors. He should receive copies of internal audit work plans and the internal audit reports. In turn, he should inform the internal audit organization about the areas in which he plans to work.

It should be the responsibility of the

government agency head to establish and maintain satisfactory accounting systems and related internal controls pertaining to the custody and use of public funds and other resources. His internal auditor should include in his audit program an examination of financial transactions, including both the receipt and disbursement of funds, to the extent necessary to evaluate:

- The adequacy of the agency's prescribed policies and procedures relating to such transactions.
- The adequacy of internal controls over such transactions.
- Compliance with prescribed agency policies and procedures and applicable laws and regulations.

In recognition that the basic responsibility for proper accounting and internal control is that of each government agency, the external auditor in his examination of financial transactions and accounts should place major emphasis on the adequacy and effectiveness of the agency's accounting and

internal controls and he should test the adequacy of the agency's procedures and the work of the internal auditors to establish the extent to which such work is satisfactorily performed.

Thus, internal auditors, in addition to their primary role of serving the managers of their organizations, can have a very significant impact on the scope and effectiveness of the work of the external auditors. The more reliable the internal auditor's work is with respect to financial operations, the more opportunity the external auditor has to delve into other problems, including efficiency and economy in the use of funds and what is accomplished with the use of those funds. For example, as a result of improved internal audits of financial transactions in our Government, and strengthened agency financial management systems, we have been able to reduce the effort of the General Accounting Office to the point where it now represents less than 10 percent of our total audit program.

Training

Training is another important aspect of the whole question of extending the auditor's role in examining into problems of management performance. Where and how does the auditor develop his competence to inquire into such matters in a knowledgeable manner and with the necessary maturity and judgment to evaluate performance and make sound recommendations for improvement?

The answer is intense and continuous training—both formal training in classrooms and on-the-job training

under competent, experienced supervisors. This need is no different than what is required for the auditor who concerns himself only with auditing financial transactions and accounts. But for the auditor who is extending the scope of his examinations into management performance, adequate training is even more important. There are those who will question his qualifications, his competence, and his ability to effectively analyze and evaluate such matters. The only answer to this questioning is demonstrated competence and that competence comes through conscientious adherence to the generally accepted auditing standard that auditors must be adequately trained and properly supervised in all of their work.

I realize that training auditing staffs was a major part of Subject I which was discussed yesterday. However, it is such a vital part of developing and maintaining a good and acceptable audit system that some of the key principles can bear repetition.

The comments in the papers submitted reflect some variation in views on this subject. Some did not specifically mention the subject in relation to management auditing on the basis that it was dealt with in Subject I. Others described their practices at some length and showed a serious concern with the importance of the subject.

I was very much interested in some of the different ways in which broad training and familiarization with government operations are carried out in some countries. For example, one approach is to give staff auditors temporary assignments in government corpo-

rations to provide them realistic financial and operating experience. Another practice is to provide in-house training in such subjects as civil engineering. One country requires considerable advance preparation for its audit staff such as 2½ years of intensive training in its national school of administration and getting into the school in the first place requires an advanced degree or 5 years of public service experience.

One auditor general recently established a fiscal control school to train audit staffs in new techniques in order to achieve broader and more effective audits, particularly those where operational efficiency is to be evaluated. The school is operated by the auditor general, and the teaching staff is comprised of officials from his office, university professors, and other competent officials. Seminars, conferences, and training courses specializing in auditing and fiscal control service will be conducted. In addition, cultural extension courses are included in order to improve the overall intellectual and cultural backgrounds of audit staff.

In the General Accounting Office, we use large numbers of persons who have concentrated in the study of accounting and who, through in-house training and on-the-job training, become quite capable of conducting management and program audits. In recent years, we have also added to our staff large numbers of college graduates who have concentrated in such subject areas as economics, business, public administration, engineering, mathematics, and statistics. We also have added staff members who are expert in systems analysis, computer

science, and actuarial work. A broadened base of expertise is essential to the external audit organization that wishes to broaden its scope of operation into management problems.

No matter what their major area of university study may have been, beginning auditors need close direction, supervision, and training if they are to develop rapidly into good management auditors.

Initially, training programs should emphasize the technical aspects of management audits to assist new staff members in adapting to the work required. More advanced training programs can then emphasize the development of (1) supervisory and management skills, such as planning, audit decisionmaking, communicating, and delegating and (2) special skills, such as systems analysis, statistical sampling, and automatic data processing.

Formal classroom training programs should be designed to (1) improve management auditing skills and technical competence that can be applied on the job, (2) prepare each staff member for greater responsibility, and (3) inform the staff of new ideas and practices in management operations.

All staff members should be encouraged and be given incentives to continue their professional development throughout their professional careers. Each staff member must grow throughout his career if he and the organization are to remain responsive and useful.

An effective staff development program requires an effective career planning and evaluation system which will help each staff member identify his

strengths and weaknesses as well as his opportunities for growth. Such a system permits him to use his existing strengths while developing new strengths and correcting any weaknesses. The audit organization should provide regular performance appraisal and counseling programs to assist its staff members in assessing their strengths and potentials and in planning programs which will enable them to develop the maximum of their potential.

Use of Consultants

I might add another thought here on the point of expanding the competence of the audit organization. Because of the very wide range of activities of modern governments, it is doubtful if any organization can efficiently acquire all of the expertise needed to make management audits. To supplement the staff, expert consultants in various specialized fields should also be employed. In this way, an audit organization has available to it the special knowledge and competence needed for a particular audit at the time needed without having to maintain such specialists on the staff all of the time.

In the General Accounting Office, we have made good use of expert consultants in our audits of the programs concerned with elimination of poverty, manpower training, control and abatement of water pollution, and review of complicated weapons systems procurement. Our intentions are to increase our use of consultants in order to expand our overall capabilities to audit government programs.

The Expanding Role of the Auditor

I would like to conclude these remarks with a few observations about the expanding role of the auditor.

First, it is my belief that the responsibility of the independent, external governmental auditor should embrace the following three aspects of management accountability:

- Fiscal accountability*, which includes fiscal integrity, disclosure, and compliance with applicable laws and regulations.
- Managerial accountability*, which is concerned with the efficient and economical use of personnel and other resources.
- Program accountability*, which is designed to assess whether programs are achieving their intended objectives and whether the best program options have been selected to achieve these objectives from the standpoint of total cost and outputs.

An accountability system should embrace all three elements. There must be public confidence as to fiscal integrity in the spending of public funds; there must be assurance that waste does not occur through mismanagement; and, there must be an assessment of whether programs are accomplishing their intended objectives with the least cost and maximum results.

I do not intend to imply that the auditor has an exclusive responsibility for management and program evaluation. Other analytical staffs and other systems of review are also available to

government administrators and legislators. Too frequently, however, such staffs have been primarily concerned with budget formulation and program planning and not sufficiently with whether authorized programs are achieving their intended results. This is the area to which I strongly believe the auditor has a major and increasingly important contribution to make. He has a tradition of making and reporting his findings independent of operating officials. He should be increasingly equipped with special skills which go far beyond that required for financial audits alone. And most importantly, he should be increasingly looked to by legislatures and by the executive officials for examinations and recommendations on all three aspects of accountability.

Recommendations

After discussion of the subject and consideration of the remarks of delegates from other countries, the following recommendations were proposed by Mr. Staats on this subject and were adopted by the Congress.

Recognizing the differing views on this complex subject and the necessary variances and stages of audit development deriving from the respective countries participating in this Congress, and with the view that they are compatible for progressive application through any stage, the following general recommendations are made:

1. That a full or complete concept for independent auditing of gov-

ernmental programs, agencies, or activities include recognition of the following elements:

- Fiscal accountability, which should include fiscal integrity, full disclosure, and compliance with applicable laws and regulations.
- Managerial accountability, which should be concerned with efficiency and economy in the use of public funds, property, personnel, and other resources.
- Program accountability, which should be concerned with whether government programs and activities are achieving the objectives established for them with due regard to both costs and results.

2. That the laws governing the activities of supreme audit institutions do not preclude the scope of auditing stated in recommendation 1.
3. That governmental auditing that goes beyond financial transactions and accounting matters be extended gradually.
4. That audit staffs used in making governmental audits of whatever scope be adequately trained and supervised.
5. That, in making audits involving matters of economy and efficiency or of program effectiveness, necessary skills be available, either directly in the supreme audit institution or through contracting for expert services.

6. That supreme audit institutions encourage the development of strong internal audit systems in government agencies audited and that the work of such internal auditors be evaluated and fully utilized as appropriate in the making of independent audits by supreme audit institutions.

Discourse on Information Systems

As I went over our system with Mr. Swain it seemed to me, perhaps erroneously, that the principal objective of our particular business was operating a system and not selling magazines. I am informed that this is true of business in general. To my untutored mind it appears that the primary object of any enterprise should be to insure that it operates profitably. With this viewpoint, our industrial system often seems to be in disagreement. Let us suppose that I am the owner of a cow. The purpose of a cow is to produce milk. If you turn the creature into a pasture and allow her to eat grass she will produce many quarts of lacteal fluid. The process consists of eating grass, transmuting it into milk, removing the milk from the udder. However, you are infected with the system disease. You cease to be interested in milk. You hire inspectors to count the number and measure the height of the blades of grass eaten by your cow. You count the number of steps she takes in the pasture. You time the number of occasions upon which she looks over the fence, and test the volume of sound produced when she moos. Then you employ a bookkeeper to record these items, and various persons to make out forms for the guidance of the bookkeeper. At the end of the year you have a vast and entertaining volume of information, but you have added so greatly to the cost of your operation by systematizing in this manner that you lose money on every quart of milk you sell. This, of course, is exceedingly modern and in accord with business practice, but you find yourself compelled to sell your cow to pay your overhead.

Authorship and source unknown.

Implementation of Recommendations Made by a Supreme Audit Institution

The importance of this subject can best be appreciated by a brief reflection on the role and purpose of our audit institutions, which, in broad terms, are charged by legislative decree with the responsibility of auditing the financial affairs of our respective governments and reporting the results of our findings and opinions with the aim of ensuring the continuance and, where appropriate, improvement of governmental financial administration.

For the audit role to be fully effective, the overall system of government should therefore provide appropriate machinery to ensure that audit findings and opinions, including recommendations where such are made, receive proper study and consideration and, more importantly, that decisions are taken for their implementation.

The profession of auditing is not a stagnant science but one where technological and other developments and influences frequently dictate the need for consideration of changes and/or improvements in audit concepts and practice.

We must keep aware of the develop-

ments taking place and seek to implement such changes in our organisations and techniques as may be appropriate and suitable for our individual needs and in the environments in which our institutions function.

One of the notable features to emerge from the survey of papers submitted was, notwithstanding the differences in constitutional and other statutory provisions governing the audit institutions represented as referred to previously, there was a significant measure of fundamental uniformity as between the various countries in relation to the subject items, but where there were divergences as covered in the minority views presented, they were almost without exception worthy of note and consideration.

I shall now proceed to present as briefly as I consider possible my summation of the various items according to the sequence shown in the Congress agenda.

The Effects of the Various Systems of Audit (Preaudit or Postaudit) on the Implementation of Recommendations Made by a Supreme Audit Institution

In our considerations of this item it

¹ Mr. Thomas R. Rees, Director of Audit, was also a delegate from Australia.

is important to keep in mind that the effects of all systems of audit, if they are properly designed and effectively applied, including appropriate followup and implementation of sound recommendations, should in theory be the same, namely they should ensure regularity of transactions, economy, efficiency, and, in short, the protection of the public purse.

In the majority of countries a system of postauditing is observed and favoured for the primary reason that it permits the audit institution to perform an independent and objective appraisal of the effectiveness of the whole field of financial administration and control by the audited body. The resultant audit findings and recommendations, it is suggested by those who support this concept, are in the main recognised by administrative management as being both constructive in approach and well supported from an in-depth study of an overall situation. The postaudit approach, it is considered, facilitates maintenance of audit independence of the executive or the administrative branch of government, and, apart from accepted forms of cooperation, the following of a policy of noninvolvement in administrative action.

In the case of audit institutions observing a preaudit system either by constitutional or other legal requirements or by stated preference for such approach, the generally expressed view is that the audit institution is able to prevent, or at least suspend or interrupt, improper or illegal transactions by withholding audit concurrence or approval. Estopping action by the

audit institution sometimes necessitates reference by the audited body or responsible ministry to the higher authority of the legislature for determination of action where corrective measures are not taken or the divergence of view between the audited body and the audit institution cannot be reconciled.

As to the value of preventive control in implementing audit recommendations, one paper advances the view that by hindering certain acts of the administration before they are completed or carried out, it tends to guarantee the regularity of legal and accounting aspects so as to maintain good order in the administration. It is also of interest that advocates of preaudit do not consider that their procedures prevent them from making recommendations and suggestions for corrective action.

In a few of the papers presented to the Congress, mention is made of the employment of both preaudit and postaudit techniques and no doubt local circumstances make the combination convenient and effective but some papers show significant tendency towards a postaudit approach.

An advantage claimed of preaudit is that it achieves an overall audit aim of protecting public funds before disbursements, though one of its disadvantages is related principally to the volume of transactions which must be subject to prior audit surveillance.

It seems to be generally recognised by most audit institutions using preaudit methods that care must be exercised to ensure that its procedures do not intrude into policy or impede administration and that preaudit is not necessarily a substitute for postaudit.

In summing up, it is felt that irrespective of the system of audit adopted, the effects on the implementation of audit recommendations are dependent on the efficiency with which the audits are performed and, of course, on the procedures adopted to report findings, review results, and implement sound proposals for improvement.

I think it is true to say that while either system of audit may be considered to have advantages according to individual conditions or statutory requirements and therefore in their particular environment must affect the nature and value of audit reports, any system of preventive control as a matter of principle more properly belongs to the responsibilities of administration. In such circumstances Supreme Audit Institutions are free to discharge an independent and evaluating role as to the manner in which administrations are discharging their responsibilities and the reports or suggestions of the audit institution would possibly be more effective within the general framework of administrative and parliamentary control. Institutions variously see the legislature or its Public Accounts Committee, however named, or the administration as the case may be, as being the authority responsible for the development of solutions to overcome any matters reported in the audit findings.

Description of the Manner in Which the Supreme Audit Institution Makes Its Recommendations

One of the most important and, in-

deed, one of the most responsible tasks of an auditor—whether he be engaged in what we may term private or commercial practice or whether he occupies the position of Auditor General or its equivalent—is to report the results of his audit. Whatever the system of audit—preaudit or postaudit or a combination of the two basic techniques—which may be prescribed by law or adopted by choice, the effectiveness of its performance must always attract doubt if the results are not reported in some manner and provision is not made for the report where necessary to be examined by an appropriate authority.

It is clear from the papers presented that legislatures in almost every country have recognised the need for the Supreme Audit Institution to be given the duty, irrespective of whether the results of audits are satisfactory or otherwise, to report in writing either directly to the legislature or to an authority for subsequent tabling in the legislature. In this way the legislature has safeguarded its own and the public interest by making the submission of such a report mandatory and at certain intervals, usually at least once each year. In some cases, the audit authority is given free access in that a special report or reports may be submitted at any time. There are instances where annual reports must be submitted within a designated period after the close of a financial year whilst other countries leave it to the discretion of the audit institution as to the time reports shall be presented.

In summary, it can be generally stated from the papers presented that

the manner in which Supreme Audit Institutions make their recommendations are mainly as follows:

- By addressing, either by law or during the normal course of audit, observations, comments, and suggestions, usually on a continuous basis, direct to the audited body, etc.
- By including recommendations in an annual report or series of reports or special reports to the legislature, and, as necessary, by reports submitted to Committees of the legislature.

Although the legislative provisions of a country on the matter of reporting, which have no doubt been determined by historical and other factors, are probably of prime importance, the manner in which audit reports are presented, together with their contents and frequency, is determined to a considerable degree by the philosophy of auditing aims and practices and the methods and procedures utilised to obtain followup remedial or, in some cases, disciplinary action.

It is usual practice for many audit institutions to communicate the results of examinations, including those designed to achieve operational effectiveness, efficiency, and performance direct to the audited body and where appropriate to a department such as a Treasury or Finance Ministry having a measure of responsibility for overall control. The more important of the recommendations are frequently included in an annual report or series of reports submitted to the legislature as the audited accounts become available.

Although the responsibility for decision concerning the implementation of the recommendations is commonly the prerogative of the legislature or the Government, the force of the recommendations is frequently strengthened by the consideration given to audit reports by Select Committees such as Public Accounts Committees or by other Select Committees who may, in fact, have requested the preparation and submission of a particular report. Some audit institutions have indicated that they possess special powers to assist them in achieving satisfaction of matters recommended such as to be able to demand measures for rectification and improvement or to impose fines for infringement of regulations and rules.

Among the number of differences in practice noted in reporting was the time factor connected with the actual presentation of the annual reports of audit institutions. Although all papers received did not specifically cover this point, it is apparent that in a number of countries there is a statutorily defined period for submission of the annual report and/or for its subsequent tabling in the Parliament. In other countries no time element is prescribed. Of the countries which indicated the statutorily prescribed or customary time for tabling, it was noted that this ranged from a period of seven to eight weeks to upwards of two years after the close of the financial year. In some cases even though the approximate date for tabling the annual report was given, the date of the close of the financial year was not indicated and therefore the time interval

involved was not readily apparent. One country where the audit report was presented twelve months after the close of the financial year commented that much of the topicality and interest in the audit findings was lost through this late presentation.

Where the initial audit representations are not dealt with by the audited body to the satisfaction of the audit institution, the general practice is to pursue such subjects, if considered to be of sufficient significance, with a higher authority either by making a direct report to the appropriate fiscal authority in relation to a specific subject or by including reference thereto in the annual report of the audit institution as submitted to the Parliament or other nominated authority.

Whatever the reporting mechanics followed by individual audit institutions, the papers surveyed show that in most countries as a matter of principle all audit observations, criticisms, and recommendations are pursued by the audit institution concerned until appropriate executive action is taken or an accord is reached between the audited body and the audit institution in relation to particular audit findings. It was noted that reports submitted to the legislature are usually subject to examination by the legislature or one of its Select Committees.

Independence of the Supreme Audit Institution

With some exceptions, audit institutions which have papers on this subject indicated either particularly or by inference that insofar as their audit

function was concerned, they were independent of the executive or administrative arm of government, being responsible only to the legislature.

The considerations determining audit independence have been variously expressed, and in some instances qualified by certain reservations. It was evident from a survey of the papers to the Congress that, notwithstanding the several forms of government represented, the legislators in framing the respective Constitutions or other enabling legislation under which the individual audit institutions were constituted, have generally speaking recognised the important principle that an auditor's independence is a fundamental prerequisite to the securing of an objective and analytical audit opinion. However, not only must the audit institution be granted independence under statutory powers, but must by behaviour and attitude display independence of activity in relation to its responsibilities.

Whilst independent in regard to their audit function, some audit institutions themselves form part of the executive arm of government. A number of audit institutions have responsibilities extending beyond the audit role. In other cases, as mentioned earlier, a number of audit institutions carry out functions not limited to financial considerations but extending into the field of operational effectiveness, efficiency, and performance.

Even those audit institutions which have expressed certain reservations concerning their complete independence, such as the power of the executive to determine the staff establish-

ments and/or financial appropriations, have generally noted that such power has not in practice been exercised so as to inhibit the audit institution in the performance of its functions.

Many of the papers in outlining the factors ensuring the independence of audit institutions have again provided interesting and informative material for study and comparison, for example, the manner and conditions applicable to the appointment and dismissal of the supreme audit authority, however designated; the right of unfettered access to documents, records, and accounts pertaining to governmental financial matters; the fact that the audit authority shall not be subject to direction or control of any other authority or person in the exercise of the audit function, and so on. The several differences in the constitution of the supreme audit authority afford an interesting comparison. They vary from a single entity to a group of persons consisting of a Board or Court.

It is clear from the papers that the Supreme Audit Institutions' reports to the legislative or other appropriate bodies, to which reference has been made previously, are regarded as being of great importance from the standpoint of independence. There also appears to be unanimity that the reports should be in such form and content as the institutions consider necessary. A high degree of flexibility is essential to enable adequate and appropriate reporting. Further, because of the institutions' responsibilities in relation to audit of government financial operations, it is of paramount importance that reporting is not inhibited by

political or other restrictive pressures.

In brief, the review of the papers has revealed that the institutions are fundamentally independent of their respective governments but there are at times limiting factors in respect of their discretionary powers concerning administrative matters and in the manner of discharging their responsibilities. To enable attainment of the objectives of utmost efficiency in operations combined with economy of staff and operational procedures, the greatest possible degree of independence, including independence of the government, is essential.

Description of Press Coverage in Relation to Reports Made by the Supreme Audit Institution to Its Legislative Authority

The observations furnished in the papers under survey with regard to the matter of press publicity arising from audit reports submitted to the respective legislatures by audit institutions have in the main been dealt with in general terms and are principally related to the press coverage obtained in connection with the annual reports of the institutions concerned.

With few reported exceptions, the annual reports of the various audit institutions, on presentation to Parliament, are printed and are available to the public, including the news media. Generally speaking it would seem the nature and extent of the subsequent press publicity is dependent on the impact made by the particular report. Factors influencing this impact are the topicality and public interest content

as assessed by the press in the subject matter. General experience, as reported, is that this is largely related to the exceptional and critical references. The emphasis often appears to be on the "news value" rather than any critical or informed analysis of overall content.

Delegates will have observed from their study of the Congress papers that some audit institutions have been concerned at both the paucity and type of coverage received in the news media. To overcome this deficiency some countries have adopted the practice of issuing a press release concurrently with the publication of the annual audit report.

