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Auditing Symposium V: Proceedings of the 1980 Touche Ross/University of Kansas Symposium on Auditing Problems

University of Kansas, School of Business

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Edited by
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Preface

Once again it is a pleasure to acknowledge the financial support of Touche Ross Foundation that has made it possible to continue this series of biennial auditing symposia at the University of Kansas. The 1980 symposium was the fifth of the series, with some fifty invited practitioners and educators coming together for two days to consider the eight papers that were presented.

As co-chairmen of the symposium and editors of these Proceedings, we assume full responsibility for the selection of topics for both the invited papers and those selected from the papers submitted in response to the call for papers for the symposium—a call which we reissue at this time for the sixth offering of the symposium which we hope to present in May 1982. Papers or proposals for papers should be submitted to either of us by September 1, 1981.

With the exception of the paper on the history of government auditing and the General Accounting Office, which continues the historical coverage of auditing that has opened each of the symposia, the papers reflect no unifying theme or purpose, other than that the topics addressed or the research reported hold promise of being of interest to the invited participants from both practice and academe. All papers, except for the traditional evening address on a more general topic, were distributed in advance, making it possible for the preparer to limit comments to summary remarks or observations about the paper so that more than an hour was available for the prepared response of a selected discussant and the ensuing open discussion. Although these discussions invariably have been one of the highlights of the symposia, unfortunately it has not been feasible to attempt to capture and report these discussions for the benefit of the wider readership of the proceedings. For those who might like an opportunity to participate in the discussions at a future symposium, however, we would be pleased to receive an indication of your interest.

The proceedings of each of the five symposia are in print and may be purchased from:

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The titles and prepaid price of each of the volumes are as follows:

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In conclusion, we should like to acknowledge the encouragement, advice, and personal support of the symposia so generously proferred by Jerry Jackson, partner in charge of the Kansas City office of Touche Ross & Co.

Donald R. Nichols
Howard F. Stettler

October, 1980
University of Kansas
Lawrence

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An Historical Perspective of Government Auditing—With Special Reference to the U.S. General Accounting Office

Leo Herbert
Virginia Polytechnic Institute and State University

Introduction

Looking back on what has happened to auditing in the government by one who was there may give a somewhat warped perspective. Nevertheless, I am going to interject some of my own impressions of what happened in government accounting and auditing during the past forty or fifty years that I have participated in these activities—in education, in state and local auditing, and in the Federal Government.

Looking back into history only a short distance, a short enough distance to obtain a vision of the environment that is causing auditing changes, we sometimes might not like what we foresee. Foreseeing changes oftentimes can be very disconcerting, because we can possibly see that the changes can extend into our own future in such a way that they will dramatically affect us and our future professional lives. Most of us do not like rapid changes of any kind and especially those that directly affect us. Yet, you can see that changes in government auditing may be reflected in private auditing, and likewise, changes in private auditing can affect government auditing.

First, let me give you an overview of what has happened in government auditing from the time that the United States started as an independent nation until recently. Then I will give you a more detailed look at government auditing with special reference to auditing in the U.S. General Accounting Office during the past thirty years. By then, you should be ready to take a peek into the future to see some of the conditions in government auditing that may affect you in your professional activities, whether they be in education, public accounting, internal auditing, private accounting, or in governmental accounting.

A Look at Auditing During the Various Periods of United States History

During my early years in the GAO, I became very interested in the history of auditing because what we in the GAO regarded as auditing seemed somewhat different from what the rest of the profession was calling auditing; furthermore, the impression I received from some of my friends in the public accounting profession was that they thought what we were doing was not auditing. I had many of them, including some members of state boards of accountancy and professors of accounting, tell me that only the examination of financial statements was auditing—and nothing else. Yet, I knew that what they were then doing in the way of making financial statement examinations was not what I was taught to do in my first collegiate course in auditing, about 25 years earlier. Obviously, in only a few years, quite a few changes had taken place in the meaning and practice of auditing, and these changes, as far as I was concerned, were still taking place. Furthermore, I felt, additional changes would continue to take place in the future.