At least two audit institutions, the Netherlands and Germany, meet this difficulty by holding a press conference concurrently with the publication of the annual audit report, and Austria has indicated it is considering a similar move to aid journalists in achieving more disciplined reporting.

The organisation of the General Accounting Office of the United States of America includes an Information Officer for the purpose of providing information to the press and public, but no emphasis is given to any special communication of audit reports by the news media. However, with most countries reporting to this Congress, the nature and extent of press coverage is left to the news media to determine without any influence or direction by the audit institution concerned.

Although it would be appropriate to acknowledge the influence of the news media where objective press reporting lends support to the effectiveness of the

work of audit institutions, and aids in the important audit concept of adequate disclosure, it is suggested the extent and nature of the publicity considered appropriate in relation to the reports of audit institutions to their respective legislatures is a matter for individual audit institutions to assess and determine according to the dictates of their own particular circumstances and environment.

The Manner in Which Reports Having Been Made by the Supreme Audit Institution Are Examined or Otherwise Acted Upon by the State Authority

In the papers presented to the Congress, the information provided in respect of this topic can be broadly delineated as embracing two considerations. The first relates to the examination of audit reports and the taking of implementing action by the executive as constituted by the audited body, the responsible ministry, or the controlling ministry, generally the Ministry of Finance or the Treasury. The second aspect concerns the examination of such reports either by the legislative authority itself or by appointed or select committees acting on its behalf.

In relation to the first consideration, a survey of the papers shows that the majority of audit institutions have no power to enforce the implementation of executive action in relation to audit findings calling either for corrective action or giving rise to recommendations or suggestions. Generally speaking, the audit institutions concerned would appear to view the absence of such power as being consistent with

the independent nature of the audit role and the accepted concept of non-encroachment by audit on the functions and responsibilities of the executive.

A few countries have indicated either directly or by inference that the audit institution has the authority or power to direct compliance by the executive with audit findings whether they be of a corrective or recommendatory nature. Generally, the information provided does not elaborate on the possible effects of the use of this power of direction on the independent stature of the audit institution in relation to the executive although reference is made in some instances to the overriding authority of the Parliament or other designated authority.

Against the foregoing observations the following summarizes the situation obtaining in the majority of the countries.

Generally, on receipt of audit comments, observations, criticisms, or recommendations, the audited body has the responsibility for the consideration of audit findings and for the implementation of any corrective or other relevant action required. Where initially differences of opinion exist as between the audited body and the audit institution, these are generally resolved by negotiation or, in the event that settlement is not reached, by reference to some higher authority, such as the controlling financial ministry, a parliamentary committee, or even to the Parliament itself, for decision.

In the main, countries have parliamentary committees, established either on a statutory basis, under standing orders, or by custom, which examine on behalf of the Parliament either the whole or the more important matters referred to in the periodical audit reports of the individual audit institu-



Committee members responsible for discussion of implementation of recommendations, from the left: Lars Breie, Auditor General of Norway; George H. Kabiswa, Auditor General of Uganda; Dr. Samir Helmy, Vice President, Central Auditing Organization of the Arab Republic of Egypt; and Victor J. W. Skermer, Auditor General of Australia and rapporteur.

tions. These committees are variously titled—e.g., public accounts, expenditure, or appropriation committees—and in general terms have authority to seek evidence in writing and/or by the examination of witnesses (in some instances in public) and usually report in writing to the respective Parliament on their examination of the audit institution report. The committees include in their own reports the conclusions reached and recommendations arising from their considerations. Although the individual situation has not in all cases been specified in the papers surveyed, some Parliaments debate the reports received from the committees; in other cases the reports are simply received and ordered to be printed, whilst in still other cases, administrative procedures exist to deal with matters raised in the reports and bring them to conclusion.

In some countries where the equivalent of a Public Accounts Committee has not been established, it is customary for the Parliament itself to examine or debate the content of the annual or other reports submitted by the audit institution.

In general, the audit institution attends inquiries made by Public Accounts or similar parliamentary committees in an observer capacity. However, there are variations in the degree of participation by audit institutions in the work of these committees as, in some cases, there is active participation as adviser and in the drafting of the committee's report.

Having considered the situation as reported to this Congress, a fair conclusion may well be that Supreme

Audit Institutions generally are assured that their reports will receive the attention of the respective legislative authority and of any administrative agency which is the subject of criticism. In the event that appropriate remedial action is not taken, audit institutions have ample scope for further appropriate observations and criticisms per media of their reporting powers.

Description of Action Following Examination of Audit Reports, Responsibility for Action, and Effectiveness of Results

Broadly speaking, insofar as the executive is concerned, whether it be in the audited body, the responsible Ministry, or the controlling financial authority or Minister, there is both a direct and implied responsibility on the executive to determine and as appropriate implement those audit findings which call for corrective or other action, whether stemming from critical or recommendatory audit observations. That this responsibility is both recognised and effected is generally evident from the papers surveyed. Naturally enough, the papers also acknowledge that audit comments are not necessarily always accepted without some measure of initial opposition even to the extent of considerable resistance on the part of the executive. Whilst recourse to higher authority for decision is generally available in the governmental machinery in those cases where an accord cannot be reached between the executive and the audit institution, a study of the papers suggests, gener-

ally speaking, that this course appears to be necessary only in exceptional cases.

In the majority of countries where audit reports to the legislature are subject to examination by a parliamentary committee such as a Public Accounts Committee, it is often the practice for the controlling financial ministry, or some other designated executive authority, to be required to examine the reports of such committees and to prepare considered minutes in relation to Committee conclusions and recommendations. The minutes or reports, however described, are usually prepared in consultation with the audited body concerned and not only reflect the executive opinion in relation to the subjects under reference but also contain the executive action either implemented or proposed. The executive findings are in turn subject to further examination by the parliamentary committee and an eventual additional report to the legislature, thus affording the legislature an opportunity to take any final decision in relation to any matter initiated by the audit findings and/or the considerations in relation thereto by both the executive and the committee acting on its behalf. In other words, the general machinery of government involved recognises at all times the ultimate authority of the Parliament in regard to all matters of significance arising from audit reports on governmental activities.

In summary, it can be fairly stated that the effectiveness of the work of a Supreme Audit Institution is greatly enhanced if there is adequate enquiry into its report by a competent body of

the State authority empowered to make the necessary recommendations as are appropriate to the subject matter of the reports.

Other Interesting Aspects

Although only a limited number of audit institutions took advantage of the opportunity to provide specific observations in their papers under this term of reference, many papers contain interesting aspects associated with the agenda item or having relevance to matters of consequence to the aims and procedures of Supreme Audit Institutions. The data given serve to highlight both the similarities and the differences between our respective institutions over such diverse topics as organisational structures; the nature and scope of audit coverage embracing both ministerial departments and statutory bodies; and the relationship between audit institutions and the executive government, to name but a few.

The Federal Audit Court of the Federal Republic of Germany is represented at Budget Committee meetings of the Parliament and, if necessary, at special committees of the Bundestag and the Bundesrat. The Federal Budget Law, as amended, to operate from 1 January 1970, empowers the Federal Audit Court to inform the Parliament and the Government on matters of special importance at any time. The Constitution, as amended in May 1969, provides that the Institution, whose members enjoy judicial independence, shall audit the accounts as well as the economy, efficiency, and regularity of the administration of the budget and

submit its annual reports directly to the Parliament in addition to the Federal Government.

The Comptroller and Auditor General of India has mentioned that recently Audit Boards under his chairmanship have been formed for conducting comprehensive appraisal of the performance of public sector undertakings periodically. These Audit Boards consist of five members including the Chairman—three members being senior officials from the Audit Department and the other two members being persons having the necessary technical background and knowledge of the working of the industrial and commercial undertakings.

The Auditing Court of the Netherlands is presently commissioned under legislation to test the efficiency of the State's financial administration. The Netherlands paper refers to proposed legislation which would allow the Auditing Court to suggest changes of policy or to criticise the results of implementing particular policies. The legislative authority would also be empowered to request the Institution to conduct certain efficiency investigations without undermining the Institution's independence.

The Swedish National Audit Bureau recently was reorganising accounting and auditing functions in the public administration, and in the process linking Government agencies into accounting groups each comprising separate accounting and internal audit units.

The Federal Financial Control Office of Switzerland does not submit annual reports to the legislative authority in the generally accepted manner. In lieu,

the Office submits its files to the Financial Delegation of the Federal Legislative Councils which, in turn, submits annual reports, based on the contents of the audit files, to the Federal Assembly.

A draft law recently before the National Congress of Venezuela provides that the budget of expenses for the Office of the Supreme Audit Institution cannot be subject to modification or limitations on the part of the National Executive; and that the budget will be prepared and carried out by the Office of the Institution while the National Congress will be responsible for the examination of the accounts of the institution.

Conclusion

In conclusion, I suggest the following broad summary of the various views and procedures as submitted in the papers received:

1. Irrespective of the system of audit adopted, the effects of the implementation of audit recommendations are dependent on the efficiency with which the audits are performed and, of course, on the procedures adopted to report findings, review results, and implement sound proposals for improvement.

While either system of audit (preaudit or postaudit) may be considered to have advantages according to individual conditions or statutory requirements and therefore in their particular environment must affect the na-

ture and value of audit reports, any system of preventive control, as a matter of principle, more properly belongs to the responsibilities of administration. In such circumstances Supreme Audit Institutions are free to discharge an independent and evaluating role as to the manner in which administrations are discharging their responsibilities.

Institutions variously see the administration or, in the ultimate, the legislature or its Public Accounts Committee, however named, as the case may be, as being the authority responsible for the development of solutions to overcome any matters reported in the audit findings.

2. The manner in which audit institutions make their recommendations varies according to the conditions and statutory requirements obtaining in individual countries, but whatever may be the reporting mechanics followed, all audit observations, criticisms, and recommendations should be pursued by the audit institution in a manner appropriate to the circumstances, including initial or further reference in annual reports to the legislature as necessary or desirable.

It is noted some countries have special powers to assist them in achieving satisfaction on matters recommended. It is a matter for consideration whether the possession and implementation of such powers intrudes on the statutory role of both the ad-

ministrative authority and the audit institution.

3. Whilst the review has revealed that audit institutions are generally fundamentally independent of their respective governments, there are at times limiting factors in respect of their discretionary powers concerning administrative matters (e.g., staff establishments and financial appropriations) and in the manner of discharging their statutory role. To enable satisfactory attainment of the functions and objectives of the audit institution, the greatest possible degree of independence, including independence of the government, is essential.
4. It is appropriate to acknowledge the influence and importance of the news media in the public interest and where objective press reporting lends support to the effectiveness of the work of audit institutions. However, the extent and nature of the publicity considered appropriate in relation to the reports of audit institutions to their respective legislatures is a matter for individual audit institutions to determine according to the dictates of their own particular circumstances and environment.
5. Responsibility for the examination of observations or recommendations which have been made by a Supreme Audit Institution is initially a matter for the audited body. Where settlement is not reached with the au-

dited body or responsible Ministry, decision as to further audit action depends on the circumstances and the statutory processes available to the audit institution, such as reference to the Finance Ministry or inclusion in a report to higher authority. With regard to reports to the

legislative authority, they should, as necessary, be examined by the executive government (i.e., responsible ministry) and controlling Finance Ministry and, as a parliamentary procedure, by an appropriate committee of the legislature empowered to make necessary recommendations.

Accounting—A Part of Management

Accounting furnishes a framework which can be fitted to assignments of responsibility by management for specific areas of activity. At the same time, it supplies a basis of reporting as one element by which the success of the operation can be judged. Decisions regarding future operations are made with greater confidence by management and the Congress where it can be demonstrated through accounting results that past performance has been consistent with planned programs and within established financial limits.

Lindsay C. Warren

In "The Contribution of Accounting to Better Management," August 15, 1952.

The Work of the Cost Accounting Standards Board

This article reviews the initial operations and status of the work of the Board and is based on an address by the author before the Montgomery-Prince Georges Chapter of the Federal Government Accountants Association, September 8, 1971.

The Cost Accounting Standards Board was established as an agent of the Congress by legislation enacted in August 1970. Establishment of the Board followed an 18-month feasibility study by the General Accounting Office undertaken by specific direction of the Congress. In this study, GAO found that the development and promulgation of cost accounting standards were both feasible and desirable.

The Board has the responsibility for promulgating cost accounting standards to be followed by prime contractors and subcontractors in the pricing, administration, and settlement of negotiated defense contracts in excess of \$100,000.

Composition of the Board and Its Staff

The law directs that the Comptroller

General serve as chairman and that he appoint the other four members of the Board. The other members are: Mr. Herman W. Bevis, formerly Senior Partner of Price, Waterhouse & Co., and currently Executive Director, Banking and Securities Industry Committee; Mr. Charles A. Dana, Manager of Government Accounting Controls, Raytheon Company; Dr. Robert K. Mautz, Professor of Accounting, University of Illinois; and Mr. Robert C. Moot, Assistant Secretary (Comptroller), Department of Defense.

There was a 5-month lag between the time the Board was established by the Congress and the time funds were provided by supplemental appropriation for operation of the Board. The members of the Board were appointed in January 1971 and I was appointed Executive Secretary of the Board and began work on March 29, 1971.

Mr. Schenhaut was appointed Executive Secretary of the Cost Accounting Standards Board in March 1971. He previously served, from 1967, as Deputy Comptroller of the Atomic Energy Commission. Before that, he was employed by the General Accounting Office, serving as Deputy Director of the Civil Division from 1964 to 1967.

Since April we have recruited 19 professionals for the staff of the Board. Nine of these individuals come from Government, six from industry, two from public accounting, and two from the academic community. The staff includes 12 certified public accountants, four lawyers, and three individuals who come from industry comptrollers' offices. These people are all very well versed in contract administration and cost accounting. Their recruitment results from review of approximately 600 applications to date and interviews conducted with more than 100 individuals. We are still recruiting, principally from the public accounting profession and the academic community. The work of the staff is supplemented by four consultants who are professors at major universities.

The Board has been holding monthly meetings with the staff. At these meetings topics of both a technical and an administrative nature are discussed. The Board has made it clear that it wants early involvement in the work of the staff by industry, Government, and the public accounting profession and is seeking suggestions from these sources on problems in Government contracting and recommendations for their resolution. Every effort is being made to minimize the feeling of distrust that appears to have grown up between industry and Government in matters pertaining to defense contract cost accounting. The Board is interested particularly in minimizing distrust of its work.

Major Areas of Staff Effort

Generally speaking, the Board's purpose is to narrow the options in cost accounting that now are available to defense contractors under "generally accepted accounting principles" and Section XV of the Armed Services Procurement Regulation. This purpose is to be served by issuing cost accounting standards to be followed by defense contractors in estimating, accumulating, and reporting costs of defense contracts.

Hearings leading to the Board's creation showed that the accounting profession in developing accounting principles was placing maximum emphasis on principles related to financial reports to stockholders. Even with respect to financial reporting, the Accounting Principles Board of the American Institute of CPAs finds itself in substantial controversy concerning many of its issuances or lack of issuances. Problems concerning cost accounting have obviously received very low priority within the profession. The result is that a vacuum was left insofar as cost accounting principles were concerned. The Cost Accounting Standards Board was established to fill that vacuum.

In attempting to decide how to attack the very many complex areas involved in cost accounting, the Board and its staff have identified five major projects, most of which arise out of the legislation itself.

Disclosure Statements

The first of these projects concerns disclosure statements. As a condition

to entering into any negotiated defense contract in excess of \$100,000, contractors will be required to file with the Government statements disclosing their current cost accounting practices. The contractors will then be required to follow the disclosed practices consistently. Changes will be permitted in disclosed cost accounting practices but contractors will have to make known to the Government the cost impact on all Government contracts to which proposed changes are to apply. The Board is charged with the responsibility for prescribing the rules that will govern such disclosure statements, for example, their form and content.

In developing the disclosure rules, we have in mind designing a statement that will provide compliance with the legislative requirements for disclosure and consistency and at the same time facilitate establishment of a data bank so we can tell what contractors' cost accounting practices are by class of contractor, by dollar volume of business with the Government in relation to total business, by size of the contractor, etc. This kind of empirical data does not now exist anywhere in the United States. With such information the Government will know in detail for the first time what cost accounting practices are actually being followed. This knowledge should be of considerable assistance in developing cost accounting standards.

A preliminary draft of the form and content of a disclosure statement has been prepared by the staff and was sent in September to Board members, selected industry associations, Government agencies, and professional

accounting associations for review and comment. In addition a draft disclosure statement questionnaire was distributed to 22 major defense contractors and subcontractors for field testing; that is, for filling out sample statements with the intent of ascertaining any difficulties encountered. Following the initial input from organizations from whom comments are being solicited and modification on the basis of field testing, the proposed disclosure statement with attendant rules and regulations will be published in the Federal Register for more formal comment. The first publication in the Federal Register is expected to take place about January 1972. The entire publication and promulgation procedure that must be followed by the Board requires the passage of a minimum of 121 days and a maximum of 209 days before any rule or regulation of the Board becomes effective. Thus, there will be ample advance notice to all contractors to make ready for the filing of disclosure statements.

Cost Accounting Standards

The second major area of staff involvement concerns research and development leading to the promulgation of cost accounting standards. Our staff has identified more than 100 subjects that could possibly lead to standards. Of these, an initial group of eight subjects were selected because they were highlighted as significant problem areas in GAO's feasibility study and in testimony before Congress on proposed legislation that led to the Board's creation. Before discussing these eight

subjects, let me summarize the procedures being followed by the staff in examining into possible cost accounting standards:

- We are extracting from reports of the GAO and the Defense Contract Audit Agency examples of reported problems. We have also requested defense contract project managers and industry associations to step forward with examples of problems in particular areas and we are reviewing cases handled by the Boards of Contract Appeals of various agencies. Our purpose is to identify specific problem areas which indicate the need for a standard on a particular subject.
- We are researching authoritative literature dealing with specific problems and the accounting concepts and principles involved.
- We will be able to review disclosure statements, when available, to ascertain the scope and significance of problem areas.
- We are attempting to ascertain the basic causes of the problems, such as insufficiency of existing regulations, inadequate policing to insure compliance with regulations, and lack of recognition of underlying cost concepts and principles involved.
- We are discussing each problem area identified with Government agencies, industry and professional accounting associations, and individual contractors who volunteer to assist the staff. We are looking for *prompt* assistance from all

knowledgeable sources interested in the development and promulgation of meaningful cost accounting standards.

- We are developing alternative solutions to problems and we are evaluating them to determine their relative advantages and disadvantages.
- These alternatives are to be field tested at contractors' plants to consider the feasibility of each alternate, the likely financial impact of changes that might be required as a consequence of each alternate standard, and the likely benefits of each.
- Following the resolution of questions and problems identified for each alternate, a standard will be recommended to the Board for initial publication in the Federal Register to solicit formal comments from all interested organizations.

The eight areas identified for possible development of standards are summarized as follows:

1. Reduction of the instances in which like items of cost are improperly charged to defense contracts both as a direct cost and as a pro rata share of indirect costs—commonly termed “double counting.”
2. Improvement of consistency between the manner in which contractors present cost data in pricing proposals and the manner in which they record the actual cost of contract performance.
3. Need for separate identification

- and segregation in contractors' records of costs made unallowable by Government regulation.
4. Development of criteria for equitable selection of the base period during which indirect costs are incurred and accumulated for distribution to the contract work performed in that period.
 5. Appropriate handling of credits where they relate to costs previously charged to defense contracts.
 6. Research into the various methods by which depreciation charges are currently computed and allocated to defense contracts.
 7. Research of appropriate methods to be followed in the allocation of general and administrative expenses to Government contracts.
 8. Consideration of the question of interest as a cost on Government contracts and its relationship with return on invested capital as a profit concept.

We intend moving forward as rapidly as possible in each of these areas.

Exemptions

Another subject embodied in the legislation is the provision for exemption of classes and categories of contractors from the disclosure requirement and the standards promulgated by the Board. The staff is considering all possible alternatives which may warrant exempting contractors, such as the dollar volume of Government negotiated contracts in relation to a company's total business and the dollar vol-

ume of such contracts in relation to advertised fixed-price contracts. Also under consideration is the possibility of using the definition "small business" as an exemption criterion as well as the kind of industry and the nature of the contract performed. There is the possibility, of course, that no blanket exemptions will be authorized by the Board, and instead the Board will consider exemptions to individual standards proposed for promulgation.

Examination of Records

A fourth major area under consideration concerns the matter of examination of records to determine that contractors are in compliance with established standards and requirements pertaining to disclosure statements. The Board's enabling legislation states that the Board, the Comptroller General, and the contracting agency shall have access to contractors' records for the purpose of determining compliance. The Board staff is attempting to ascertain (1) who should make the examination, (2) how frequently the examination should be made, (3) the scope of the examination, (4) the type of report to be prepared, (5) to whom the report should be directed, and (6) who should make the determination of compliance.

Terminology and Concepts

We are developing a glossary of terms dealing with cost accounting; none currently exists. The purpose of this exercise is to make it easier for the Board to communicate initially internally, and ultimately with the out-

side world. When standards are issued, they will carry the Board's definitions.

The Board is also working in close cooperation with the National Association of Accountants on its development of a statement of objectives or concepts for contract costing. The purpose of the statement is to provide criteria against which specific cost accounting standards can be tested to provide better assurance that they are consistent and are not based on mutually exclusive or conflicting objectives.

Timing Considerations

The enabling legislation for the Cost Accounting Standards Board is a part of the permanent legislation of the Defense Production Act of 1950. Therefore, the tenure of the Board is in perpetuity. There have been various predictions on the length of time that will be required to promulgate a body of cost accounting standards. The predictions vary from 18 months to 10 years. The very nature of the effort is controversial, and the staff has seen some evidence of what might be characterized as distrust of the potential results of staff and Board efforts.

We do not anticipate that we will have "instant standards." Although we are seeking assistance from industry, Government, and accounting profession sources, we will not delay going

forward with the development of standards if such assistance is slow in forthcoming. Too much valuable time is being consumed by technical program managers, in both Government and industry, in disputing cost accounting issues. Standards are long overdue.

We are required to report on our progress to the Congress 2 years after the enactment of our enabling legislation and annually thereafter, which means that our first report is due to the Congress in August 1972. The feasibility and desirability of establishing cost accounting standards have been clearly demonstrated to the Congress. We are therefore under considerable pressure to move forward as rapidly as possible.

We believe we have an outstanding staff, possibly the most expert ever assembled to deal with the subject of cost accounting. The staff is dedicated to what it sees as a once-in-a-lifetime opportunity to contribute to better Government, and to leave a mark on society in general and on the art of accounting in particular. We are well underway; the difficulties that lie ahead will be significantly influenced by the extent of cooperation and assistance we receive from people in Government, industry, and public accounting. We solicit their *prompt* cooperation and assistance to the maximum extent of their capabilities.

A Commonsense Approach to Writing Reports



This article presents some fresh thoughts on how to go about writing reports. The author's pitch is toward the thinking part of the job—thinking out the issues as well as a logical way of presenting them. The author encourages a conscious strategy for planning, actually writing, and later testing the written product.

The concepts are based on what has been tried and found successful in practice in the Detroit Regional Office. The author acknowledges his indebtedness to members of the Detroit staff—especially to *C. H. Moore*, regional manager, who encouraged and contributed greatly to this article.

Setting

Staff member: “* * * pardon me * * * but how do I go about writing this report?”

Supervisor: “What’s the matter? Haven’t you read the *Report Manual*? You

know, that red-colored book?”

Staff member: “Er * * * yes, yes of course, I read every page, but * * *.”

Supervisor: “Well then * * * and just use one of those other reports and * * *.”

Staff member: “But isn’t there a better way? I mean, I tried to read that * * * and this is an unusual case * * * and * * *.”

Just How Do You Go About Writing a Report?

This paper is an attempt to fill a need of the average auditor for some simple, down-to-earth guidance on writing reports that “communicate.” An underlying premise is that a report “communicates” when certain principles of good communication are observed—either consciously or uncon-

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sciously—in its delivery. The process may have been costly. The writer may have consumed a lot of precious time and gotten frustrated and frantic because trial and error was used to arrive at the final product. Or perhaps the writer had a satisfying experience because he *consciously* followed a logical approach—he had a strategy in mind—in identifying and laying out what he wanted to say.

Now that we've got your attention—*think* along with us in a step-by-step account of how to actually go about writing a report.

**Step 1: Begin by Finding Your Message—
Something Important To Tell
"Your World," Something Worthy
of Your Time and Effort**



One of the most difficult things to do is sit down and begin writing. Trying to get started—or being half-hearted in an attempt—can account for a lot of lost motion. If you find yourself groping, it's probably because you haven't done enough real soul-searching. You're not ready to write because you don't have anything to say. You're not inspired. You lack conviction about the *subject matter*. You need a message—a central unifying theme.

Once you "zero in" on the message, the job will take on new meaning. The message gives purpose for everything else that goes on in an audit. And it will become the unifying theme of the report. You can't write a good report until you've found the message, but—ironically—you can't continue effectively in an audit until you've made this same discovery. Hence the importance of finding the message early!

Admittedly, there's danger in getting committed to a way of thinking too early. But there's greater danger in not getting committed at all. The survey phase of an audit is the appropriate time to come to grips with the issues and form your convictions. You should have something in mind when you begin the survey—when you do the spadework. After that preliminary probe, a message must be conceived or there's no purpose in continuing. Muddling through a review without a conscious objective in sight won't do. The message must be visualized and forecasted.

The exact way in which a message is identified may vary. Usually it will involve perspiration—and perhaps a bit of inspiration. It may start with a personal conviction—complemented by a knowledge of the facts. Regardless of the method applied in bringing about the moment of truth, the following are some techniques which should assist in gaining better focus on the message:

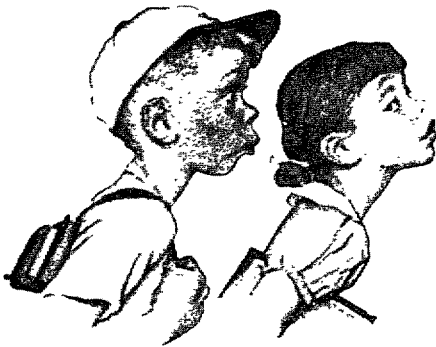
- Brainstorming and open discussion among staff members,
- Challenge and input from persons independent of the job,
- Exposure to the thinking of top managers within the office and

from “experts” on the outside,
and

—Simply through putting pencil to
paper.

Once identified, the message needs to be put down on paper. A good technique is to write it out in digest form at the close of the survey. It should be crisp and clear—with no chance for misinterpretation. Then, make sure it’s approved and accepted by everyone in the responsibility chain before proceeding. In this way, the job can be built around the message. (The need for some reshaping and recasting as the job proceeds is, of course, recognized.) Direction can be given to the entire staff. The goal will be in view. It’s the way to integrate reporting with audit planning and execution.

Step 2: Build Your Message on a Foundation of Logic



A bare message is not enough—it may be right but it won’t be convincing. You have to fill the reader’s mind with pictures, facts, and details that will add up to what you want to say. You will soon discover that getting

across your message is a venture in the art of persuasion. You must give your reader enough evidence to convince him that you’re a man of reason and that what you say is true. To do this, you’ll need some logical arguments, a rationale, specifics, perhaps a few statistics or examples, maybe comparisons and contrasts, graphs, pictures, charts, etc.—an assortment of carefully selected devices to help the reader think along with you.

The basic message itself is usually an overriding conclusion—a generalization. For example: “Water pollution is becoming a critical national problem—more Federal involvement is necessary.”

All of us rely on generalizations every day of our lives—but some generalizations are more reliable than others. Generalizations are important to good writing because they sum up our position—they help us tell it like it is. Yet our generalizations must be backed up with facts—evidence compatible with the strength of the convictions we convey. The process of drawing general conclusions from individual observations is known as “inductive reasoning.” We use it a lot in reporting:

- Over 800 million tons of toxic waste are being dumped into our Nation’s waters each day.
- No institution or governmental authority has control or jurisdiction over the problem—State and local governments lack money and authority.
- The average citizen either doesn’t know about the problem or doesn’t care.

- Fish are dying—people can't swim in the water.
- Professor Snodgrass says "We're doomed unless * * *."
- No one at the Federal level is clearly responsible for action—other priorities exist, etc.

Conclusion: Water pollution is a national problem and somebody at the Federal level had better do something fast!

The logical step-by-step unraveling of evidence will give your reader the basis he needs for going along with your message.

Step 3: Get Your Story Straight—Separate the Big Issues From Other Bits of Information Needed To Support, Complement, or Fairly Deal With the Message



Reports can easily get mired down with too much detail—words, sentences, paragraphs, even globs of pages that aren't working. This distracts from the report and may even conceal or confuse the message. Remember: the only valid reason for writing the report is to deliver an important message. Everything else merely tags along to complement it.

Every word, sentence, paragraph, section, and chapter should readily justify its presence in a report by the

contribution it makes—the tie-in it has—to the message. (This obviously would include any information necessary to add balance or present the "other side of the story.")

—Introductory or background-type information provides scene-setting, offers perspective, and appropriately leads up to the message. How much and what it is depends on the message which follows. But, if it's too long, rambles, or is couched in technical or legalistic jargon, the reader may never make it there.

—The raw message can usually be summed up in a statement or two, but it takes demonstration to make it convincing. An example or two will convey impact in earthy terms. Also, some related issues are usually needed to tell the full story. These should be brought together logically in summary form to alert the reader to what is to follow. Details can be laid out later. The point is to give "reader direction" quickly—an overview—letting the reader know where we're heading. Lay it out for him . . . 1-2-3. A listing of the major points—which tells the story—forms the nucleus of our report. It's our "skeletal structure" dictating what's to follow. What follows, therefore, should be consistent with it and also easily tied back.

—Is there another side to the story? The parties affected—what do they say? Our message is not complete and we aren't fair unless we squarely deal with the reactions

of those who are the targets of any criticism or who may have to take action based on our suggestions. Their views, therefore, must be given prominent place.

—What specifically can and should be done about the conditions we found? Some reports may be simply informational, but usually we'll want to offer suggestions or recommendations. Recommendations must be addressed to the underlying causes—a clear tie-in should be evident.

—Our readers are also entitled to know the *scope* of our work—what we did and where we did it. A brief discussion of our approach and coverage lends credence to our conclusions.

Step 4: Adopt and Consciously Follow a "Strategy" for Communicating Your Thoughts to the Reader



Someone has defined "communicating" as the process of guiding important ideas through mental roadblocks. Certainly we all know from experience

that uninitiated readers need to be led by the hand.

Theories on communication touch on many complicated concepts—about human nature, perception, thought processes, and uncertainties. One thing comes through loud and clear: people get the message only if it's laid out in an easy flow of logical thoughts. And for the casual reader it must be especially simple and down-to-earth. Remember: "the easiest thing for anyone to do is to stop reading."

How do you lay out the thoughts you believe are essential to communicate your message? Is there a logical flow? Can your presentation of thoughts be easily picked out—point by point? Do your physical structure and arrangement (i.e., overview, chapters, captions, sections, paragraphs, sentences, words) facilitate this blow-by-blow account?

In writing the report, you should be consciously thinking of how your writing fits into the plan for logically communicating your message. You should have a "strategy." To illustrate:

—After satisfying yourself on the basic message and listing the pertinent issues or related bits of information you believe are needed to tell your story, devise an overall framework for presenting it.

—Begin with the digest. This is where you should form your "skeletal structure"—an organizational trail which should be readily observable throughout the report. For example, the major points supporting your message should stand out to the reader. A good technique is to list them in

parallel fashion—perhaps indenting them and setting them out separately for quick identification. These major points become logical choices for breaking down the body of the report into appropriate chapters or sections.

—Now consider one of those major sections—the detail behind your first issue highlighted in the overview. A meaningful caption will get you started. But what about the basic content of the section? Can you divide your material into three or four categories or segments? O.K., tentatively devote a paragraph to each segment.

—Next, check each paragraph. Do you have one prominent sentence—one overriding thought—either leading off or finishing up the paragraph? Do all the sub-thoughts complement or tie-in to that basic thought? Check each sentence. What do they really say? Can you combine? Should you break them up? Check each word! Are they all working? Does each paragraph, sentence, and word convey the precise meaning? Does it all add up to something important in relation to your message?

These principles have application to every part of any report. A “skeletal structure” should be the concern. The physical arrangement as well as the subject matter of each chapter, section, caption, paragraph, sentence, and word should be considered from the standpoint of its logical connection to the whole.

Remember: the reader needs con-

stant direction. Summary statements—overviews—can offer this direction, but good side captions and organization can too. Transition words, lead-in phrases, etc., also are important. An easily identifiable flow of logic should be evident from one chapter to the next, from one section to another, from one paragraph to the next, and so on. This will lead the reader through the mire and help him understand the logic you have (or should have) in mind in making your point.

Step 5: Test the Logic of Your Writing To Satisfy Yourself



A message clearly conveyed is open to scrutiny—flaws in logic can be detected, disagreements in philosophy can be flagged, etc. It’s when the message is concealed behind high-sounding verbiage that you may have serious problems—getting back to such basics as support, objectivity, and significance. This may also delay processing or even kill a message that should be told. How do you really know you have it until the message and all its supporting parts are first clear to you? How can others evaluate it unless it com-

municates to them? Clarity is the *first* test. Then other tests can be applied.

You can test your products to satisfy yourself that your message is clear. A logical presentation of your message can be readily subdivided and outlined. A clear trail should be apparent throughout the report. To illustrate:

—First, subdivide the report into its major segments. Let Roman numeral I represent the introductory comments, II the message, III the agency comments, IV the conclusions, V the recommendations, etc. (You could follow the same approach with the digest structure on a smaller scale.) These major segments may fall differently depending on the report. But regardless of the report, you should be able to easily identify the major breakouts. Are you satisfied with this overall framework? Is it complete?

—Now begin with I and break it down further . . . points A-B-C . . . the basic skeletal structure of section I. For example, in an introductory section, point A may simply introduce the subject and give rationale for our concern in the area. B may provide appropriate background data for the reader. C may deal with the law, departmental regulations, and other criteria. D may deal with agency responsibilities, and so on. Are all these important and necessary? If so, is your paragraph structure consistent with your mental image of a logical breakout? Is the ar-

rangement proper? Are transitions apparent?

—Perhaps I.A. has three subpoints . . . 1-2-3 . . . the logical thought structure leading to point A. Do you lead the reader by helping him visualize this three-fold relationship? Do you need to summarize them first and then devote a separate paragraph to each? Do the thoughts justify the detail?

—What about the sentences? Do they enhance the central point in the paragraph to which they relate? The thought is most important! Is it there? After satisfying yourself on the thought, check the language—choice of words. Is every word working? You'll probably be able to refine the thought and surely you'll be able to cut out a few unnecessary words.

This same type of step-by-step examination of each part of your report is necessary before you can expect a product that communicates. When you're through, you can take another look at the outline. Maybe by that time, you've had some major alterations. Remember the outline should be visible as you read through the report. (You might even want to jot down the numerals, letters, and numbers in the margins of your draft as a test.) By translating it to an outline you can better examine the real logic of your presentation. It may be shocking when you realize that you have a difficult time devising the outline. You can be sure in such a case that the reader will have a doubly difficult time under-

standing your point. So try it one more time!

Final Thought

A clearly written, well-organized report is, of course, not a substitute for an important message. But, assuming

you have something important to say, a commonsense approach may help you say it and your audience see it—sooner!

EDITOR'S NOTE:

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How To Improve Internal Reports

* * * once responsibility for data identification is placed on management, effective management usually eliminates a bulk of trivia and trash in internal reports. This in turn eliminates substantial costs incurred all the way from the field to the top office in gathering raw data that is to a great extent useless.

Leonard Spacek

Senior Partner, Arthur Andersen & Co.

Speaking on "Utilizing What Is New in Accounting" in the CAO 50th Anniversary lecture series on July 15, 1971.

A Method and Format for Proposal Studies

With increasing frequency the GAO is being asked by the Congress to analyze policies and programs in their formative stages. One way of conducting some of these "proposal studies" is by extensive interviewing of experts coupled with comprehensive research of relevant literature.

Introduction

Over the past few years, congressional committees have begun to ask for a new kind of assistance from the now multidisciplinary GAO organization: the gathering of analytical, judgmental information about proposed policies, programs, and expenditures in their formative stages when options are still open to the committees. These committees expect that the information gathered by the GAO will be more thorough, more impartial, and more reliable than that put forward by the advocates of a new policy program or expenditure or by the opponents of the proposed measure. This kind of effort is termed a "proposal study" in this article.

Study Criteria

A congressional committee wants to

know before acting on an emerging program if it is soundly conceived, worthwhile, and likely to achieve its objectives; if it is complete as presented or has hidden, long-reaching implications; if it will duplicate or contradict existing programs; and if it is likely to reshape or redirect policy already established by the Congress. These are the typical criteria of proposal studies and they are thus less precise than those addressed in audit reviews.

The time frame is sometimes critical. The executive budget, containing many new proposals arrives early in the year, for instance, and the principal committees who may call on us for analyses of some of these proposals have only a short time to make decisions. There may be only 4 or 5 months allowed—unless the proposals are anticipated in the previous year—

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for the GAO to make a substantive response.

A committee, in directing such a study, is generally not seeking GAO's own recommendations or conclusions primarily, but instead wants a reliable and objective analysis of the proposal, a spelling out of the action options which the committee may choose to act upon, and a statement of the advantages and disadvantages attached to each option. In the course of some proposal studies, too, we have been asked to help frame questions to be asked of both advocates and opponents during committee hearings.

The Present Scope

There have not been many proposal studies made by the Defense Division as yet, but the number seems to be growing. As our self-confidence to do this kind of evaluation deepens and as our competence is demonstrated through high quality reporting, proposal studies should become a regular part of our work. Some in the Congress, not fully aware of the skills on board, have reservations about GAO capabilities—but those misgivings can be dispatched by the quality of our product and by recognizing those subjects that are simply too big, too “political” or emotional, or too arcane. Some proposed policies and programs are more in the province of special commissions, scientific bodies, and other such groups, however excellent the analytical talents that are in-house within the Government.

GAO Capabilities

To analyze thoroughly a proposed policy or program one must design the right questions to ask at the most reliable sources and sift carefully the answers obtained. As the proposal begins to emerge into clearer light through detailed inquiry it attains a reality and integration fit for critical examination. The advantages, disadvantages, and uncertainties then begin to manifest themselves, and the development of a reasoned, objective report to the Congress can begin.

As two prominent analysts have said, good analysis is the product of inquiring minds rather than a set procedure:

[Systems analysis] is at once eclectic and unique. It is not physics, engineering, mathematics, economics, political science, statistics, or military science * * * it 's much more a frame of mind than a specific body of knowledge, which explains why economists, physicists, military officers, and liberal arts graduates can all be good systems analysts—or bad ones, for that matter. A good systems analyst is a relentless inquirer, asking fundamental questions * * *, systems analysis is more a philosophy than a specific set of analytical techniques.¹

This is a useful frame of reference for proposal analysts. (“Relentless inquirer,” in fact, is GAO's middle name!) With the help of those on our staff educated in the several disciplines² and occasional use of con-

¹Alain C. Enthoven and K. Wayne Smith, *How Much is Enough?* (New York, Harper & Row, 1971), p. 62.

²The CAO systems analysis staff participated in the guided missiles study described below (it also did statistical analyses on performance data of missile capabilities); the Office of the General Counsel supplied talent for an analysis of the future implications of the F-14 aircraft contract. There was aeronautical engineering help on the F-14 review as well as on a similar S-3A aircraft contract assignment.

sultants in specialized fields, proposal studies are well within our competence as indicated so far by some comments in the Congress, the Department of Defense, outside experts, and the press.

As one illustration, a study of two procurement methods proposed as means of improving competition in weapon systems procurement led us to find good promise in one of them—parallel undocumented development, or competitive prototyping. The GAO recommendations won widespread acceptance in the defense community, and due at least in part to our forwarding it, competitive prototyping is now Department of Defense policy in applicable procurements. During public testimony on the two procurement methods, the chairman of the Senate subcommittee which authorized the study complimented the Comptroller General several times on the quality of the analysis.³

Proposal Studies vs. Audit Reviews

Before discussing appropriate investigative procedures and describing some recent proposal studies, it may be useful to point out some contrasts and similarities of these assignments with audit reviews. Unlike our usual work, the typical proposal study deals less often with facts and figures (although statistics are to be preferred to adjectives when they can be derived). It inquires into history, as do audits,

except that the purpose is more to establish background and to find lessons of the past that may support, discourage, or suggest useful alterations to the proposal; competitive prototyping, for instance, was widely used for weapon procurement up to about 20 years ago and its history was germane to the proposal study mentioned above.

The proposal study seeks to look ahead, to predict what may happen if a proposal is or is not adopted; therefore this kind of evaluation is before the fact rather than after. Proposal reports, then, have a more enduring relevance, generally, and the writer must take the long view to try to anticipate the questions and views of later readers (including GAO auditors down the road) when the proposal may be in effect or when it is being revived.

Because proposal reports are heuristic in nature—they seek to guide or lead since they cannot “prove”—they are not so acceptable on their face as audit reports, even though proposal reviews are conducted with equivalent stress on professionalism and reliability. Readers understand as a “given” that audit reports are fortified by unequivocal workpapers derived from official records, for example, and they do not expect further documentation. Proposal studies on the other hand are more pragmatic; they are based more often on opinionative sources, some of which might not be the choice of some readers. In the report indexing process there are more labels such as “interpretation” and “logical development” than appear in audit report indexing.

³ U.S. Congress, Senate Committee on the Judiciary, *Competition in Defense Procurement—1969*, Hearings before the Subcommittee on Antitrust and Monopoly, pursuant to S. Res. 40, 90th Cong., 1st sess., July 14, 1969, pp. 7–32.

The Work Plan

As in an audit, we interview executive agency and contractor officials; but we talk with others, too, such as ex-officials, academics, scientists if need be, consultants, and other knowledgeable people who may have valuable insight on the subject. Most are eager to speak when asked for their help by the GAO. The dialogue is seldom "adversarial" since we are not seeking to learn what was done wrong in the past, but rather contributions and opinions of what is likely to happen in the future, if the proposed policy, program, or expenditure in one form or another is approved.

Even though the relationship between the interviewees and the proposal analyst may be "easier" than in audit reviews, the proposal analyst, in his quest for reliable information, should be no less skeptical than his auditor brother; possibly he should be more so, since he must winnow through sometimes a bumper crop of varying opinions and judgments rather than through sets of facts and figures which, however elusive, are in the end verifiable. Before the interviewing program begins, it is very useful to make a study of the literature to get a better or refreshed view of the subject so that questions can be carefully framed and the extemporaneous discussion with the experts will be well organized and germane.