So, at that time I wrote a paper concerning some of those historical changes in auditing. I am going to paraphrase some of the statements I made at that time, because the points I made then are still relevant today. Let me start with what happened in auditing during the early history of our country, from the 1770's to the 1870's.

From the 1770's to the 1870's—100 Years of History

I have always considered auditing as the professional part of accounting. If you consider auditing to encompass more than financial statement examinations, then you must think of accounting as being something much broader than merely financial record keeping. Accounting from this broader standpoint, moreover, would be more closely related to accountability than to accounts. With this introduction, and with some minor changes, this is what I said concerning this early period of the history and what happened in accounting and auditing.

> The conditions under which accounting operated in the United States prior to the middle of the 19th century, both in government and business, can be stated very simply. The environment primarily was agricultural. Most businesses—agricultural, commercial, and industrial— were small. State and local governments were the dominant public bodies and most citizens believed the less government the better. There was little governmental influence in any business activity. Any auditing was for the purpose of checking the accuracy of vouchers, determining the legality of transactions, and finding fraud in the records. The concept of an independent accountant could not be supported at that time in the United States.[1]

If you will check into this period of early United States history you will find that most auditing done in this country at that time was performed by the United States government. This type of auditing was the review of vouchers to determine compliance with applicable laws or regulations and to determine whether any fraud had been committed.

Notice, that in this type of auditing no financial statements were involved. Auditing included only a review of individual vouchers. ''Voucher Auditing'' continued long after newer types of auditing, such as balance sheet audits, financial statement examinations, and performance audits were discovered. The fact of the matter is, I saw a lot of voucher auditing in both the State of Louisiana and the GAO when I was there, but it was gradually being phased out. In addition, in early years, a great deal of State and local auditing was concerned with preauditing, i.e., auditing before payment, as well as post auditing, i.e., auditing after payment of the voucher. But, this type of auditing changed very rapidly during the next 50 years.

From the 1870's to the 1920's—50 Years of History

Concerning change during this next fifty years, I said:

> Be that as it may, the environment changed so radically, immediately before and after the Civil War, that it influenced the functions of the accountant (and auditor) and the knowledge he needed just as radically. Industry, commerce, transportation, and finance were becoming preponderant, and they provided the major stimuli for accounting and auditing changes. The Federal Government, taking over from the States and municipalities, was becoming the dominant public body.
>
> Absentee owners of industrial, commercial, financial, and transportation businesses, rather than expecting accounting to be mainly an asset recording tool, were now beginning to require it to be an income measuring tool—a tool for measuring the profit performance of those who carried out the activities for investors.
>
> Thus the auditor began to act as a representative of absentee owners rather than for the managers of business. In his audits, he represented the equity suppliers, and thus was independent of management. Now the environment began to support the concept of an independent accountant, and independent financial auditing became a part of the common body of knowledge of the accountant.[2]

But independent financial auditing during the latter part of the 19th century was quite different from what it is today. Kohler and Pettingill, in a book published in 1925 say:

> The American public accountant 40 years ago was frequently called an expert bookkeeper and his labors were confined largely to matters of locating errors and irregularities.[3]

Thus, the auditor's approach during the 1870's and 1880's was largely the same as what the government auditor had been doing for 100 years; i.e., auditing vouchers for locating errors and irregularities. But, later on it changed to the audit of balance sheet accounts. In the same book, Kohler and Pettingill say:

> A number of years ago the Federal Trade Commission found that verified statements could be divided into the following two classes:
>
> 1. Those in which the certificate is based on an examination of the books without independent appraisal of all assets with the aid of technical appraisers.
>
> 2. Statements verified with the personal supervision of inventories and the independent appraisal of all assets.
>
> Most balance sheet audits fall under the first category, and rightfully so. The accounting records of any business of ordinary size should be capable of satisfactory review in a few weeks' time by independent auditors without a physical inspection and appraisal of its assets. Occasional physical appraisals of properties by competent engineers, are, of course, necessary, not alone for testing the sufficiency of insurance carried, but also for the purpose of ascertaining the existence and estimating the future usefulness of properties appearing on the books. In most cases, it is safe to say, the auditor's technical abilities are best confined to extensive checks and comparison and a study of the general financial situation in which any business may find itself.[4]

You may notice that the term "balance-sheet" audit was the rightful title of audits at that time. The balance sheet was the primary statement, with the income statement just coming into prominence. The audit had moved from checking only individual transactions through voucher auditing to an examination of a summary of the vouchers in the accounts. The examination of accounts usually only included balance sheet accounts; thus, the balance sheet audit. The auditor seldom went outside of the records during his examination, but he was beginning to be independent of the organization that was being audited.

Government had lagged way behind the public accounting profession during this period. Government auditors were still auditing vouchers. Most of the auditors were a part of the branch of the government they audited, the executive branch, with only limited independence. In 1921, at the end of this period, the Federal Government adopted the idea of independent auditors, by setting up the United States General Accounting Office and transferring to it the functions and the auditors from the Treasury Department.

From the 1920's to the Mid 1950's—35 Years of History

From the 1920's to the mid 1950's the accounting profession grew very rapidly. During this period, I saw auditing move from the balance sheet audit to the examination of financial statements; from no standards for auditing to numerous generally accepted auditing standards; and from only a hint of generally accepted accounting principles, GAAP became the password of the day. I heard accountants say that the profession would never become proficient in observing inventory taking or expert in determining the validity of accounts receivable through account confirmations.

I saw during this period: (1) government attempt to develop better ways of managing its expanded activities as a result of trying to overcome the worst depression that the nation has ever had, and (2) government spend more in one year than they had spent before in 100 years as a result of the effects of two world wars. And, as a result of the wars, the depression, and bigger central government, I saw the expansion of the income tax base so that practically all businesses, not only big businesses, and almost every individual, not only the extremely wealthy, paid income taxes. I saw the need for adequate payroll accounting because of the Social Security and withholding tax systems, and I saw the need for adequate audits in order to sell registered securities as a result of the Securities and Exchange Commission Acts stemming from the great depression. The fact is that during this period of rapid expansion of the accounting profession one of my graduate professors made a statement that all of us should consider. He said: "Each of us accountants should arise each morning and bow three times to Washington, because they have made the accounting profession what it is today."

Of course, the Securities and Exchange Commission, the Internal Revenue Service, and audit organizations, such as the GAO and the DCAA have all had a major impact on the private auditing profession. But when it came to auditing public organizations, is was not until the passage of the Government Corporations Control Act in 1945, that audits in government began to be comparable to those in the private sector.

This Act required the GAO to audit government corporations in accordance with the principles and standards of the accounting profession. Thus, the GAO then became the independent public accountant for all Federal Government corporations. GAO's Corporation Audits Division reviewed the financial statements of some of the largest corporations in the United States—The Tennessee Valley Authority and The Columbia River Power System, for example. Their audits were made in accordance with generally accepted auditing standards and their audit reports expressed an opinion as to whether the statements were fairly presented in accordance with GAAP. But this part of GAO's responsibility was limited to the audit of financial statements of government corporations and did not include auditing the financial statements of all activities of government.

Many states, likewise, were requiring their auditors to follow generally accepted auditing standards in making audits of state and local agencies. The major problems I found in our audits in Louisiana, at that time, were not related to following generally accepted auditing standards, but to finding accounting principles that we could use as a basis for expressing an opinion on the statements. To a certain extent, it became necessary for the auditor to develop his own generally accepted accounting principles and any legal principles that were needed. Thus, the auditor in government was somewhat both a legal expert and an accountant. But all auditing activities of government changed as dramatically as in the public accounting profession.