The purpose of the literature search described below and the extensive interviewing is to gather a wide spectrum of views, weigh them for relevance and import, and then distill the

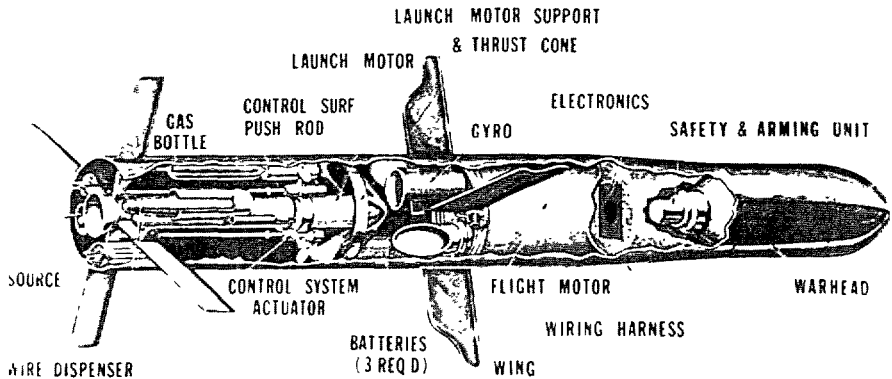
most reliable ones into layman's language, and, as with our audit reports, present them to the Congress "without fear or favor." This has been done rather successfully in the past by the Defense Division, for instance, in studies of the future cost implications of the F-14 and S-3A airplane contracts, the proliferation of tactical air-to-ground missiles, alternative approaches in the development of the MBT-70 tank, proposed new methods for procuring major weapon systems, and others.⁴

Not all proposal studies can be conducted in the same manner as will be described here, but perhaps the story of one study made by the Defense Division will illustrate one way of going about some of them.

A Review of Guided Missiles

The chairman of the Preparedness Investigating Subcommittee, Senate Armed Services Committee, asked the Comptroller General in November 1969 for assistance to the subcommittee staff in studies of guided missiles expected to be proposed in the upcoming Department of Defense budget.

⁴ "Analysis of the F-14 Aircraft Program," B-168664, Aug. 17, 1970 (Confidential), 68 pp.; "Contractual Features and Related Matters in the S-3A Aircraft Program," B-163058, Mar. 29, 1971, 63 pp.; "Analysis and Alternatives: The AGM-65A Maverick Missile System," B-160212-1, Dec. 31, 1970 (Secret), 49 pp.; "Analysis and Alternatives: The AGM-53A Condor Program," B-160212-2, Dec. 31, 1970 (Secret), 46 pp.; "Analysis and Alternatives: TOW and Shillelegh Anti-tank Missile Systems," B-160212-3, Dec. 31, 1970 (Secret), 41 pp.; "Actions Needed to Reduce the Proliferation of Tactical Air-to-Ground Missiles," B-160212, Dec. 31, 1970 (Secret), 86 pp.; "Study of the MBT-70 Program, Department of the Army," B-163058, Sept. 2, 1969 (Secret), 68 pp.; and "Evaluation of Two Proposed Methods for Enhancing Competition in Weapons Systems Procurement," B-39995, July 14, 1969, 57 pp.



The Army's TOW missile has both an air and ground role. It is a wire guided antitank missile launched from vehicles and from helicopters. It is also launchable from the ground by infantry troops. Two thin wires are dispensed from the missile in flight over which guidance commands are given the missile to keep it on proper course.

Some of these missiles seemed to the subcommittee to be overlapping or duplicative in their missions and capabilities. The GAO was asked to concentrate on the tactical air-to-ground missile group. Because of the short deadline imposed, we selected the three most prominent missiles in the group for detailed study and planned an overall report on tactical air-to-ground missiles as a class.

There were four Washington professional staff members assigned, supplemented by three outside consultants, and able assistance was provided by several regional offices. Other Defense Division groups provided data and helpful comments in the course of the work. The four reviews and reports required 800 man-days.

Researching the Proposal

* * * in research as in life, one is far

more likely to find what one looks for than what one neglects.⁵

Our first step was to meet with the subcommittee staff to discuss the objectives and scope of our study and to plan our coordination. Each member of our staff then wrote a "think paper" about scope, objectives, and procedures which we consolidated into one. Then an interviewing list was compiled of executives in the Office of the Secretary of Defense and officers in the military services in charge of missile requirements, research and development of missiles, testing, procurement, and operations.

The Defense Documentation Center at Cameron Station, Va., was asked to compile a bibliography of technical documents and their abstracts about tactical missiles. Another bibliography of more widely published texts was gleaned from such sources as the *Bib-*

⁵ Jacques Barzun and Henry F. Graff, *The Modern Researcher*, Harbinger Book (New York, Harcourt, Brace & World, Inc., 1962), p. 160.

liographical Index, the *Cumulative Book Index*, and the *Publisher's Annual*. The *Index to Military Periodicals* was a useful link to journal articles about guided missiles.

The Literature Search

The literature search was planned in order to find other perspectives on the subject, to refine our questions, to support or modify opinions gathered in the interviews, and to insure reliability of our review results.

From the Defense Documentation Center's bibliography of about 1,000 technical reports on guided missiles we selected about 200 to be scanned further, and about half of those were worth thorough review. Another 100 or so published texts were scanned and about as many theses, journal articles, and congressional reports. Of particular interest for overview were the books and articles written by ex-Department of Defense officials and retired military officers who, when freed of the restraints of office, are often the more candid. Other sources were works by distinguished scholars having a special interest in defense affairs, such as those published under the aegis of the Institute of War and Peace Studies at Columbia University. The writing of experts who expect their work to be reviewed by their peers is often better organized and more carefully considered, perhaps, than opinions expressed in extemporaneous interviews.

In the published texts we stayed mostly with authors listed in *Who's Who in America*, *Who's Who in Edu-*

cation, *American Men of Science*, and so on. *The Book Review Digest* and distinguished journals (e.g., *Foreign Affairs*) provide previews about many texts and looking these up can be a useful preliminary step. Generally, authors who are distinguished in their field and whose works are sponsored by leading universities and reputable publishing houses are good, reliable sources for background information, and their footnotes are likely to be reliable sources for further detail.

As with the opinions of interviewees the objectivity of the literature must be carefully judged. The *Marine Corps Gazette* is no place to look for open criticism of Marine tactics, nor would *Space and Missile Technology* be likely to suggest a return to brass cannon. A number of the technical reports were suspect in their objectivity, too, because of data that appeared incomplete or overly selective. Sometimes, though, careful reading between the lines of advocacy literature does furnish useful clues. But in going through much of the written works, as in assessing face-to-face interviews, contradictory views must be resolved, polemics discounted, gaps filled in, and biases analyzed.

The Interviews

Officials of the Office of the Secretary of Defense were close by at the Pentagon, but many of their counterparts in the three military departments were stationed at laboratories, testing centers, bases, and posts all over the country. The regional staffs did some of this interviewing and observed some

important missile tests for us. Later, after absorbing these more or less "official" comments, we were to meet with experts detached from the Department of Defense who would give us other views.

We talked with about 150 people in all. Most were quite cooperative because they, too, were concerned about the diversion of resources to overlapping missile systems and the disappointing performance of some missiles then being used in Vietnam. Our discussions were quite informal, and we met with some people several times. We cross-checked opinions and answers between groups to collate the understatements, biases, exaggerations, and different shades of meaning.

Often there was service bias to be discounted, especially when rival services were developing guided missiles for more or less the same mission. Service representatives argued the superiority of their missile over competing ones, point by point, and in these briefings we sometimes found fruitful grounds for more precise questions about comparable missiles.

There are other particular biases to be weighed, too. Electronics specialists are inclined to argue for more sophisticated control systems, while operations people tend to emphasize simplicity. Those in the requirements shop stress the urgency of need, and contractor representatives and weapon advocates are likely to dismiss technological uncertainties. Rarely will a new missile be proposed, for example, without at least 80 percent reliability ascribed to it. The problem of synthesizing this array of opinions into a cohe-

sive statement about a proposal is challenging indeed.

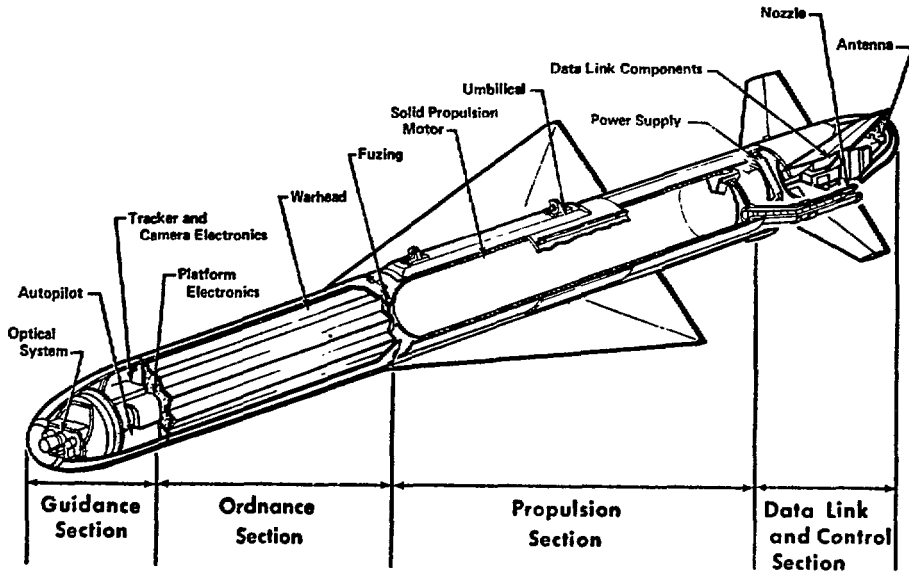
After each meeting, we prepared notes of the interview highlights. These were kept confidential; to get freer views expressed we had assured each of the interviewees prior to meeting that no one would be identified or cited in our reports. Most people proved to be candid with us, but we did not expect nor did we hear any basic service disloyalties.

Preparing the Report

The research can be endless on an important proposal, and it may take a conscious effort to bring it to a halt and start writing the report. This we did on the missile assignment, but we made a last minute check of the trade magazines during the final drafting to make sure that our paper would not be outdated by the latest events.

The three prominent tactical missile programs which we elected to study in detail were the Army's TOW, the Navy's AGM-53A Condor, and the Air Force's AGM-65A Maverick, each of which resulted in a separate report developed by different members of the staff. A fourth paper broader in scope but coordinated with the others treated the history, development, and evidence of duplication in tactical air-to-ground missiles as a class, and related the problems encountered with them in design, testing, and operations.⁶ All the reports are classified as secret, but an unclassified version of the overall re-

⁶ "Actions Needed To Reduce the Proliferation of Tactical Air-to-Ground Missiles," B-160212, Dec. 31, 1970 (Secret), 86 pp.



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The Navy's AGM-53A Condor missile is intended to be a long-range missile for high value targets such as bridges and power plants. A television camera in the missile's nose transmits a continuous picture back to the launch aircraft and permits the operator to guide the missile to the target. The aircraft can thus stand off from enemy defenses positioned near the target.

port was also published for internal GAO use.

We had prepared tentative report outlines and had written introductory sections early to help us hold steady on the course we had laid out for ourselves. These were rewritten from time to time, as we got deeper into the subject, and needless to say the reports went through many editions. There was a good deal of pruning and condensing to do too. We often overlook the precept of the poet Coleridge: "The art of writing consists largely of knowing what to leave in the inkwell."

As successive editions emerged we tried them out on a number of experts we had previously interviewed, asking that the papers be reviewed for clarity

and accuracy; a good deal of the information we gathered was rather technical, and a report's credibility may be damaged in the eyes of experts if the *lingua franca* of the technologist is not precisely translated for the layman. We wanted to "true up" the reports to be readable by laymen without necessarily "talking down" to the experts in the subject since there are both kinds of readers on congressional committees and among their staff specialists—not to mention in the Department of Defense which would be asked to comment officially. Our interviewees were most helpful in their reviews, suggesting where added development would be useful, other sources for some of the data, which facts should be qualified, which statements should be

checked further for reliability, and which terminology would appear not quite correct to the knowledgeable.

Documenting the Proposal Study Report

Again, proposal reports are developed from assessments of opinions, views, and perspectives, and no matter how excellent the sources are, results will always be open to some disagreement if only because of the diversity of opinion about most proposals. Grounds for dispute can be narrowed, however, by the scope and depth of the supporting research, and the care with which the uncertainties are identified and the judgments qualified in the report.

It was in the prepublication stage that we learned that proposal reports, unlike traditional GAO reports, cannot stand alone quite as well. We had dug rather deeply into some details of guided missile technology and development, and some of our knowledgeable prepublication readers, not familiar with those details were "from Missouri." We cited the sources to them, but it was becoming clear that other serious readers might want to appraise for themselves the reliability and objectivity of our information. We thought it would be useful to footnote source documents for this reason, and also because there were information and statistics in the reports gathered from other works that were probably quite difficult for the original researchers to dig out or put together. These authors, it seemed, deserved due and proper credit for their work and ideas.

We cited the sources of quotations, and also of uncommon facts, generally unremembered events, and interpretations, inferences, and statements drawn from sources about which alert readers might want more evidence. Previous GAO reports whose topics overlapped were cited, too, to show precedents for positions taken and to demonstrate consistency within the Office on related issues.

There may be another benefit derived from footnoting source documents—not perhaps a terribly important one—they give to those readers who may have doubted our capability to do proposal evaluations some indication of the depth and breadth of our studies and the care with which we selected sources.

* * * Footnotes * * * form the main part of the "apparatus" which is said to distinguish a "work of scholarship" from a "popular work." They give us confidence in the book that displays them by announcing to the world that the text is open to anyone's verification. They declare in their way that the author is intellectually honest: he acknowledges his debts; and that he is democratically unassuming: the first comer can challenge him.⁷

Footnoting required little or no additional report preparation time since the report had to be indexed to the source documents for the referencer anyway.

Overview

Conducting a proposal study is something like mining for rare ores. It is a patient search for likely terrains and then a chipping away to expose

⁷ Barzun and Graff, *op. cit.*, p. 311.

nuggets of significant information. There were many possible sources of information about guided missiles, we found, but often there was little pay-dirt. Some people selected for interviewing, for example, were more reticent or less well informed than we had hoped; similarly in the literature, many documents and texts did not live up to their promising titles or abstracts: they were either too broad or too narrow in scope, or were discrepant in their information.

Not all proposal studies need to or can be conducted in the manner de-

scribed here. If the subject is well in hand the research need not be extensive. But if the proposal deals with unfamiliar ground or if it may have long-reaching implications, it will be wise to fortify the report's reliability with a comprehensive interviewing program and a thorough study of the literature.

* * * in most analyses of policy issues, the vast majority of the important effort is devoted to seeking and then asking the right questions, formulating the problem, gathering relevant data and determining their validity, and deciding on good assumptions.⁸

⁸ Enthoven and Smith, *op. cit.*, p. 66.

Good Riddance Feds

The Los Angeles audit group working on the HUD code enforcement survey were pleasantly surprised not long ago by the clerical staff of the County of Los Angeles Homeowners Modernization Effort (HOME) on their last day of work at that location. During the afternoon coffee break, the HOME staff surprised the GAO team with refreshments consisting of a large cake, ice cream, and punch. The cake was beautifully decorated and inscribed with "Good Riddance Feds." This friendly gesture on the part of the HOME staff culminated from a very good relationship between the GAO and HOME staffs while working at the county project.

Kelly Seelig

Supervisory auditor,
Los Angeles Region.

Accrual Accounting Benefits to Government and Nonprofit Activities

This article emphasizes the number and kinds of benefits available to the full range of management levels from accrual accounting. It suggests that when all these benefits are considered, accrual accounting is amply justified and that conflicting views on its worth may be the result of somewhat parochial assessments.

Extolling the helpfulness of valid and timely information on accrued Federal expenditures and revenues in devising appropriate national fiscal and monetary policy may leave middle managers cold, and emphasizing the help a good system of accrual accounting can give middle managers may not impress the fiscal and monetary policymakers. The fact of the matter is that accrual accounting can significantly help management at most levels.

Its worth should be judged, not parochially in terms of usefulness to one or another level, but in terms of the total potential benefit that a well conceived and designed accrual accounting system can provide to multiple levels of management. These benefits may stretch from a line manager seeing to the performance of a local activity to

the President of the U.S. Senate and the Chairman of the Board of Governors of the Federal Reserve System in their fiscal and monetary policymaking roles.

It is important to consider this full range of benefits in judging the worth of accrual accounting and the extent of its applicability to government and nonprofit institutions. This is especially true because the traditional idea of the profit motive found in private business is characteristically absent in such institutions as a compelling reason for accrual accounting. The number of other benefits that have been cited may also have in themselves individually obscured the entire span of benefits that in total make up a compelling reason for its use by emphasize

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ing one or another benefit to the exclusion of the others.

Accounting for Management Output Objectives

Most management objectives can be stated in terms of definable goals or output objectives to be achieved. From an operating site upward through an organization, output objectives can often be established that support the next higher output objective successively in pursuit of a national purpose. Thus, a line manager seeing to the performance of a local activity might work out daily output objectives with his subordinates in terms of units of work to be accomplished. The basic output objectives, for example, to irrigate, survey, or clear certain land acreage by a specified date for a specified cost, would be in pursuit of a national purpose usually through a hierarchy of intermediate purposes and programs. In this example, the national purpose could be to promote the general welfare, an intermediate purpose could be to attain the highest beneficial resource use, and the programs could range anywhere from reclamation to hydropower to mineral surveys.

By comparing his planned output objectives and the related costs with actual performance and cost periodically during the period of performance, the line manager can see how well, or poorly, he is doing. If necessary he can use this information to both adjust current performance and refine future plans.

Thus when objectives having three elements can be established in pursuit

of a program and its purpose, accrual accounting can be used to report the plan and compare performance against it in commonly understood terms. The three necessary elements of "bookable" objectives are the planned achievement of definable events (units of output), the planned time in which to achieve the events, and the planned costs of achievement.

When management output objectives are established that clearly support national programs and purposes, accounting for them can be used to show the degree of effectiveness achieved in program accomplishment. When the objectives are based on a standard of performance, accounting for them can be used to show the degree of efficiency achieved in program accomplishment. Thus, properly devised and applied accrual accounting for management output objectives can be used to measure both effectiveness and efficiency, and appropriate management action can be taken when there are significant deviations. Cash accounting and obligations accounting are not as universally suitable for this purpose because the time when events are recorded under these methods often differs from the time they occur.

Some sort of record is required for a comparison of any but the simplest plans with performance. This record would almost certainly include information that would be in an accounting system maintained on any basis; e.g., budgeted obligations compared with active obligations, budgeted cash with active cash, and budgeted cost with active cost. Thus, a management information system that neglects to utilize

the existing accounting system for the purpose of comparing plans with performance would include information that would overlap information in the accounting system and to the extent of the overlap would be inefficient when compared with an accrual system designed to report in terms of the planned and actual costs of achieving management output objectives.

In this connection the following passage from the Report of the President's Commission on Budget Concepts makes the point:

* * * program costs are being increasingly used to measure agency performance. The accurate measurement of program cost requires an accrual accounting system, in which such items as accounts receivable, accounts payable, stocks on hand at the beginning and end of the period, and capital assets are recorded * * *.

Conceptually, it is but a short step from accounting for program costs to accounting for the cost of achieving program objectives. The cited passage leads to the subject of quantitative and monetary property control, another useful purpose served by accrual cost accounting systems.

Property Control

Accrual accounting provides a basis for effective monetary and quantitative control of property. This type of control is required of Federal agencies by statute. Through accrual accounting, control is established when goods are received, and custodianship responsibility occurs, and continues until they are consumed or disposed of. This is not true of obligations accounting that

recognizes when an order is placed—normally before goods are received, or of cash accounting that recognizes when a payment is made—normally after goods are received. The only true mesh between custodianship and accountability is provided by accrual accounting.

The basic feature of accrual accounting is recognizing transactions by type as they occur. When this is coupled with a perpetual inventory, a self-checking unified system of quantitative and monetary control over both expendable and nonexpendable property is provided.

For example, take the receiving report that signals the entry of the quantity and cost of goods received on a perpetual inventory. No entry is made in obligation and cash accounting records from a receiving report, and accounting records maintained on those bases serve no control function for property. In accrual accounting the receipt is recorded as an addition to an account which can control the perpetual inventory as a subsidiary record. Likewise, while accrual accounting recognizes issues from stores and other property dispositions when they occur, obligation and cash accounting are not designed to do this. Thus, the flow of both quantitative and monetary property information through the articulated processes of an accrual accounting system serves to assure the validity of both recorded quantitative and monetary information. This capability when properly used can help property managers, inventory managers, and procurement and supply officers in meeting their

responsibilities by providing information on the quantity and cost of what is on hand, and its rate, place, and even nature of use.

The aggregate result of accrual accounting for property acquisitions is also important as indicated by the following comments from the Report of the President's Commission on Budget Concepts concerning the difference in budget totals stated in terms of accrued expenditures rather than cash disbursements.

The discrepancies between cash disbursements and accruals become particularly significant in periods where there is a rapid increase or decrease in outstanding Government orders for long leadtime procurement items as in a defense build-up or demobilization period.

This, in turn, leads us to the usefulness of information on accrued Government expenditures and revenues in national monetary and fiscal policy decisionmaking.

Monetary and Fiscal Policy

The following Associated Press release concerning a study by the Council of State Chambers of Commerce in November 1970 brings the use of information on "outlays" at the national level into focus.

WASHINGTON (AP)—The country faces twin deficits of up to \$15 billion each in fiscal year 1971 and 1972 unless Congress clamps a tight lid on spending, the Council of State Chambers of Commerce said Sunday.

That much red ink, said the council, would revive upward pressure on interest rates, retard homebuilding, and impede efforts to control inflation. The council's research director, Eugene F. Rinta, added:

These deficits would also tend to force the Federal Reserve Board to adopt a tighter monetary policy which would inhibit business expansion and job creation.

A general tax increase to reduce or eliminate the deficits would not be a practical solution in the present sluggish economy.

REPORT DISTRIBUTED

The budget analysis was sent by the council to its 31 member state and regional chambers and to members of Congress.

A \$9 billion increase in outlays over the original \$200.8 billion expenditure estimate for fiscal 1971—plus an almost equal shortfall in revenues—was blamed for the current year's deficit.

The report suggested that Congress use its fiscal 1968 budget-cutting resolution as a model for immediate action.

The report closed: "Now that the elections are past, it is a favorable time for fiscal responsibility."

The reliability of any conclusions that may be drawn from the Council's report and the appropriateness of fiscal and monetary policy actions that may result both depend on the validity and timeliness of the information on "outlays" and "revenue shortfall," a validity and timeliness that accrual accounting would help assure by better periodic matching of expenditures and revenues.

The Report of the President's Commission on Budget Concepts stated that:

From the standpoint of determining fiscal policy, expenditures on an accrual basis probably represent the best measure of the economic impact of the budget. This is the point in time at which the Government actually incurs a liability requiring immediate or eventual payment, including constructive delivery in the case of construction put in place and work performed by contractors on specific orders.

Conclusion

Accounting for management output objectives, property control, and providing information needed for fiscal and monetary policy decisions illustrate the range of purposes accrual accounting can serve from line management to management of the national economy. The three examples do not cover all purposes that accrual accounting can serve such as controlling revenues earned but uncollected, and reducing the expense of obtaining money (interest) by timing expenditures more closely with need.

Further, the case for accrual accounting applies to all levels of government—Federal, State, and local as well as to nonprofit private institutions

such as universities. The appropriate performance of the latter is becoming increasingly critical as Federal grant-in-aid programs expand and Federal donors become more dependent on donees for information on rates of expenditure and donees become more responsible for achieving program objectives and more accountable for national resources and activities.

The benefits from accrual accounting, if universally adopted, would “accrue” not only to line managers but also, when aggregated, to managers responsible for setting national fiscal and monetary policies.

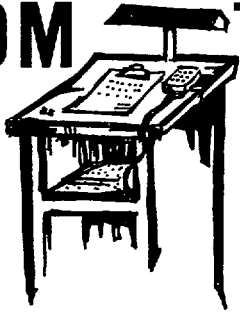
Thus, accrual accounting seems amply justified when viewed from the perspective of all the management levels it can benefit.

Then, Too?

We tried hard * * * but it seemed that every time we were beginning to form up into teams, we would be reorganized * * *. I was to learn later in life that we tend to meet any new situation by reorganizing and a wonderful method it can be for creating the illusion of progress while producing confusion, inefficiency and demoralization.

Petronius Arbiter, 210 B.C.

FROM



GAO

SPEECHES

Elmer B. Staats, Comptroller General, speaking on "Federal Spending—Is It Out of Control?" before the Commonwealth Club of California, San Francisco, October 1, 1971:

The twin problems of need for a strong economy and need for confidence in government go hand in hand. For the country to concentrate on meeting the needs of the reordered priorities, these two basic problems—too much inflation and too little confidence—will require mitigation as soon as possible and solution within some foreseeable period. I believe that a strong economy is not attainable without a renewal of confidence by the American people in their national Government. Such a challenge could not come at a more difficult time. The new priorities are largely in areas where neither Government nor private enterprise as yet has had much experience. Someone has observed rightly that it is easier to get a man on the moon using a technical program largely dependent on machines than it is to devise a welfare program for millions of persons that can be managed adequately and administered effectively.

E. H. Morse, Jr., director, Office of Policy and Program Planning, speaking on "The Expanding Role of the Auditor in Government Operations" at the joint meeting of the Cleveland Chapters of the Institute of Internal Auditors and the Federal Government Accountants Association, Cleveland, Ohio, October 13, 1971:

In concluding these remarks, a cautionary

note is needed. In expanding the scope of his operations, the auditor should not overlook any important part of the total audit job, be it related to fiscal operations, to management performance, or to program accomplishments.

During any given period of time, there are priorities to deal with but over time he should not subordinate any one of these broad areas. Any tendency to pass over fiscal or accounting problems as being of lesser importance must be guarded against. It is a serious mistake for an auditor to drop one type of essential work in order to perform another *unless* he assures himself that what he is passing over may be done safely by reason of a strong management system or alternative audit coverage. To repeat, all aspects of accountability must be evaluated and there is no justification for an auditor's omitting significant financial or fiscal problem areas in favor of other areas without a systematic determination that such action is desirable and appropriate.

Another point to conclude on is that the auditor does not run the management system. His job is to evaluate it and through his work to contribute to improving it so as to better achieve the objectives for which it exists. This is his job whether he is concerned with a financial transaction, a contract award, a financial report, an apparent uneconomic expenditure, a possible loss of revenue, or ineffectiveness in achieving a prescribed goal. The auditor's concern is basically with the system in which those components are but a part and his objective is, or should be, to call attention to where the *system* needs shoring up so that it will sup-

port management officials at all levels in working efficiently and successfully toward whatever goals exist for them.

William L. Campfield, associate director, Division of Financial and General Management Studies, speaking on "Selection and Development of Staff From Disadvantaged Groups" at the 38th annual meeting of the Kansas City Society of CPAs, Salina, Kans., September 23, 1971:

But what can we as individuals and as a profession, as a whole, do to better meet our social responsibilities? Let me take the bit again on the selection and development of disadvantaged people problems. With your "advise and consent" I pose a listing of some key "do's and don't's" as guidelines for individual and collective action.

"Thou Shall" Do List

- Each accountant should accept a personal responsibility to: (1) become informed on at least one important social problem area (this could be selected from a whole catalog of problems; but, since manpower needs are important to each accountant, the development of an additional untapped reservoir of talent should appeal to the enlightened self-interest of each accountant) and (2) establish a specific personal action program with enough built in motivation to insure that action will be taken timely as planned.
- Each concerned accountant should be willing to contribute staff, funds, facilities, and equipment to enhance the possibilities that the various institutional complexes which are devoted mostly to disadvantaged groups will be better enabled to train and develop the disadvantaged to compete on even terms for jobs and other social prerequisites.
- Each concerned individual and organization should be sufficiently flexible to understand and appropriately adjust to cultural and ethnic influences that significantly affect disadvantaged people.

For example, disadvantaged young people, more frequently than for national norms, have life experiences and life styles such as outside work, sharing family responsibilities at a young age, impeded speech and communication facility, etc., which interfere with school performance or other achievement measured against national standards. Often the promising recruit with a superficially poor academic or related record needs only the extra coaching or the extra year of experience to start him or her solidly down the road to parity with other promising professionals.

- Each concerned individual and organization should intensify his or its efforts to publicize to and convince the "communities of the disadvantaged" that the accounting profession is sincerely and actively concerned about extending professional opportunities in deed and not just by word.

There is a considerable credibility gap on the part of high school and college students from disadvantaged groups, who simply do not believe that equal opportunity is actually available for them. The change in attitude on the part of industry, Government, and the professions has been so sudden and the years of denial have been so long that many of these young people take a lot of convincing before they will believe that education and training for potential top spots in society will pay off.

- The thousands upon thousands of small practitioners and firms have perhaps a closer grassroots tieline to the disadvantaged. Hence, there is considerable first-hand opportunity for these professionals to "Big Brother" assist and guide the disadvantaged on a "one-on-one basis." There also is considerable opportunity to reach into the elementary school environment and plant early the notion that accountants are good people to know and that accounting is a worthy life's work to prepare for.

"Thou Shall Not" Do List

- Individuals and organizations that un-

dertake action plans should not be patronizing. It should be fairly obvious that no self-respecting person wants to be treated with either condescension or unwarranted adulation. Some people in the so-called superior positions in society still regard the "disadvantaged communities of people" as foreign colonies and go about the matter of recruitment from these ranks as if it was a diplomatic mission.

- Well-intentioned individuals and organizations should not expect Utopian miracles. After all there are just not enough highly qualified, personable, and well-motivated "disadvantaged people" to go around to each would-be sponsor.
- Individuals and organizations should cease and desist rationalizing inaction. The rationale takes such stances as "my skills just don't apply" or "the problems just aren't professionally interesting or challenging enough" or "I don't need to get involved in what are essentially political problems calling for political solutions."

Harry C. Kensky, associate director, Office of Policy and Program Planning, speaking on "Congressional Oversight—Role of the GAO" at the Federal Management Seminar, U.S. Civil Service Commission Seminar Center, Oak Ridge, Tenn., August 16, 1971:

A question it would be quite natural to ask is "What has the General Accounting Office achieved?" or "What contribution does the General Accounting Office make toward better Government?"

The financial benefits attributable to our work cannot be fully measured. In fiscal year 1971 we were able to identify measurable savings of about \$370 million attributable to

our work, a significant portion of which is recurring in nature. Many financial benefits are realized, however, without our being able to attach a specific dollar amount saved. These result mainly from changes in executive agency policies and procedures based upon our recommendations for more efficient ways of managing agency business.

But more important than any specific visible dollar savings is the general contribution made by the Office. The primary function of General Accounting Office examinations and reports on Government operations is three-fold:

- We provide for the public at large a meaningful demonstration of the openness of our governmental processes. Fundamentally our Government does not operate secretively, and I believe that one of the most important reasons for having a General Accounting Office is the contribution it makes toward maintaining public confidence in the integrity of Government programs.
- Second, and of most immediate importance from our standpoint, is that we provide information to the Congress for its use in the legislative and oversight processes. The days are long past when Congress could amass information through its own committee structure sufficient to provide it with reliable data necessary to oversee the administrations of all its complex and diverse legislation. I would not assert that our operations fulfill completely or even nearly completely the voracious need of the Congress for information concerning the manner in which the programs it authorizes are administered. But it is undoubtedly true that the legislative process is enhanced through our efforts.
- Third, and, perhaps most significant to executive agencies, we provide information to agency managers which is useful in improving agency operations.

The amendment to the Defense Production Act of 1950 passed in August 1970 which provided for the establishment of the Cost Accounting Standards Board designated the Comptroller General as Chairman and authorized him to appoint the other four members. The law further specified that two of the additional members are to be from the accounting profession; one is to be representative of industry; and one is to be from a Federal department or agency.

Accounting Standards Board (Public Law 91-379) was passed by the Congress following an 18-month study by the General Accounting Office undertaken by previous direction of the Congress. In this study GAO found that such standards were both feasible and desirable. The new establishment of the Board was then incorporated in the amendments to the Defense Production Act, approved August 15, 1970. Funds for the establishment of the Board were approved recently by the Congress.

On March 5, 1971, Mr. Staats, Chairman of the Board, announced that the Board had selected *Arthur Schoenhaut* as Executive Secretary.

Mr. Schoenhaut has served the Federal Government since 1950. Until 1964 he was with the General Accounting Office and served as Deputy Director of the Civil Division from 1964 to 1967. Since 1967 he has been Deputy Comptroller of the Atomic Energy Commission.

Mr. Schoenhaut received his B.B.S. degree from the City College of New York.

Establishment of Procurement Division

The Comptroller General, *Elmer B. Staats*, announced in November 1971 his decision to accept the recommendation of the GAO Organization Planning Committee that a Procurement Division be established in GAO.

The Organization Planning Committee was chaired by *Robert F. Keller*, Deputy Comptroller General. The Committee cited four advantages in establishing a single division to examine into the procurement policies and practices of all Federal agencies:

- A uniform approach to the audit and review of procurement.
- Centralization of GAO expertise in the procurement field.
- Increased attention to procurement policy and procurement actions in areas that may not now be receiving sufficient attention.
- A vehicle for followthrough on recommendations that will be made by the Commission on Government Procurement next year.

Formal establishment of the new division will take place early in 1972.

New Office of Administrative Planning and Services

Another organizational change took place in December 1971 when the Office of Administrative Services, the Organization and Management Planning Staff, and the Data Processing Center were consolidated and renamed the Office of Administrative Planning and Services. This change came with the retirement of *Herschel J. Simmons*, director, Office of Administrative Services (see p. 97).

Director of the new organization is *Clerio Pin*, who headed the Organization and Management Planning Staff from its formation in April 1971.

The following are in charge of the components of the Office of Administrative Planning and Services:

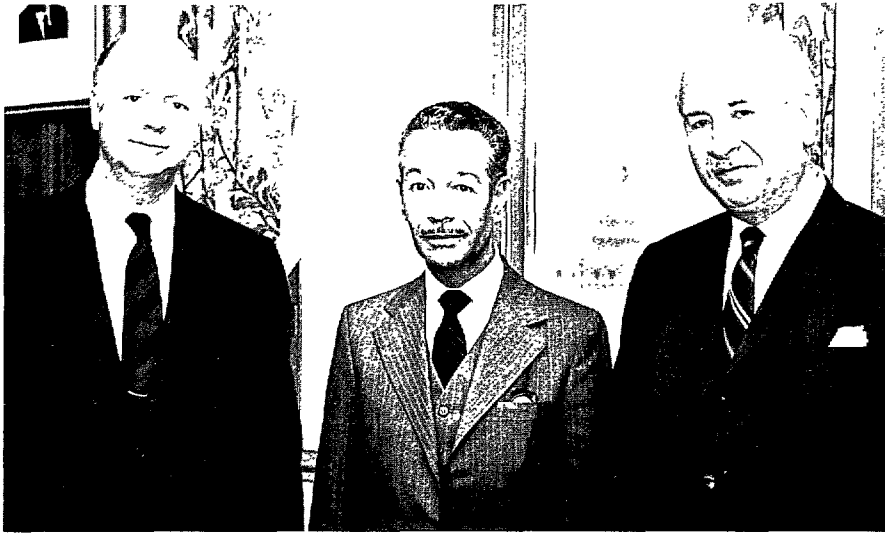
Sanford H. Cornett—Budget and Finance Branch

Larry A. Herrmann—Records Management and Services Branch

Anthony P. Kostrzewsky—Publications Branch

Robert W. Benton—Data Processing Center

William D. Martin, Jr.—Organization and Management Planning Staff



GAO Watchdog Photo

INTOSAI Policy Committee for new International Journal of Government Auditing met in June 1971 at the General Accounting Office in Washington to complete final arrangements for publication of the first issue. From left: Elmer B. Staats, Comptroller General of the United States; Dr. Manuel Vincente Ledezma, Comptroller General of Venezuela; and A. Maxwell Henderson, Auditor General of Canada.

New Auditing Journal

The International Organization of Supreme Audit Institutions (INTOSAI) (see p. 1) has launched a new quarterly journal in the field of auditing—one to be devoted almost entirely to governmental auditing. Bearing the name *International Journal of Government Auditing*, the first issue was released at the 7th International Congress of Supreme Audit Institutions held in Montreal September 7-16, 1971.

The main purpose of the journal is to promote better communications between governmental auditors of the world, provide a better medium for interchanging ideas and concepts of auditing governmental activities, and

stimulate the development of auditing as an overall management control in all countries.

All material in the journal is published in three languages—English, French, and Spanish.

Publication of such a journal was first proposed by the Comptroller General of Venezuela, Dr. Manuel Vincente Ledezma. The proposal was approved by the Governing Board of INTOSAI in 1970 and a three-man Policy Committee was appointed to proceed, consisting of Dr. Ledezma, A. Maxwell Henderson, Auditor General of Canada, and *Elmer B. Staats*, Comptroller General of the United States.

The initial issue of the journal was assembled by staff representatives of the Policy Committee, including *Roland J. Sawyer*, GAO information officer. The issue contains the following material from GAO:

Articles:

“Defense Industry Profits in the USA” by *Robert F. Keller*, Deputy Comptroller General

“Audit Programs to Reduce Water Pollution in the United States” by *E. A. Densmore, Jr., N. Carbone, C. L. Kuchinski, and J. S. Cohen* (This article originally appeared in *The GAO Review*, Summer 1970 issue.)

Profile of *Elmer B. Staats*, Comptroller General of the United States

Other articles in the first issue were contributed from Venezuela, Canada, and Panama.

Copies of the first issue are available in all GAO divisions and offices. Arrangements for continuing regular publication of the journal are being pursued.

Information on publication schedules and subscription arrangements may be obtained by addressing inquiries to:

International Journal of Government
Auditing
c/o Auditor General of Canada
Box 757, Station B.
Montreal 110, Quebec, Canada

GAO Reviews Federal Inspection of Poultry Plants

A significant GAO report in the area of consumer protection went to the

Congress in November 1971. This report presented the results of a followup review at 68 poultry plants to determine whether the Consumer and Marketing Service of the Department of Agriculture had improved the enforcement of sanitation standards.

The general conclusion reached and reported was that actions taken by the agency had not been successful in achieving adequate enforcement at the plants visited. Conditions rated as unacceptable by Agriculture's inspectors who accompanied GAO staff members on their plant visits existed at most of the plants.

For details, see Comptroller General's report to the Congress “Consumer and Marketing Service's Enforcement of Federal Sanitation Standards at Poultry Plants Continues to be Weak,” B-163450, November 16, 1971.

The GAO report did not reveal the names of the plants visited. A list of such names and a statement of the current status of their compliance with prescribed sanitation standards were obtained from the Department of Agriculture by Senator Abraham Ribicoff of Connecticut, who placed them in the *Congressional Record* for November 17, 1971. In his statement which accompanied the list inserted in the *Record*, Senator Ribicoff made the following telling point:

But even if we develop an effective inspection system, we will still have to depend to a great degree on the food packagers and processors themselves to make certain that the system works. Federal inspectors cannot be present every day. Private industry has the primary responsibility to assure that its products are wholesome, safe and clean. This does not seem too much to ask. In the past, however,

the only times the industry seems to have shown much interest in cleaning its own house is after the publication of reports by the General Accounting Office.

GAO Report on OEO Reappears

No systematic study has ever been made of how long a GAO report is good for in terms of use or reference. Occasionally, we find them being used long after they are issued.

Such a case occurred with one of the 50 reports issued in 1969 on GAO's comprehensive review of the "War on Poverty" programs. During hearings by the House Committee on Education and Labor in May 1971 on bills to extend and amend the Economic Opportunity Act of 1964, the legal services program of the Office of Economic Opportunity came in for considerable discussion. In answer to one question, Frank Carlucci, Director of OEO, submitted for the record a copy of GAO's report of August 7, 1969, on "Effectiveness and Administration of the Legal Services Program Under Title II of the Economic Opportunity Act of 1964." Although there was no particular discussion of the report, it was included in its entirety in the printed hearings. (Hearings on Economic Opportunity Amendments of 1971, Part 3 and Appendix, p. 1600)

Teacher Corps Report

Another, more recent GAO report was included in its entirety in the printed hearings before the Subcommittee on Education of the Senate

Labor and Public Welfare Committee. This report was entitled "Assessment of the Teacher Corps Program at Northern Arizona University and Participating Schools on the Navajo and Hopi Indian Reservations," dated May 13, 1971.

The report was introduced on June 9, 1971, by Senator Gaylord Nelson of Wisconsin who stated:

It is not very often that we will find praiseworthy reports from the GAO about any operation of any of the Federal bureaucracy.

Senator Nelson also discussed some of the observations made in the report. (Hearings on Education Amendments of 1971, S. 659, May-June 1971, Part 5, p. 2614)

Good Audit Practice

Devising recommendations for corrective or improvement action based on our audit findings is a normal and essential part of GAO audit work. So is the policy of following up on recommendations made to ascertain the nature of action taken, if any, and to assess its effectiveness.

These practices were the subject of an interesting and welcome communication received last September by the regional manager of the Los Angeles Office, *Hyman L. Krieger*, from Dionicio Morales, Executive Director of the Mexican American Opportunity Foundation.

The Mexican American Opportunity Foundation (MAOF) was recently audited by a member of your staff, Mr. Royal Gauthier. This was the second visit of an auditor from your office.

In many ways this was an experience similar to other audits, yet in one way unique. As per our request, and based upon his observations, Mr. Gauthier provided guidance in the form of recommendations for improvement of our program. He informed us that follow-up was a procedure of your office and that evidence of corrective action on the part of the agency being audited would be considered in your report.

Your dual emphasis in providing recommendations and follow-up, and adding this to your finding, we find most beneficial, fair and economical to all. Mr. Gauthier indicated to MAOF that, under your direction, this is the usual policy of the Los Angeles General Accounting Office. Therefore, we would like to commend you and express the hope that this enlightened policy might spread to other areas of government and accountability.

Drug Control Proposal Involving GAO

Growing national concern with narcotic drug abuses and their impact has led to a number of bills being introduced in the Congress designed to control production and traffic of illegal drugs. One of these bills, S. 1188, proposes to involve the Comptroller General directly in such an effort. The bill would require the Comptroller General to review and determine annually (1) the effectiveness of measures being taken by each foreign country to prevent narcotic drugs, partially or completely produced or processed in such country, from unlawfully entering the United States and (2) whether that country has undertaken appropriate measures to prevent any such narcotic drug from unlawfully entering the United States. A negative determination would set in motion a procedure to stop further economic assistance to that country.

Commenting on June 21, 1971, on this proposal to the chairman of the Senate Committee on Foreign Relations, the Comptroller General stated:

While we are in wholehearted agreement with the need for eliminating or reducing illicit drug traffic, we have considerable question as to whether S. 1188, if enacted in its present form, could be effectively carried out. We have reached this conclusion because to carry out the provisions it would be necessary for the General Accounting Office to have access to the records of other countries that relate to the measures taken by those countries to prevent narcotic drugs from entering the United States. The sensitivities which would be generated thereby would seem to require careful consideration of such an approach from a foreign policy standpoint. In addition, countries may be involved in the production or processing of drugs, such as where drugs are grown in one country and processed in another, that are not receiving assistance from the United States under the Foreign Assistance Act of 1961, as amended, and consequently would not be subject to penalty.