In the early 1950's, Congress passed an Act that said that GAO should be the public accountant for all agencies and departments, and not only for the corporations of the Federal Government. It was also given the responsibility for stating accounting principles and standards for Federal organizations. In other words, the auditor in the GAO, instead of having the vouchers sent in to him, was going to the site of the audit, as an independent auditor, to make his review. And, instead of auditing only vouchers and preparing statements of government agencies, he would audit all of the activities of the Federal Government, including the examination of financial statements, as well as the audit of any funds that went to private sources for government procurement of goods and services.

You can easily visualize what a change this would make in the activities of the GAO. Instead of having voucher checkers as auditors, they would need professional accountants. Instead of sitting behind a desk reviewing and stamping vouchers, they would go to the site of the audit to professionally examine the activities of the departments, agencies, and corporations of the government. In addition they would audit any funds that went to private sources for government procurement of goods and services.

From the Mid 1950's to 1970—15 Years of History

Most of you have lived during this period and can attest to what has happened to auditing as it applies to education, public accounting, internal auditing, and government. Auditing standards have expanded, principles of accounting have grown dramatically, lawsuits in the public accounting field have run rampant, and the supply of professionally trained accountants has not been sufficient to meet the demand. Many factors have increased this demand for personnel for accounting and auditing services:

—the expanded requirements of the Securities and Exchange Commission and of the Internal Revenue Service;

—the effect of two wars on our economy;
—the expansion of technology, such as, television; the space program, including a landing on the moon, a look at other planets, and the possibility of space travel;
—nuclear energy, including the possibility of a nuclear war;
—the almost universal adoption of contracting with private corporations to fulfill the military, space, and atomic needs;
—the shifting from the government's taking care of social problems to letting private enterprise and local government organizations take care of them through the use of federal funds.

In addition to creating shortages in auditing personnel, these factors have also brought about the intermeshing of private auditing with public auditing, and national auditing with international auditing. The expansion of demand for accounting and auditing services also created other problems: not only obtaining new personnel but also developing current personnel to meet the demands of the changing practice.

In April 1956, I went to the U.S. General Accounting Office as a consultant and stayed on as the Director of the Office of Staff Management with the responsibility for developing its professional staff. You will remember that until the late forties and early fifties the mandate of the Office was to examine vouchers, but this was slowly changing. I made a study for the Comptroller General soon after I went with GAO and found that of the approximately 5,000 employees, only 1,226 could be classified as "accountants and auditors." Of those 1,226 we could find only 226 we could identify as professional accountants and auditors. Most of those classified as professional auditors had been contract auditors during the World War II, with most of them coming from large national public accounting firms. They decided after the war to stay in the government rather than go back to their private employment. Others had come in after the war in the Corporations Audit Division, the division set up by the Comptroller General to audit government corporations. A few of the voucher auditors had demonstrated their capability as professionals and had been converted to auditors; a few of the professionals were accounting systems experts, with limited auditing background.

With this nucleus of professional accountants and auditors, with the auditors being required to audit in accordance with the principles and standards of the public accounting profession, and with the auditors being on the site of the audit, most of them found that it was almost impossible to audit the financial statements of the departments and agencies of the Federal government. It would be almost impossible for them to state that in their opinion the statements were fairly presented in accordance with generally accepted accounting principles. Although the GAO had set forth accounting principles for the Federal Government, most of the agencies and departments of government did not have an accounting system that would provide information that could in any way be said to be accordance with GAAP. Consequently, the auditors began to expand their audits into areas that led to determining the efficiency and economy of the operations of the organization. GAO found that the Congress, to whom the reports were sent, was more interested in the accountability of the management of the departments and agencies than they were in accounts and financial reports. As a result, GAO developed what, in the early stages, they called a "Comprehensive Audit." This audit included not only a partial review of the financial records but also an audit for efficiency and economy of particular operations of the organization. Efficient operations include: (1) holding the costs constant while increasing the benefits, (2) holding benefits constant while decreasing the costs, (3) increasing costs at a slower rate than benefits, and (4) decreasing costs at a faster rate than benefits. Economical operations involves the elimination or reduction of needless costs. Thus, economy and efficiency, as they both pertain to reduction or elimination of costs, are equivalent in meaning. Only when costs remain constant or increase in relation to increasing benefits are the meanings different.