In lieu of the approach taken in S. 1188, we suggest that the Committee may wish to consider legislation to require the executive branch to clearly establish a focal point of responsibility for administration and coordination of United States efforts to stop the entry of illegal narcotics, including the relationships with other countries and international organizations. Such legislation might be more effective if it included a provision to require annual or other periodic reports from the executive branch to the Congress on the total situation and the activities and efforts for controlling the inflow of narcotics.

The Comptroller General's letter (B-173123) also transmitted for the information and use of the committee a background memorandum entitled "General Accounting Office Observations and Data Concerning Illegal Entry of Narcotics." This document

was prepared by staff of the International Division.

The committee held a hearing on this and other bills on the subject on July 1, 1971. The printed hearing record includes the Comptroller General's letter.

Refreshing Language From an Audit Report

"Your civilian payroll system provides prompt and proper payments to your personnel."

This clear, concise, and unequivocal statement appears in a payroll audit report sent by Detroit regional manager *C. H. Moore* to the commanding officer of the Navy Finance Center in Cleveland, Ohio. It is a good example of the kind of simple, direct writing that is needed in all GAO reports.

Fiscal vs. Performance Auditing

A small booklet published in 1956 by the Institute for Public Service in New York, directed by William H. Allen, contains a number of plain truths in plain language about the difference between fiscal and performance auditing. For example:

For most tax-spending in our country, even in small towns and small school districts, someone is paid to audit the tax-spending and tax-collecting. He audits for

- 1) *legality*, if the spenders had lawful right to spend as they did for what they spent;
- 2) *validity*, if the spending was authorized;
- 3) *conformity*, if it showed clearly and neatly each step of the spending;
- 4) *accuracy*, if the arithmetic was correct,

columns added right, price per unit correctly multiplied by the number of units; and

- 5) *honesty*, if all money received was accounted for as spent or on hand.

That kind of audit is called *fiscal audit* because it watches for and reports about public finances.

But fiscal audits do not audit for waste and inefficiency. When well done they catch illegality, inaccuracy and crudest kinds of dishonesty, like lying and stealing. They do not look for or tell about the quality of goods and services which the spending bought. In fact, nowadays many accountants who stand high in their profession, take pains to show that they are not certifying to economy and efficiency. They certify only to their opinion, not to responsible officers' legality, honesty and accuracy.

* * * * *

That an amount paid is what was authorized doesn't prove that the price was not too high or that the goods were as bargained for.

* * * * *

That each man on a payroll actually received the pay charged for him doesn't prove that he worked the hours for which he was paid; that his work was worth his pay; that he did any work but collect his pay; or that there was any work for him to do.

The bulletin (No. 1261) incidentally contains numerous references to GAO reports and audit findings of the mid-fifties.

Changing the Federal Fiscal Year

The Legislative Reorganization Act of 1970 created the Joint Committee on Congressional Operations to study continually the organization and operations of the Congress and recommend improvements.

The committee is chaired by Repre-

sentative Jack Brooks of Texas. The vice chairman is Senator Lee Metcalf of Montana.

The first report of the committee was issued in November 1971 and dealt with testimony received and analysis of proposals for changing the Federal fiscal year from the present July 1—June 30 (adopted in 1842) to other periods, usually the calendar year. Such proposals were receiving considerable support in the Congress and the committee held hearings in June 1971 to evaluate them.

Among the numerous witnesses was the Comptroller General, *Elmer B. Staats*. Mr. Staats did not favor the change.

The committee concluded in its report (H. Rept. 92-614) that “the evidence developed during the hearings and supplementary research does not support a recommendation to change the Federal fiscal year.”

Advice to Supervisors

William F. Paller of the New York Regional Office calls attention to the article in *Supervisory Management* for April 1970 on some effective ways to ruin good employees. Mr. Paller notes that “all of us at one time or another have been either at the receiving or the giving end of one or more of the instances cited.” The article, written by *William Lefsky*, identifies these 12 ways to wreck employee competence:

1. Tell your subordinate what you want done in terms so vague that he cannot pinpoint precisely what you want.
2. Give an audible sigh of resignation or act shocked if he asks you to clarify something you have explained.
3. If he asks the same question more

than once, point out that you have already answered that question.

4. Make an obvious effort to contain your impatience if he still doesn't understand what you mean.
5. If you can find specific acts to criticize, be sure to do so, even where the error is minor and would have been corrected in the normal course of events.
6. Give him many jobs with step-by-step instructions, but leave out the purpose or expected results.
7. Change your instructions from time to time as he proceeds with a project.
8. If unforeseen problems arise from following your instructions, insist that he return to you for the solution.
9. Make him do each job your way, even if it is a slow and awkward way for him.
10. Give him a deadline that you know cannot be met.
11. Assign him to jobs that are well below his ability and training.
12. Improve on everything he does.

Note of Appreciation

The chairman of the Legal and Monetary Affairs Subcommittee of the House Committee on Government Operations, *John S. Monagan* of Connecticut, expressed his appreciation for GAO staff assistance in connection with the subcommittee's hearings on operations of the Law Enforcement Assistance Administration in a recent letter to the Comptroller General, as follows:

Orlaf B. Hylle, *Gerald Kelly* and *George Mortenson*, who are members of your staff in St. Paul, Minnesota, have been of great assistance to us in our investigation in that area, and I commend you on the excellence of your field personnel.

Nonappropriated Fund Activities

The far-ranging audit authority of

GAO does not extend to the nonappropriated fund activities of the military and other Federal agencies. This lack may change if the Congress acts favorably on a bill now pending. The bill (S. 2782) provides that:

* * * the operations of nonappropriated funds and related activities within the executive branch, the systems of accounting and internal controls and any internal or independent audits or reviews of such funds and activities shall be subject to review by the Comptroller General of the United States in accordance with such principles and procedures and under such rules and regulations as he may prescribe.

This part of the bill grew out of an extensive investigation into fraud and corruption in management of military club systems by the Permanent Subcommittee on Investigations of the Senate Committee on Government Operations. Its 300-page report (S. Rept. 92-418 issued in November 1971) included among the 15 recommendations growing out of the investigations one that called for the Congress to consider legislation that would authorize GAO to have access to the records and files of nonappropriated fund activities.

Reclaim Data

The problems of solid waste disposal are receiving more and more attention

in modern-day society. James A. Schwartz, environmental writer for the *Louisville Times*, notes in an article on "Technology vs. Trash" printed in *The Sohioan* for October 1971:

Reclaiming the typical 3,600-pound auto, the Institute of Scrap Iron and Steel reports, yields about 2,500 pounds of steel, 500 pounds of cast iron, 32 pounds of copper, 54 pounds of zinc, 51 pounds of aluminum, and 20 pounds of lead. Another 400 pounds of non-metal materials remain.

More Articles Related to GAO's Fiftieth Anniversary

The Fall 1971 issue of the *Review* listed a number of articles published in other journals during GAO's 50th anniversary. Additional articles which have come to attention are the following:

Public Administration Review
(September/October 1971)

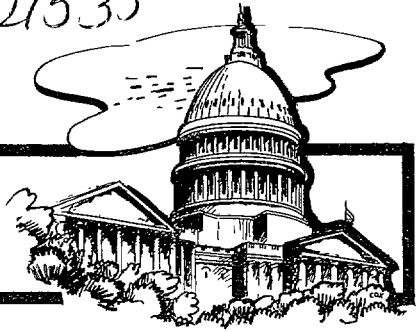
"Closing the Books on Fifty Years of Service" by Neil Lawer

Forbes
(November 1, 1971)

Profile on *Elmer B. Staats*, Comptroller General, included in a department entitled "Faces Behind the Figures"

721535

HEARINGS *and* LEGISLATION



By JUDITH HATTER

Assistant Chief, Legislative Digest Section, Office of the General Counsel

Original Jurisdiction for GAO

Like Argus, the faithful watchdog of Odysseus, the Comptroller General is the fiscal watchdog for the Congress and like Argus, let not the Congress sleep, as it has too many times in the past.¹

The role of the General Accounting Office as an arm of the Congress has been characterized in many ways over the years, but this erudite description by Senator Sam Ervin of North Carolina is among the best. The Senator made the comment on October 19, 1971, while introducing S. 2702, a bill to insure the separation of Federal powers by amending the Judicial Code to provide for original jurisdiction in the District Court for the District of Columbia over certain civil actions for declaratory and injunctive relief brought by the Comptroller General against officers and employees of the executive branch of the Government.

Senator Ervin explained that the bill:

*** would provide, where such differences of legal opinion exist, [between the Comptroller General and the Attorney General] a means of determining, finally, the legality of disputed payments before such payments are

actually made. At present, the Comptroller General is virtually defenseless when the Attorney General decides that he will not adhere to a ruling of the Comptroller General. * * *²

He described the decisionmaking authority of the Comptroller General under the Budget and Accounting Act, 1921, and outlined the controversy surrounding the Philadelphia Plan. In further explanation Senator Ervin stated:

This bill is not intended to alter or substantively affect any existing provisions of law, such as those governing the legality of public contracts, obligations, or expenditures, and the finality of administrative determinations. It will enable the Comptroller General to seek judicial review of his determinations in advance of payment or obligation of public funds in violation of such determinations. This issue could normally reach the courts only if and when the Attorney General brought a suit to recover amounts illegally paid, an event not likely to come about if the Attorney General has already decided that the payments were legal, or if an aggrieved third party who has standing to sue brought an action.

In cases where a difference of opinion arises between the Attorney General and the Comptroller General over the legality of expenditure of public funds, and the executive

¹ *Congressional Record*, Vol. 117, Oct. 19, 1971, p. S 16407.

² *Ibid.*, p. S 16406.

branch proceeds on the basis of the opinion of the Attorney General, it is clear that the executive branch is asserting the power to use Government funds upon its own determination of authority and its own interpretation of pertinent statutes. This seriously threatens the control of the Congress of the expenditure of public moneys, and is another example of executive erosion of the constitutional principle of separation of powers.³

Executive Privilege Vis-a-Vis Access to Records by GAO

The executive privilege doctrine was discussed by *Robert F. Keller*, Deputy Comptroller General, when he testified before the Senate Judiciary Committee on S. 1125 which, as he pointed out, is the first measure to specifically recognize the doctrine of executive privilege as a basis for refusing information to the Congress.

On July 29, 1971, one day after Mr. Keller's testimony, Senator J. W. Fulbright submitted amendment No. 343 to S. 1125, which he had originally introduced, to include the General Accounting Office among those to whom records may not be refused on the grounds of executive privilege without a statement signed by the President.

Further, if GAO determines that any information requested of an agency has not been made available within a period of 60 days after the request has been received, and the President has not signed a statement invoking executive privilege, no funds made available to that agency shall be obligated or expended commencing on the 70th day after such request is received, unless such information is made available or

the President invokes executive privilege.

On October 28, 1971, the Subcommittee on Separation of Powers, in executive session, approved the bill for full committee consideration with amendment.

During his testimony on the executive privilege measure, Mr. Keller also outlined the access-to-records problems GAO has encountered with the Department of State and the Defense Department in certain specific instances.

Oye V. Stovall, director, International Division, had previously discussed at length GAO's increasing difficulties in obtaining information needed to effectively evaluate and report on the administration of the Military Assistance Program before the Subcommittee on Foreign Operations of the Senate Appropriations Committee. (Other participant: Mr. *Duff*.)

In connection with the action of the Senate Foreign Relations Committee in invoking section 634(c) of the Foreign Assistance Act of 1961, 22 U.S.C. 2394(c), relative to the current Five-Year Plan for the Military Assistance Program for all countries, GAO determined that all funds for the Military Assistance Program would not be available for further obligation or expenditure until the requested documents were furnished or the President certified that they may not be furnished. (B-163582, Aug. 17, 1971)

On August 30, 1971, the President determined it would not be in the public interest to provide to the Congress the basic planning data on military assistance and directed that the information not be made available.

³ *Ibid.*, pp. S 16406-16407.

A *Baltimore Sun* article by Gene Oishi dated September 29, 1971, discussed a Senate Foreign Relations Committee staff study ordered after the administration refused the Five-Year Plan which estimated that the administration proposals for foreign aid would cost more than \$60 billion over the next 6 years.

Emergency Loan Guarantee Act

Public Law 92-70, signed by the President on August 9, 1971 (85 Stat. 178), creates the Emergency Loan Guarantee Board composed of the Secretary of the Treasury, as Chairman, the Chairman of the Board of Governors of the Federal Reserve System, and the Chairman of the Securities and Exchange Commission to guarantee loans to major business enterprise. The maximum obligation of the Board under all outstanding loans guaranteed is not to exceed \$250 million at any time.

The House Committee on Banking and Currency pointed out in its report on the bill that "there is no doubt but what the Lockheed Aircraft Corporation would be the first applicant for a guaranteed loan under the legislation" incident to the company's L-1011 air bus program.

During the debate on the legislation in the House on July 30, 1971, Representative John D. Dingell of Michigan offered an amendment inserting a new subsection (b) to section 7 of the bill, as follows:

(b) The General Accounting Office shall make a detailed audit of all accounts, books, records, and transactions of any borrower with respect to which an application for a

loan guarantee is made under this Act. The General Accounting Office shall report the result of such audit to the Board and to the Congress.

During the discussion of the amendment, which was subsequently agreed to by a vote of 163 to 76, this audit requirement was clarified in the following colloquy between Mr. Dingell and Representatives Garry Brown of Michigan and Wright Patman of Texas, the chairman of the House Banking and Currency Committee:

Mr. DINGELL. I say to the gentleman from Michigan that we are making the legislative history at this time, and it says we are going to have a GAO audit of the borrower.

Mr. BROWN of Michigan. But the language speaks to the application, it does not say with respect to the borrower who has received a loan guarantee.

Mr. DINGELL. For the benefit of my good friend, the gentleman from Michigan, a person who wants to get a loan is a borrower, and the words "with respect to which an application for a loan guarantee is made under this Act," is to define which borrower is going to be getting a GAO audit, because evidently there are many thousands of borrowers in this country.

The function of the amendment is a very simple one.

Mr. PATMAN. Mr. Chairman, would the gentleman yield?

Mr. DINGELL. I yield to the gentleman from Texas.

Mr. PATMAN. In other words, this is after the fact, and it is not before the fact.

Mr. DINGELL. The gentleman from Texas is entirely correct. *The audit is post facto as opposed to preliminary to.* (Emphasis supplied.)

Mr. PATMAN. After he has already borrowed the money.

Mr. DINGELL. The gentleman is correct, and I agree entirely with my good friend, the gentleman from Texas, and I hope my Republican friends will accept this amendment.

* * *

⁴ *Ibid.*, July 30, 1971, p. H 7516.

Subsection (a) of section 7 provides the Board with access to records of

* * * any enterprise which has received financial assistance under this Act concerning any matter which may bear upon (1) the ability of such enterprise to repay the loan within the time fixed therefor; (2) the interests of the United States in the property of such enterprise; and (3) the assurance that there is reasonable protection to the United States. * * *

The expenses and obligations of the Emergency Loan Guarantee Board are to be met from an emergency loan guarantee fund established in the Treasury for the purpose, and the Board's authority to enter into any guarantee or to make any commitment to guarantee under the act terminates on December 31, 1973.

Reimbursement to GAO for Employees on Congressional Assignments

Public Law 92-136, October 11, 1971 (85 Stat. 376), adds a new subsection (c) to section 235 of the Legislative Reorganization Act of 1970 requiring, effective March 1, 1972, reimbursement of salary of General Accounting Office employees assigned or detailed to committees of the Senate or joint committees whose expenses are disbursed by the Secretary of the Senate.

The report of the Senate Committee on Government Operations (S. Rept. 92-357) explains the necessity for this amendment in the following way:

From time to time, Senate committees have found it necessary to utilize the services of certain employees of the General Accounting Office whose expertise has been required

for varying periods of time. A Standing Order of the Senate requires Senate committees to reimburse Government departments and agencies for the salaries of personnel detailed or assigned to such committees. The Committee on Rules and Administration has advised that, although there has been general compliance with this requirement, in some instances, no reimbursement has been made for the salaries of General Accounting Office employees, resulting in the inability of the Rules Committee, which is responsible for monitoring the expenditures of Senate committees, to determine the precise amount which is being expended for staff services.

Grant Activities of the Law Enforcement Assistance Administration

The Legal and Monetary Affairs Subcommittee of the House Committee on Government Operations conducted hearings on the administration of grants by the Law Enforcement Assistance Administration.

Gregory J. Ahart, deputy director, Civil Division, presented a statement on July 22, 1971, regarding General Accounting Office reviews of programs authorized by title I of the Omnibus Crime Control and Safe Streets Act of 1968. (Other participants: Messrs. *Crawford*, *Stanton*, and *Thompson*.)

Treatment and Rehabilitation of Narcotic Addicts

On September 21, 1971, the Comptroller General testified before House Judiciary Subcommittee No. 4 regarding a GAO report to the Congress on Federal programs to commit narcotic addicts for treatment and rehabilitation. The report concerned the admin-

istration of titles I and III of the Narcotic Addict Rehabilitation Act of 1966. Title I provides for civil commitment in lieu of prosecution of addicts charged with certain Federal crimes. It was pointed out that opportunities for pretrial civil commitment in lieu of prosecution are lost if the State does not have a civil commitment program. The report suggested that the Attorney General and the Secretary of Health, Education, and Welfare revise grant program guidelines to stress the development of close working relationships between rehabilitation programs and the courts and to encourage arrangements whereby the two departments would participate jointly in the development of State and local civil commitment programs. With respect to title III which provides for civil commitment for treatment of persons not charged with any criminal offense, it was recommended that the Attorney General and the Secretary of Health, Education, and Welfare consider having HEW grantees or contractors involved in the rehabilitation of narcotic addicts provide assistance to U.S. attorneys by performing certain stipulated nonlegal functions. (Other participants: Messrs. *Ahart*, *Crowther*, *Elmore*, and *Fitzgerald*.)

Financing of Public Buildings Operations

Gregory J. Ahart, deputy director, Civil Division, testified before the Subcommittee on Buildings and Grounds, Senate Committee on Public Works, September 28, 1971, on two bills which would significantly change the

method of funding the construction and operating costs associated with meeting the space needs of the Government. The two bills, S. 2479 and S. 1736, would amend 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.

Among the provisions discussed was one which would delete requirement that prospectuses for construction, acquisition, or alteration projects be resubmitted to the Committees on Public Works when the maximum costs in the approved prospectuses have increased by more than 10 percent.

GAO objects to this provision because congressional control would appear to be diminished since maximum project cost would no longer be restricted and the prospectuses could be presented in such a way that they would permit wide flexibility in project scope rather than provide a limitation. Without a maximum project cost, there might be less incentive to hold project costs to a minimum. (Other participants: Messrs. *Dembling*, *Neuwirth*, *Hill*, and *Blair*.)

Randolph-Sheppard Act for the Blind Amendments

The Subcommittee on Handicapped Workers of the Senate Committee on

Labor and Public Welfare received testimony on October 1, 1971, from *Paul G. Dembling*, general counsel, on S. 2506, the Randolph-Sheppard Act for the Blind Amendments of 1971, which

is intended to improve the vending stand program by strengthening the preference given blind operators by Federal departments and agencies. (Other participant: Mr. *Blair*.)

Building a Case for Sick Leave

The following item appeared some years ago in the *Massachusetts CPA Review* but its original source is not known.

A truly unfortunate bricklayer in Barbadoes, West Indies, wrote this letter after he encountered an on-the-job accident.

It was to his employer in England and it read:

Respected Sir:

When I got to the building, I found that the hurricane had knocked some bricks off the top. So I rigged up a beam with a pulley at the top of the building and hoisted up a couple of barrels full of bricks. When I had fixed the building, there was a lot of bricks left over.

I hoisted the barrel back up and secured the line at the bottom, and then went up and filled the barrel with extra bricks. Then I went to bottom and cast off the line.

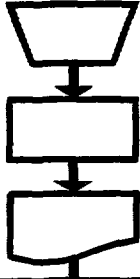
Unfortunately, the barrel of bricks was heavier than I was and before I knew what was happening the barrel started down, jerking me off the ground. I decided to hang on and halfway up I met the barrel coming down and received a severe blow on the shoulder.

I then continued to the top, banging my head against the beam and getting my finger jammed in the pulley. When the barrel hit the ground, it burst its bottom, allowing all the bricks to spill out.

I was now heavier than the barrel and so started down again at high speed. Halfway down, I met the barrel coming up and received severe injuries to my shins. When I hit the ground I landed on the bricks, getting several painful cuts from the sharp edges.

At this point I must have lost my presence of mind, because I let go of the line. The barrel then came down giving me another heavy blow on the head and putting me in the hospital.

I respectfully request sick leave.



SYSTEMS ANALYSIS

Operations Research, the journal of the Operations Research Society of America, for September 1971 represents a significant happening in the history of applications of the scientific method to management, referred to by various titles such as operations research, systems analysis, management science, etc. This issue of *Operations Research* is a departure from the previous technical issues. As explained by *Keith E. Marvin*, associate director, Division of Financial and General Management Studies, it is devoted entirely to one of the purposes of the society which is "The establishment and maintenance of professional standards of competence for work known as operations research."

The *ad hoc* committee which developed the reports on which this issue is based took as a case study conflicting analyses presented to the Senate Armed Services Committee in 1969, just prior to the debate in the Senate on ballistic missile defense. The members of this committee were all past presidents of the Operations Research Society of America, the Military Operations Research Society, and the Institute of Management Sciences. The committee developed "Guidelines for Professional Practice" against which

the opposing analyses were compared. These guidelines cover such matters as general approach and relationship to the sponsoring organization, and necessary steps in beginning, conducting, reporting, reviewing, and following up studies. In addition to specific standards, there is a discussion of the operations analyst in the adversary process and general guidelines for the use of operations research in the adversary process.

The October issue of *Science* contains an article about this issue of *Operations Research* regarding the representativeness of the *ad hoc* committee's review procedures which some regard as deficient. This article raises some question regarding the case study itself but it is not critical of the guidelines for professional practice which were established.

The importance of this event to the GAO and to audit organizations throughout government is that it is further evidence that auditing of analysis and evaluation can be performed and that it can be interdisciplinary. Since the resulting report contains all of the characteristics of an audit including criteria, cause and effect, conclusions, and recommendations, it

would appear that members of professional auditing societies also could have been members of such a committee and could have been helpful with regard to certain matters considered.

Although the conclusions of this report will be debated, any auditor who becomes involved in reviewing the validity of analysis provided to decision-makers or to legislatures would do well to consider a list of deficiencies such as the following which were found by this group in their critique of operations research methodology: (1) failure to present assumptions and facili-

tate the constructive discussion of differences among experts, (2) improper use of source material, (3) failure to incorporate major features of systems under consideration, (4) failure to look at a suitable range of strategies, (5) suggestions of impractical alternatives, (6) use of improper criteria, (7) use of improper costing, (8) failure to treat the multifunctional character of systems adequately, (9) failure to treat leadtime problems adequately, and (10) failure to treat the potential systems interactions properly.

Institutional Loyalty

If you work for a man, in Heaven's name, WORK for him. If he pays you wages which supply you bread and butter, work for him; speak well of him; stand by him and stand by the institution he represents. If put to a pinch, an ounce of loyalty is worth a pound of cleverness. If you must vilify, condemn and eternally disparage—resign your position, and when you are outside, damn to your heart's content, but as long as you are part of the institution do not condemn it. If you do that, you are loosening the tendrils that are holding you to the institution, and at the first high wind that comes along you will be uprooted and blown away, and probably will never know the reason why.

Elbert Hubbard



Herschel J. Simmons

Herschel J. Simmons, director, Office of Administrative Services, retired from the General Accounting Office on January 9 after more than 36 years of Federal service. Mr. Simmons has spent his entire Federal career with the General Accounting Office. He began as a reconciliation clerk in the former Audit Division. Mr. Simmons soon became a senior reconciliation clerk and progressed through the Records Division and the Reconciliation and Clearances Division. By 1942 he was an auditor in the Audit Division, moving rapidly to the position of principal auditor and then administrative assistant within that division.

During World War II, Mr. Simmons served almost 3 years with the Army Air Corps. Returning to the General Accounting Office, he continued in the Audit Division until 1946 when he became an administrative analyst in the former Office of Administrative Planning. By 1952 he had moved into the Accounting Systems Division as a systems accountant. He became a budget analyst in the Budget and Finance Branch, Office of Administrative Services, in 1953 and became chief of that branch in 1954. Mr. Simmons became administrative officer of GAO in 1965; that title was later changed to director, Office of Administrative Services.

Mr. Simmons attended Benjamin Franklin University while working with GAO and received his B.C.S. degree from that institution in 1950. Honors that he has received include the Meritorious Service Emblem and cash award in 1959, many outstanding performance ratings and, most recently, the Distinguished Service Award which was presented by the Comptroller General on November 10, 1971.

Clerio P. Pin



Clerio P. Pin was designated director of the Office of Administrative Planning and Services, effective December 1, 1971. In this position he is responsible for the Office's administrative services, the Data Processing Center, and the Organization and Management Planning Staff.

Mr. Pin served with the Navy during World War II. He received a Bachelor of Science degree in accounting from the University of Scranton in 1951.

He first joined the staff of the General Accounting Office in 1951. He completed the Advanced Management Program at the Harvard University Graduate School of Business Administration in 1965. Prior to accepting a position with the Atomic Energy Commission in 1968, Mr. Pin was responsible for the planning and direction of the GAO accounting and auditing work at the National Aeronautics and Space Administration, the Department of Transportation, and the Atomic Energy Commission.

In April 1971, Mr. Pin returned to the General Accounting Office as director, Organization and Management Planning Staff. While at the Atomic Energy Commission, he was special assistant to the director of the Division of Reactor Development and Technology and assistant to the controller.



Lloyd G. Smith

Lloyd G. Smith was designated in August 1971 as deputy director for internal review in the Office of Policy and Program Planning. In this position, Mr. Smith is responsible for examining into the operations and performance of all GAO divisions and offices and preparing reports for the Comptroller General and the Deputy Comptroller General setting forth the findings, conclusions, and recommendations growing out of such examinations.

Mr. Smith graduated with honors from the University of California at Los Angeles in 1938, with a Bachelor of Science degree in business administration. From 1941 to 1945 he served in the Navy as a flight instructor and as a transport pilot. Before joining the General Accounting Office in 1953, Mr. Smith served as a staff member of a public accounting firm in Beverly Hills, Calif., and as controller of a manufacturing company. With the General Accounting Office, Mr. Smith has served as an audit manager in the Los Angeles Regional Office; as manager of the Frankfurt, Germany, Office; as director of the European Branch; and as an assistant and an associate director in the Civil Division. In 1963 he completed the Advanced Management Program at the Harvard University Graduate School of Business Administration.

Mr. Smith is a CPA (California) and a member of the American Institute of CPAs and the Federal Government Accountants Association. He received the Meritorious Service Award in 1959.

Hyman L. Krieger



Hyman L. Krieger was designated manager of the Washington Regional Office, effective September 19, 1971.

Mr. Krieger joined the General Accounting Office in 1946 upon release from the Army. He has served in various positions with the Corporation Audits Division, the Division of Audits, the Accounting and Auditing Policy Staff, and the Field Operations Division. He served as manager of the Chicago and New York Regional Offices and as deputy director of the Field Operations Division prior to being assigned as manager of the Los Angeles Regional Office.

In 1941, Mr. Krieger received a B.B.A. degree in accounting from City College of New York and later attended The George Washington University. He completed the Advanced Management Program at Harvard University Graduate School of Business Administration in 1961.

Mr. Krieger is a certified public accountant (North Carolina and Illinois) and is a member of the American Institute of CPAs and the Federal Government Accountants Association. He received the GAO Career Development Award in 1970.



Irwin M. D'Addario

Irwin M. D'Addario was designated manager of the Denver Regional Office, effective October 3, 1971.

Mr. D'Addario served in the Navy from 1943 to 1949. He received a Bachelor of Science degree from Long Island University in 1949 and attended the Executive Development Program at Stanford University Graduate School of Business in 1965.

Prior to joining the General Accounting Office in 1954, Mr. D'Addario was associated with a public accounting firm and with a private corporation in New York City. He is a CPA (Washington) and a member of the Washington State Society of CPAs.

Jerome H. Stolarow



Jerome H. Stolarow was designated manager of the Los Angeles Regional Office, effective September 15, 1971.

Mr. Stolarow served in the Army from 1951 to 1953. He received a Bachelor of Business Administration degree from the University of Oklahoma in 1951 and a Juris Doctor degree from Georgetown University Law School in 1955. Prior to joining the General Accounting Office in the Defense Division in 1958, he was associated with public accounting firms and private industry.

In 1964, Mr. Stolarow attended the Program for Management Development, Harvard Business School. From 1969 to 1970 he attended the Industrial College of the Armed Forces. He is a certified public accountant in the State of Oklahoma and the District of Columbia and has been admitted to the bar in the District of Columbia. He is a member of the American Institute of CPAs and received the GAO Special Educational Award in 1970.



Richard W. Maycock

Richard W. Maycock was designated deputy director for financial management in the Division of Financial and General Management Studies, effective August 16, 1971.

Mr. Maycock joined the General Accounting Office in 1967. Previously he had served for over 20 years in managerial and executive capacities with several private business corporations.

Mr. Maycock graduated with distinction from The George Washington University with a Bachelor of Arts degree in business administration. While in college, he worked for the Treasury Department. Later, he served as finance director of the Puerto Rico Reconstruction Administration, as senior administrative analyst in the Bureau of the Budget, and as assistant director of budget and finance in the Department of Agriculture.

Following his release in 1944 as a lieutenant in the Coast Guard Reserve, Mr. Maycock was appointed treasurer of the Commodity Credit Corporation and later vice president and a member of the board of directors. In the latter capacities, he also served as the director of supply of the War Food Administration.

Mr. Maycock has been a part-time instructor for the graduate school of the Department of Agriculture, the University of Utah, and the Civil Service Commission. He is a member of the Federal Government Accountants Association and the Alpha Kappa Psi national business fraternity.

Fred D. Layton



Fred D. Layton was designated associate director for financial management in the Division of Financial and General Management Studies, effective November 1, 1971.

Mr. Layton received his Bachelor of Arts degree in accounting from East Carolina University in 1960 and has done graduate work at The George Washington University. He also attended the Program for Management Development at the Harvard University Graduate School of Business Administration.

Mr. Layton is a CPA (Virginia) and a member of the National Association of Accountants and the Federal Government Accountants Association. He received the GAO Career Development Award in 1967. In May 1971, he was presented the Meritorious Award for exemplary achievement in public administration by the William A. Jump Memorial Foundation.

Mr. Layton joined the General Accounting Office in 1960 and has had varied audit experience in the Civil Division.



Jimmy J. Bevis

Jimmy J. Bevis was designated assistant manager of the Dallas Regional Office, effective October 17, 1971. In this position he will be responsible for directing the activities of the New Orleans Suboffice.

Mr. Bevis served in the Air Force from 1951 to 1953. He graduated from Auburn University in 1956, where he majored in accounting. He was in public accounting from 1954 to 1957.

Mr. Bevis is a member of the American Accounting Association, the National Contract Management Association, and the Federal Government Accountants Association.

Since joining the General Accounting Office in 1957, Mr. Bevis has served in the Atlanta Regional Office where he received the Meritorious Service Award in 1958 and 1970.

Clifford I. Gould



Clifford I. Gould was designated assistant regional manager of the Kansas City Regional Office, effective August 16, 1971.

Mr. Gould served in the Air Force from 1946 to 1949 and from 1951 to 1952. He graduated from Kansas State University in 1953 with a bachelor's degree in business administration and took graduate work in economics. In 1962 he completed the Program for Management Development at the Harvard University Graduate School of Business Administration.

Mr. Gould began his career in 1954 with the Kansas City Regional Office. In 1965 he was assigned to the Far East Branch in Honolulu and served as assistant director of the Branch from 1967 to 1971.

Mr. Gould received the GAO Meritorious Service Award in 1958 and the GAO Career Development Award in 1969. He is a past chapter president and member of the Federal Government Accountants Association.



William D. Martin, Jr.

William D. Martin, Jr., was designated director of the Organization and Management Planning Staff, effective December 1, 1971. In this position he will be responsible for making detailed studies of organization and procedural problems and for designing, testing, and assisting in the implementation of approved recommendations of various study groups and committees.

Mr. Martin served in the Army from 1953 to 1955. He received a Bachelor of Business Administration degree with a major in accounting from Wake Forest College in 1959 and a Master of Science degree in financial management from The George Washington University in 1971. He is a CPA (Virginia) and a member of the American Institute of CPAs and the National Association of Accountants. He received the GAO Career Development Award in June 1968.

John Moundalexis



John Moundalexis was designated an assistant director in the Division of Financial and General Management Studies, effective August 22, 1971. Initially he is serving as project director for development of productivity indices for the Federal sector of the economy, a joint effort sponsored by the General Accounting Office, the Civil Service Commission, and the Office of Management and Budget.

Mr. Moundalexis received a Bachelor of Science degree from New York University.

Prior to coming with the General Accounting Office, he was employed by the Federal Aviation Administration in the Management Analysis Division, Office of Management Systems. His Government career also includes service with the Army Management Engineering Training Agency and the Picatinny Arsenal.

Mr. Moundalexis is a member of the American Institute of Industrial Engineers. In 1965 he received the Federal Aviation Administration Special Act Award and in 1970 the Presidential Management Improvement Certificate.



Archibald L. Patterson

Archibald L. Patterson was designated an assistant director in the Civil Division, effective August 22, 1971. In this capacity he is assigned to the audit of the Department of Labor and is responsible for the planning of the auditing work for the Department of Labor audit group.

Mr. Patterson served in the Army from 1954-56. He received a B.A. degree in 1953 from the University of North Carolina, a B.B.A. degree with a major in accounting from Southern Methodist University in 1958, and an M.P.A. from Harvard University in 1967. He attended the Program for Management Development of the Harvard Graduate School of Business Administration during 1965.

Mr. Patterson began his career in GAO with the Dallas Regional Office. In 1966 he was one of the first GAO staff members selected for special training in systems analysis and the following year he was transferred to the newly formed systems analysis staff of the Office of Policy and Special Studies in Washington, D.C. In August 1970 Mr. Patterson joined the Bureau of Finance and Administration of the Post Office Department where he served until his return to GAO in August 1971.

Mr. Patterson is a member of the American Accounting Association, the Federal Government Accountants Association, the Operations Research Society of America, the American Finance Association, and the Harvard Business School Club of Washington. He was awarded GAO's Meritorious Service Emblem in 1961.

Robert M. Strong



Robert M. Strong was designated senior attorney in the Office of the General Counsel, effective June 13, 1971.

Mr. Strong attended The American University and received his LL.B. degree in 1961 from the School of Law, University of Missouri. Prior to joining GAO, he was engaged in the private practice of law in Missouri.

In 1964 he joined the General Accounting Office and was assigned to contract work in the Office of the General Counsel. He attended the Judge Advocate General's School, Procurement Law Division, in 1965. He received letters of commendation from the Office of Staff Management for conducting the law sessions of CPA courses from 1966-68.

PROFESSIONAL ACTIVITIES

Office of the Comptroller General

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

The National Institute of Public Affairs Conference on Federal Action and the People of Our Cities, Boston, Mass., on "Purposes and Prospects" of the conference, July 1.

The Financial Management Associations of Delaware Valley's 1971 Symposium on Socio-Economic Aspects of Accounting, Philadelphia, Pa., on the work GAO has done in the social problem area and the status of the work of the Cost Accounting Standards Board, September 27.

The Commonwealth Club of California, San Francisco, on "Federal Spending—Is It Out of Control?" October 1.

The Washington, D.C., Chapter of the Institute of Internal Auditors' Symposium on Sophisticated Federal and State Government Auditing Techniques on "Operational and Program Auditing," October 4.

The Institute of Internal Auditors' Southeast Conference on New Developments for Profitable Auditing in the Seventies, Gatlinburg, Tenn., on "50th Anniversary of the U.S. General Accounting Office," October 12.

The Washington, D.C., Chapter of the National Association of Account-

ants, on "Accountants and Government in an Age of Social Change," October 20.

The Deputy Comptroller General, *Robert F. Keller*:

Spoke at the 12th Annual Western Briefing Conference on Government Contracts sponsored by the Federal Bar Association in cooperation with the Bureau of National Affairs, San Francisco, Calif., October 28.

Thomas D. Morris, assistant to the Comptroller General, spoke on October 14 at a meeting of the Washington Chapter of the Federal Government Accountants Association. His subject was the Joint Measurement Systems project which is being conducted in collaboration with the Office of Management and Budget and the Civil Service Commission.

Office of the General Counsel

Paul G. Dembling, general counsel:

Spoke on "The Problem of Quantum in Claims: The Case of Shipbuilding Claims" before the Federal Bar Association Annual Convention, New Orleans, La., September 9.

Addressed the National Contract Management Association, Washington, D.C., Chapter, on "Bid Protest Techniques," September 15.

Spoke at the 12th Annual Western

Briefing Conference on Government Contracts on the subject of "Settling Government Contract Claims: GAO's Role," San Francisco, Calif., October 28.

Milton J. Socolar, deputy general counsel:

Spoke on "The Role of the General Accounting Office" before 30 Washington Semester students of The American University, September 21.

Spoke on "The Comptroller General, the Attorney General, and the Rule of Law," National Lawyers Club, September 30.

Spoke on "Congressional Operations: The Role of the General Accounting Office," before the Civil Service Commission's Institute in the Legislative Function, October 5.

Stephen P. Haycock, associate general counsel:

Spoke on "GAO's Role in the Procurement Process," before the Legal Logistics Officer Course, Judge Advocate General's School, Charlottesville, Va., August 13.

Spoke on "The Future Role of GAO in Federal Procurement," before the Fourth Annual Briefing Conference on Government Procurement, Federal Bar Association, Huntsville, Ala., October 19.

Edwin W. Cimokowski, assistant general counsel:

Prepared an article on "The U.S. Government Bill of Lading and Related Practices and Procedures" which will be published in the January 1972 issue of the *Journal of Maritime Law and Commerce*. It is an enlargement of his article appear-

ing in the Winter 1971 issue of the *Federal Bar Journal*.

Melvin E. Miller, assistant general counsel:

Spoke on "The Role of the GAO in Defense Procurement," Defense Procurement Management Course, Fort Lee, Va., October 1.

Spoke before the Defense Procurement Management course, Class 72-3, Fort Lee, Va., on "The Role of the GAO in Defense Procurement," November 9.

Robert H. Rumizen, assistant general counsel:

Spoke on "Problems in Formal Advertising," Defense Advanced Procurement Management Course, Fort Lee, Va., August 19.

Spoke on "Problems in Formal Advertising," before the Defense Advanced Procurement Management Course, Oakland, Calif., November 5.

Paul Shnitzer, assistant general counsel:

Spoke on "Advertised and Negotiated Procurement," before a Concentrated Course in Government Contract cosponsored by The California Institute of Technology and Federal Publications, Inc., Los Angeles, Calif., August 18.

Spoke on "Socio-Economic Aspects of Government Procurement," at the Federal Bar Association Annual Convention, New Orleans, La., September 12.

Spoke on "Problems in Formal Advertising," before the Defense Advanced Procurement Management Course, Tinker Air Force Base, Okla., September 16.

Spoke on "The Finality of Claims Awards, Pending Legislation Affecting General Accounting Office, and Proposed Bid Protest Regulations," before the Aerospace Industries Association, New Orleans, La., October 15.

Spoke on "U.S. Federal Procurement System," Shoreham Hotel, Washington, D.C., October 19.

Spoke on "Contract Formation," before the Government Contracts Program, The George Washington University, National Law Center, Washington, D.C., October 27.

Spoke on "Current Developments in Government Contracting," 12th Annual Western Briefing Conference on Government Contracts, San Francisco, Calif., October 28.

Martin L. Glass, attorney-adviser (contracts):

Spoke on "Research and Development Contracts," at the Federal Bar Association Annual Convention, New Orleans, La., September 9.

John E. Preston, attorney-adviser (contracts):

Prepared an article on "The Role of the Comptroller General in Remitting Liquidated Damages" which was published in the Spring 1971 issue of the *Federal Bar Journal*.

Office of Policy and Program Planning

E. H. Morse, Jr., director, addressed the Joint Meeting of the Cleveland Chapters of the Institute of Internal Auditors and the Federal Government Accountants Association on "The Ex-

panding Role of the Auditor in Government Operations," October 13.

Mr. Morse's article "Performance and Operational Auditing," published in the June 1971 issue of the *Journal of Accountancy* has been reprinted in the 1971 edition of *Selected Studies in Modern Accounting*, published by the American Institute of CPAs.

Included in the 52 chapters in the *Handbook for Auditors*, recently published by McGraw-Hill Book Company (James A. Cashin, Editor-in-chief), is one contributed by Mr. Morse on "Management Performance Auditing."

Harry C. Kensky, associate director, addressed the Federal Management Seminar, U.S. Civil Service Commission Executive Seminar Center, Oak Ridge, Tenn., on August 16. He spoke on "Congressional Oversight—Role of the GAO."

Civil Division

A. T. Samuelson, director, and an international vice president of the National Association of Accountants, introduced the Comptroller General as the speaker at the October 20 dinner meeting of the Washington Chapter of that association.

Donald M. Mutzabaugh, special assistant to the director, is serving as president of the Washington Chapter, NAA, for 1971-72.

Henry Eschwege, associate director, addressed the National Manpower Policy Task Force, September 14, on GAO's role in evaluating manpower programs.

Mr. Eschwege and *Ludwig Heilmeier*, supervisory auditor, met with

representatives of the California Certified Public Accountants Foundation for Education and Research on October 28 to assist in establishing training sessions designed to acquaint CPAs with special requirements involved when auditing grantees under Federal programs.

Harold L. Stugart, assistant director, addressed the Washington Conference for School Officials, cosponsored by Congressmen John D. Dingell and William D. Ford of Michigan, October 15. He spoke on audits of Federal education programs.

Mr. Stugart and *James E. Kelly*, supervisory auditor, participated as discussion panelists at an Office of Education Seminar on Contracts and Grants, October 27.

Defense Division

Charles M. Bailey, director, addressed the professional military controller course, Air University, Maxwell Air Force Base, Alabama, on November 1. His subject was DOD/GAO relationships.

Edwin C. Eads, assistant director, successfully completed the resident course at the Industrial College of the Armed Forces. This course plays an essential role in preparing selected military officers and civilian Government officials for high command and management positions in the complex field of national security. The course extended over a 10-month period beginning on August 10, 1970.

John F. Flynn, deputy associate director, gave a presentation on the GAO defense industry profit study to the 12th Annual Western Briefing Con-

ference on Government Contracts held in San Francisco on October 28 and 29. This conference was sponsored by the Federal Bar Association in cooperation with the Bureau of National Affairs, Inc.

Frank P. Chemery, assistant director, was graduated in June 1971 from the National War College and received the degree of Master of Science in International Affairs from The George Washington University in September. Mr. Chemery addressed a meeting at the Washington Lawyers Club sponsored by the Bureau of National Affairs on August 25. He spoke on the use of "should cost" methods in the pricing of Government contracts. He also participated as a member of the "should cost" panel at the 10th annual seminar of the Government Contracts Association held in Detroit on October 1.