The reception of Congress to the efficiency and economy audits was very favorable, and except for the corporation audits, where principles and standards of accounting were important, financial statement audits for all intents and purposes were eventually eliminated. Efficiency and economy audits were the only ones given to the Congress, the agency, and the public. During this period that saw the movement to economy and efficiency audits, we found in the GAO that through developing and using a conceptual framework for training, auditors who had been educated or trained in auditing financial statements found it very easy to shift to auditing management's performance for efficient and economical operations. We also found that the basic approach to auditing was the same, whether it be for financial or management auditing. Since each audit for efficiency and economy was, in almost all cases, separate and distinct from every other audit, unlike financial statement audits, one or two additional steps were needed to specifically identify the particular activity that needed auditing. But these new steps could be learned very easily if the auditor knew the procedures of auditing and the specific elements of any audit. The conceptual framework for training we developed for these types of audits identified those elements as: criteria, causes, and effects. From there on, all the auditor had to learn was a little more about evidence.

Since all auditors were at that time required to gather evidence by observing inventories, by confirming receivables, as well as by reviewing records, they sometimes did not have insight into gathering evidence from sources other than records, and past habits are hard to change. I can remember a discussion I had with our policy staff concerning the use of interview evidence. They said that interview evidence could not be used alone as evidence—it had to be supported by records evidence. I suggested to the policy staff that they might want to look into the reasoning behind why judges and lawyers wanted information from knowledgable individuals, rather than from records, to prove their legal issue. This legal view of interview evidence seemed to me to be exactly opposite of what the policy staff had told me about the value of that type of evidence as compared to records evidence. This distinction between relative values of types of evidence took several years and a good understanding of audit evidence by all of the staff members concerned before the question was satisfactorily resolved.

Adding on one or two additional steps to find out just exactly what activity needed to be audited for efficiency and economy; learning that management control for purchasing, marketing, and other management activities is no different from internal control for accounting; understanding the meaning of evidence as it applies to both financial and management audits; and learning the techniques of writing a report instead of copying a standard report; the auditors soon became very proficient in making audits for efficiency and economy. But one of the pecularities of their becoming proficient in measuring the efficiency and economy of operations of others is that the GAO auditors found out how others were measuring them. The employees in the various divisions of GAO, so it seems, had found that they were being measured by the number of reports that they issued. To increase their performance potential, they learned how to make additional reports out of one report. They called these reports "drip-type" reports. To do this, they determined the minimum amount of effects the office would accept in each report. The magic amount was $100,000. For example, instead of considering whether a corporation was efficiently or economically carrying out the contracts it had with the government on an overall contract basis, possibly $500 or $800 million worth, they considered each contract separately and "drip-type reported" any deficiency as long as the amount was at least $100,000. The corporation may have been doing an excellent job overall, but on this one particular contract, they may have overstated costs to the government of at least $100,000. Thus, a report would be issued on that one contract without considering what was taking place with all of the other contracts. For example, the contractor may have understated costs by $100,000 on another contract. This often made the corporation look as if it were cheating the government, as if it were inefficient or uneconomical, or if it were doing a very poor job, even when they were doing an excellent job on an overall basis.

Another illustration of drip-type reporting is that found in leasing versus buying of electronic data processing equipment. Instead of making one report on the cost to the government for leasing instead of purchasing all data processing equipment, one report was issued for each contract, as long as the report had in it a deficiency of at least $100,000.