Mathew Gradet, assistant director, has been appointed to serve for the next 3 years on the Committee for Management Services of the D.C. Institute of CPAs.

Andrew B. McConnell, assistant director, attended the Brookings Institution Conference for Federal Management and Program Executives at Williamsburg, Va., October 4-15.

Sam Pines, assistant director, has been elected to the post of treasurer, Washington Chapter, Federal Government Accountants Association, for the current fiscal year.

Division of Financial and General Management Studies

Donald L. Scantlebury, director, was the banquet speaker at the Data Proc-

essing Management Association Division V meeting in Chicago on November 11. His subject was "Making Information Systems Responsive to Management Needs."

On October 7, at Arlington, Va., *Edward J. Mahoney*, deputy director for ADP, addressed the Information Industry Association Annual Symposium on the subject of "Federal Government Management of Computer Software."

Mr. Mahoney and *Harry J. Mason, Jr.*, assistant director, spoke at the fall meeting of the Computer Performance Evaluation Users Committee, in San Antonio, Tex., November 11-13.

Mr. Mason also participated in and spoke at a Special Workshop on Engineering Software Coordination at the University of Colorado, October 25-26.

William L. Campfield, associate director, was elected vice president of the American Accounting Association for 1971-72. He was also reappointed to the Committee on Educational Policy of the American Institute of CPAs.

Mr. Campfield addressed the following groups:

The Western Conference of the Institute of Internal Auditors, September 9.

The annual convention of the Kansas Society of CPAs, September 23.

The Annual Accounting Education Seminar, Virginia Polytechnic Institute and State University, October 14.

Keith E. Marvin, associate director, participated on the Annual Meeting Panel of the National Capitol Area

Chapter, American Society for Public Administration, on September 30. The topic was "Program Budgeting and Analysis: What's New?"

Frank Gentile, assistant director, conducted a 2-day workshop on statistical sampling in Seattle, Wash., on October 21 and 22. The 38 participants included selected members of the staff of the Seattle Regional Office and State audit staffs from Alaska, Montana, Oregon, and Washington. The workshop was initiated by *Mortimer A. Dittenhofer*, assistant director, and hosted by *William N. Conrardy*, regional manager, Seattle. Logistics were arranged by *Douglas Cameron*, *Alvin Finegold*, and *Clifford Gardner*, Seattle, GAO.

Carl Kessler, economist, was the general chairman of a symposium on program evaluation sponsored by the Association for Public Program Analysis and held at the National Bureau of Standards in Gaithersburg, Md., on October 28. The theme of the symposium was "Public Program Evaluation: Analysis of Performance vs. Original Plan and Promise."

Theodore C. Gearhart of the actuarial staff attended the meetings of the Society of Actuaries in Toronto, Canada, on November 8, 9, and 10. He submitted a discussion of the determination of premium rates for group health insurance prepared by *Herbert L. Feay*, assistant director (actuary), and took part in meetings concerning the problems of public and private pension plans.

Field Operations Division

Stanley E. Dyal, supervisory audi-

tor, Atlanta, addressed members of the Florida Department of Health and Rehabilitation Services, October 4, on "The U.S. General Accounting Office: Its Organization, Responsibilities, and Audit Activities."

Raymond W. Hillstrom, supervisory auditor, Chicago, spoke before the Minneapolis-St. Paul Chapter of FGAA on October 14. His topic was "The Use of ADP as an Audit Tool."

Robert A. Wlodarek, supervisory auditor, Chicago, was appointed chairman of the Programs Committee of the Chicago Federal Executive Board ADP Council for fiscal year 1972.

David P. Sorando, regional manager, Cincinnati, spoke at the Executive Seminar Center in Kings Point, N.Y., on July 30. His topic was "Managing in a Decentralized Environment."

Elmer Taylor, Jr., assistant regional manager, Cincinnati, was elected vice president of the Central Region of FGAA for fiscal year 1972.

The following staff members were elected to offices in the Cincinnati Chapter of FGAA for fiscal year 1972: *Walter C. Herrmann, Jr.*, president; *James L. Silvati*, vice president; and *Daniel L. McCafferty* and *William J. Schad*, directors.

Mr. Sorando was elected president and Mr. McCafferty secretary-treasurer of the Federal Business Association of Cincinnati for fiscal year 1972.

Ronald D. Kelso, audit manager, has been elected president of the Dallas Chapter of the FGAA for fiscal year 1972. *Deon H. Dekker*, assistant regional manager, and *Daniel C. White*, audit manager, have been elected

directors. Mr. White was also named to the Members-in-Industry Committee of the Dallas Chapter of the Texas Society of CPAs.

Irwin M. D'Addario, regional manager, Denver, addressed the Great Salt Lake Chapter of the National Contract Management Association on October 7. His topic was "The General Accounting Office—Its Mission and Role."

John Murphy, assistant regional manager, Denver, a member of the General Meetings Committee of the Colorado Society of CPAs, acted as coordinator of speakers at the Society's annual meeting in Vail, Colo.

George D. Doyle, audit manager, Denver, is serving on a steering committee for a proposed Management Services Institute in the Rocky Mountain area.

Donald C. Ingram and *John T. Lacy*, audit managers, Denver, conducted two workshops on "Sampling Techniques for Auditors" during the 1971 Western Regional FGAA Symposium held in Denver, September 19-22.

Donald D. Kautzman, supervisory auditor, Denver, was elected a director of the Salt Lake City Chapter, FGAA, for fiscal year 1972.

Earl D. McCartney, supervisory auditor, Denver, was elected president of the Salt Lake City Chapter, FGAA, for fiscal year 1972. Mr. McCartney was also elected treasurer of the Northern Chapter of the Utah Association of CPAs.

William F. Laurie and *Melvin G. McCombs*, supervisory auditors, Cleveland, were elected to serve as secretary and director, respectively, for fiscal

year 1972 in the Cleveland Chapter of the FGAA.

On October 28, *Charles A. Heese*, audit manager, Kansas City, participated in "Accounting Outlook Day" activities at Kansas State College of Pittsburg. He spoke on accounting opportunities in Government.

David J. Rettiger, audit manager, Kansas City, was elected president of the Kansas City Chapter of FGAA for fiscal year 1972.

J. H. Stolarow, regional manager, Los Angeles, spoke before the American Institute of Industrial Engineers Seminar. His topic, presented October 22, was on the "should cost" concept.

Joseph J. Eglin, Jr., supervisory auditor, Los Angeles, was a team teacher in a Civil Service Commission course on governmental bookkeeping and accounting. The course was held in Honolulu, Hawaii, September 27 to October 1.

Eugene G. Horwitz, supervisory auditor, and *Robert M. Mikami*, auditor, Los Angeles, gave a joint presentation before the Accounting Society at Long Beach State College. Their topic, presented October 14, was on "Evaluating the Impact of Social Programs."

Kelton M. Seelig, supervisory auditor, Los Angeles, spoke to several accounting classes at San Fernando Valley State College on November 1. He discussed careers in GAO.

Norman E. Roth, accountant, and *Thomas J. Schulz*, management analyst, Los Angeles, participated in a "Meet the Firms Night" at Long Beach State College on October 13.

Herbert Larson, assistant regional manager, and *Robert Barbieri*, super-

visory auditor, New York, and *Howard Cohen*, audit manager, Boston, served as master of ceremonies, chairman, and moderator, respectively, at the 17th Annual Symposium presented jointly on May 20, by the Long Island, N.Y., and Northern New Jersey Chapters of FGAA. The theme of the symposium was "Accounting for Human Resources."

Walter H. Henson, regional manager, and *David C. Kelly*, audit manager, Norfolk, on October 27, made a slide presentation to the general officer staff of the Continental Army Command on "The Organization and Functions of GAO" and its relationship with the Department of Defense. On November 10, they addressed the combined freshman class and advanced accounting students at the Hampton Institute, Hampton, Va., on career opportunities with the General Accounting Office.

Mr. Kelly and *John T. Ratliff*, supervisory auditor, Norfolk, made a slide presentation and addressed the accounting club of the University of North Carolina at Wilmington, N.C., on November 11. They spoke on "The Organization and Functions of GAO."

William N. Conrardy, regional manager, and *Lyle L. Nelson* and *George R. Murphy*, supervisory auditors, Seattle, have been appointed by the Washington Society of CPAs as members of the Society's Government Accounting Committee.

International Division

Joseph P. Normile, director, European Branch, addressed the August

1971 interagency staff meeting of the U.S. Consulate General, Frankfurt, Germany, on the overseas work of the GAO.

Frank M. Zappacosta, assistant director, participated in the National Association of Accountants' Caribbean Regional Conference in San Juan, Puerto Rico, October 29 and 30. The technical program included sessions on (1) intra-Government agencies management information systems, (2) financial reporting problems, (3) economic evaluation of capital expenditures, (4) accounting does not tell the whole investment story, and (5) computer for accountants and consultants. In addition, there was a computer demonstration and a demonstration of time sharing terminal accessing application for accountants.

Office of Personnel Management

Leo Herbert, director, addressed the 1971 Denver FGAA Symposium on "Intergovernmental Accountability in the Seventies" on September 20. He presented GAO's case for recognition of GAO experience for the CPA certificate in Alabama to the State Board of Accountancy in Birmingham on October 4-5.

Mr. Herbert's article on "A Perspective of Accounting" was published in the July 1971 issue of *The Accounting Review*.

Transportation Division

T. E. Sullivan, director, addressed the General Services Administration Regional Transportation Conference in

Washington, D.C., on September 20. His topic was "A Current Look at GAO's Traffic Management and Audit Functions."

Mr. Sullivan attended the annual meeting of the Accounting Division, Association of American Railroads in Boca Raton, Fla., October 25-27. He addressed the various committees on the implementation of the Joint Agency Transportation Study recommendations and discussed problems of mutual concern in the settlement of rail carriers' accounts with the Government.

C. R. Comfort, assistant director, and *Charles C. Loomis*, chief, motor audit branch, participated as guest lecturers at the Defense Advanced Traffic Management Course, U.S. Army Transportation Course, U.S. Army Transportation School, Ft. Eustis, Va., in September 1971.

W. F. McDade, supervisory transportation specialist, *L. W. James*, supervisory management auditor, and *J. R. Nicholson*, supervisory traffic management specialist, attended the semi-annual meetings of the Cargo and Passenger Revenue Accounting Committees of the Airline Finance and Accounting Conference in Washington, D.C., September 21-23. Mr. McDade discussed various problems encountered by carriers on Government traffic including voucher annotations, alternate delivery receipt procedures (5 GAO 3035.20), securing Certificates in Lieu of Lost U.S. Government Bills of Lading from certain military installations in Europe, and preparation of and billing of the Government Ex-

cess Baggage Authorization/Ticket (GEBAT). Messrs. James and Nicholson reported on the implementation of the Joint Agency Transportation Study recommendations.

Joyce M. Cregger, transportation specialist, participated in the 11th

Biennial Workshop for Secretaries presented by the Capital Chapter of National Secretaries Association, International, in Washington, D.C., during October 1971. Mrs. Cregger addressed the Workshop on the "Certified Professional Secretary Program."

Successful Candidates— May 1971 CPA Examination

Listed below are the employees who passed the May 1971 CPA examination:

REGIONAL OFFICE

<i>Name</i>	<i>Regional Office</i>	<i>State</i>
Richard D. Behal	Philadelphia	Pennsylvania
Roger B. Bothun	Chicago	Illinois
Romulo Garcia	Dallas	Texas
James T. Luter	Los Angeles	Arizona
Bruce A. Samuelson	Seattle	Washington

WASHINGTON

<i>Name</i>	<i>Division</i>	<i>State</i>
Charles J. Bonanno, Jr.	Civil	Virginia
John A. Borrelli	Defense	Maryland
William Boshier	Civil	Virginia
James L. Dishmon, Jr.	Civil	Virginia
William L. Gieck	Civil	Colorado
Jeffrey E. Heil	Civil	Virginia
Alan H. Melberger	Civil	Virginia
Joseph F. Murray	International	Virginia
Douglas D. Nosik	Civil	Virginia
Robert L. Pelletier	Civil	Virginia
George W. Pittsley	Civil	Virginia
Ronald J. Points	FCMSD	Virginia
Victor S. Rezendes	Civil	Maryland
John M. Rider	International	Virginia
William A. Schmidt	Civil	Washington, D.C.
Mark W. Sullivan	Civil	Virginia
Bernard L. Ungar	Civil	Virginia
Michael R. Yasher	Defense	Washington, D.C.

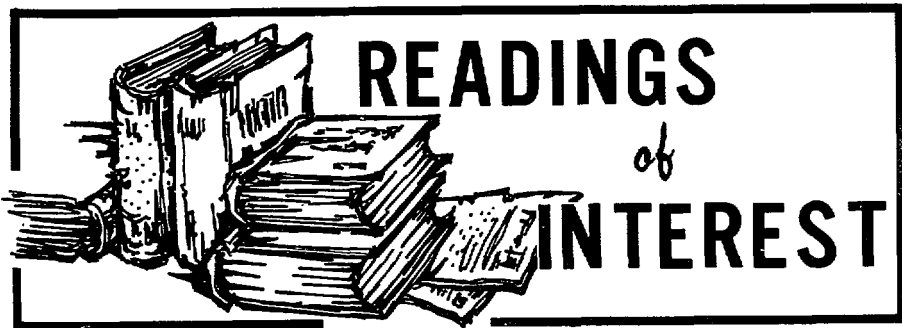
NEW



STAFF MEMBERS

The following new professional staff members reported for work during the period August 16 through November 15, 1971:

Office of the General Counsel	Harris, C. Brian Mitchell, John F.	The George Washington University Attorney—Self-employed
Civil Division	Gebicke, Mark E. Hackett, Arlind E. Patterson, Archibald L., Jr. Singletary, Gary L. Stropko, Edwin P. Rothen, Herbert D. Wagner, Raymond J., Jr.	High Point College University of Bridgeport U.S. Post Office Department Virginia Polytechnic Institute U.S. Navy National Aeronautics and Space Administration Morris Harvey College
Division of Financial and General Management Studies	Boulard, Heber D. Dana, Franklin B. Moundalexis, John	Chief of Research and Program Evaluation—State of Connecticut Actuary—The Wyatt Company Department of Transportation
International Division—Washington	Oppenheimer, Michael F.	University of Virginia
Office of Personnel Management	Silva, Alexander A., Jr.	Director of Development—National Institute of Public Affairs
REGIONAL OFFICES		
Chicago	Jotzke, James M.	Morningside College
Cincinnati	Brown, Nander, Jr. Dial, John R. Stephenson, John B.	Arthur Andersen & Co. Financial Manager—Government of American Samoa Purdue University
Los Angeles	Cravens, James E.	Contract and Grant Officer—University of California at Los Angeles
San Francisco	Lynch, John P.	University of Oregon
Seattle	Conti, Rodney R.	University of Oregon



The reviews of books, articles, and other documents in this section represent the views and opinions of the individual reviewers, and their publication should not be construed as an endorsement by GAO of either the reviewers' comments or the books, articles, and other documents reviewed.

Computer Control Guidelines

Published by the Canadian Institute of Chartered Accountants, Toronto 5, Canada, 1970; \$7.50.

This publication is part of a total effort undertaken by the Canadian Institute of Chartered Accountants to assist management, data processing personnel, and auditors in evaluating the controls in computer-based data processing systems. Work on this publication was performed by this organization's Accounting and Auditing Research Committee Study Group. It is the first product of a two-part endeavor to "define standards of internal control and of auditing relative to the use of computers for information processing."

"Computer Control Guidelines" does not provide a highly technical or in-depth coverage of the data processing control procedures. It assumes that its users will have some knowledge in and understanding of computer systems

and related control concepts. The preface and introduction point out that the study is not intended to be an educational tool or to duplicate material already documented, but rather to "facilitate the evaluation of internal control by classifying the individual control techniques." This in my judgment has been well done.

The introduction also clearly explains how the overall study is organized, how each chapter is structured, and how to use the study. A separate chapter is set aside for each of seven general types (main areas) of computer control:

1. Pre-installation
2. Organizational
3. Development
4. Operations
5. Processing
6. Documentation
7. Outside data center

Each well-structured chapter consists of an introduction to the area of con-

trol, a statement of each control objective for that area, necessary minimum control standards for each objective, and control techniques for each standard. The control standards specified by the Study Group are those which are "necessary to meet if management, data processing personnel, and auditors are to be satisfied that internal control is adequate and that information processed by the system is reliable." Controls for some of the standards are divided into preventive, detective, and other desirable techniques—another plus.

The table of contents is in itself a summary by control area and objective. Another color-guided summary (by chapters, objectives, standards, and techniques) not only directs the user to the corresponding sections and pages within sections, but also provides an adequate reference to the main points of these sections where there is no need for textual detail. Two-color printing, varied type faces, and key illustrations all contribute to ease of reference and practical use.

The study is outstanding in content as well as presentation. Sufficient information is provided to enable the user to decide which controls should be ap-

plied to particular areas of a system, and to define relationships between them. The objectives, standards, and techniques described formulate the basis for planning, developing, testing, and/or auditing a system control network.

This publication should be quite useful to those who have responsibilities in data processing management, systems analysis and design, development, and review. These same people, and particularly those engaged in auditing, should look forward to the Institute's second-phase product, "Computer Audit Guidelines."

Copies of this study are available in all divisions and offices of the GAO.

Reviews of "Computer Control Guidelines" have appeared in the following publications:

Systems & Procedures, September 1971, p. 45.

The Accounting Review, July 1971, p. 647.

Journal of Accountancy, April 1971, p. 212.

Charles R. Shimkus,
 Computer Systems Analyst,
 Division of Financial and
 General Management Studies.



Copies of the 50th anniversary edition of the *Review* (Summer 1971 issue) were sent to many former GAO officials and employees. Following are excerpts from some of the acknowledgments received.

***It is a masterpiece in compiling the first 50 years of the GAO. I have read everything that affected the work I was connected with and can state unequivocally that it was factually correct and enlightening to anyone who reads it.

The pictures were wonderful and many brought back memories of people with whom I was associated with for so many years.

Thank you for your kindness in sending the *Review* to me. I shall add it to my home library.

Edward Whitaker Bell

***Please give everyone my very best regards, especially John Fenton for his fine piece on the division that I had the privilege of organizing and directing through its formative years.

And I'll add that it was highly gratifying to me to reflect, as I read John's piece, upon the fact that the old Division contributed so many fine leaders to both the government and private business. It was truly an outstanding gang.

T. Coleman Andrews

***I found it interesting to observe what was remembered regarding the founding of the Corporation Audits Division, and also what was forgotten or left out.

The General Accounting Office has developed well, all things considered, and you and many others who began with the Corporation Audits Division deserve a great deal of the credit for the improvements since its origin.

Howard W. Bordner

***It is gratifying to know that my father, Rudolph L. Golze, has not been forgotten, and that his name has a place in the archives of the GAO.

During his term of office he had no thoughts for anything but the General Accounting Office, and he would have been pleased to know he had been remembered and given a place in the 50th anniversary edition of the *Review*.

Thank you and your staff very much for sending me a copy of your magazine. I shall keep it always.

Marguerite G. Adams

LETTERS

We found it most interesting reading and are delighted to have it. ***John Fenton did a wonderful job and I am sure it was not an easy task.

Mrs. Harold S. Morse

***The reading of it brings back some very fond memories of times gone by, and renewed thoughts of old associates who were past officials and also those who now hold positions of importance in the GAO.

I still hold dear my affiliation with those who made the GAO what it was and also with those who helped to give it its new dimension.

Gary Campbell

***It aroused a "sweet nostalgia."

Jack Gahagan

It has provided pleasant reminiscing.

A. R. Wycoff

***I have enjoyed reading it. It brings back many cherished memories.

Even though my last 2½ years was with the Air Force in Denver, my loyalty to GAO principles and teachings was with me until retirement; and will continue to "tingle" my thoughts and opinions for years to come.

John B. Cummins, Jr.

***It is certainly a very fine account of the GAO. I am glad that Steve was a part of it, and I remember happily several of the men who were with him under the remarkable leadership of Lindsay Warren.

Ellen Atwood Ives

Annual Awards for Articles Published in The GAO Review

Cash awards are available each year for the best articles written by GAO staff members and published originally in *The GAO Review*. Each award is known as the Award for the Best Article Published in The GAO Review and is presented during the GAO awards program held annually in June in Washington.

One award of \$250 is available to contributing staff members 35 years of age or under at the date of publication. Another award of \$250 is available to staff members over 35 years of age at that date.

Staff members through grade GS-15 at the time of publication are eligible for these awards.

The awards are based on recommendations of a panel of judges designated by the Comptroller General. The judges will evaluate articles from the standpoint of the excellence of their overall contribution to the knowledge and professional development of the GAO staff, with particular concern for:

Originality of concepts.

Quality and effectiveness of written expression.

Evidence of individual research performed.

Relevancy to GAO operations and performance.

Statement of Editorial Policies

1. This publication is prepared for use by the professional staff members of the General Accounting Office.
2. Except where otherwise indicated, the articles and other submissions generally express the views of the authors, and they do not necessarily reflect an official position of the General Accounting Office.
3. Articles, technical memorandums, and other information may be submitted for publication by any professional staff member. Submissions may be made directly to liaison staff members who are responsible for representing their offices in obtaining and screening contributions to this publication.
4. Articles submitted for publication should be typed (double-spaced) and range in length between five and 14 pages. The subject matter of articles appropriate for publication is not restricted but should be determined on the basis of presumed interest to GAO professional staff members. Articles may be submitted on subjects that are highly technical in nature or on subjects of a more general nature.

THE GAO REVIEW

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