If there is one thing that I learned about auditing for deficiencies in management during this period, it is this one point—if you want to improve the operations of management, rather than to make a headline, place your deficiencies in proper perspective. Isolating immaterial deficiencies for headline purposes is often used to destroy people rather than to improve operations. For instance, a general built a fancy doghouse for his beloved puppy out of appropriated funds. Even though he was doing an excellent job overall, this simple, but very limited, deficiency in his management gave him a very hard time, especially from the press. Isolating deficiencies in order to gain headlines in newspaper stories has seemed to me to be a very poor way to improve managerial operations. It seems to me that reporting isolated deficiencies, if reported often enough, gives the impression that everything is bad, and there is no good at all in management's operations. Which is not true.

While these isolated deficiency reports often impressed news makers, you can imagine how many congressmen and their staff, most agency heads, and many corporation executives felt about them. Overall, most of the managers were doing a fairly good job, needing a balanced perspective as to what deficiencies they had in their operations, in order to improve them. So, in the middle 1960's, Congress held hearings on this type of work. From these hearings, this single, isolated, drip type report, except for exceptional circumstances, became a past issue. The Congress said they wanted to know whether the overall operations were being conducted efficiently and economically, and suggested that GAO might look into whether the programs of government were being operated effectively. This leads us to the next period.

From the 1970's to 1980 — Ten Years of History

Frederick C. Mosher, summarizing this last ten year period of GAO's activities says they have ranged:

—from frugality in expenditures towards effectiveness;
—from audits for legal compliance toward reviews of management;
—from suspicion of and hostility to the executive branch towards cooperation and collaboration;
—from individual transactions toward systems and problems;
—from a punitive approach toward a corrective approach;
—from nearly total independence toward interdependence with Congress;
—from concerns about the past toward concerns about the future;
—from concerns of auditing in itself toward devolution to executive agencies;
—from strictly financial matters toward costs and results of programs.[5]

By the end of the 1960's, GAO had practically divested itself of that punitive approach to auditing—reviews for legal compliance, for errors in individual vouchers, and for efficiency and economy of individual actions—and had started the improvement (corrective) approach: reviews of the overall activity of management for efficiency and economy and of management's programs for effectiveness. Programs were considered effective when management achieved the goals or expected results desired by third parties and management agreed on and accepted those goals.

This trend toward reviews for effectiveness automatically brought about more concern for the future than for what had happened in the past. In addition, GAO began to be concerned with auditing for what the Congress, the major user of the reports, wanted and needed as well as for what GAO wanted. With the expansion of governmental activity at all levels, GAO became concerned with the decentralization of the audit function by determining what best could be done by agency auditors, CPA's, and state and local auditors instead of the GAO doing it all themselves.

Let me give you an illustration showing the differences between efficiency and economy audits and effectiveness audits. This illustration concerns the readiness of a particular military unit. This unit was supposed to be ready to fight anywhere in the world on 24 hours notice. We reported that the guns wouldn't shoot, the airplanes wouldn't fly, the tanks wouldn't run, the trucks weren't available, and the men couldn't be found. This is quite a bit more responsive than a report that says that a particular tank could be produced for less if the department used comparable parts from the previously used tanks.

Furthermore, let me show you how the reports on efficiency and economy changed and how much broader they are today by considering the overall management activity rather than by considering a single isolated action. This illustration is concerned with management using a particular type of spark plug (a platinum tipped spark plug) in place of a regular spark plug for use in military aircraft. This new plug costs four times as much as the regular plug, but users were obtaining only the same amount of service life. It was shown that the service life that should have been obtained from the new plug was six to 10 times that being obtained. If the users obtained the full service life from the plug, they could have saved hundreds of thousands of dollars. Compare that to a recent report (February 7, 1980, LCD-80-30) concerning the system of ground support for military aircraft. That report says that hundreds of millions of dollars could be saved each year if the military standardized ground support for all military aircraft—ground support such as tow-bars, boarding ladders, maintenance stands, electrical connectors, automatic test equipment, and the like, instead of developing particular support for each type of aircraft. Contrast this with earlier GAO reports that would have taken each individual part of the ground support for each particular type of aircraft and made a report out of it.

This move towards effectiveness reviews and broader based economy and efficiency audits was not an easy challenge. Many of the staff members had become extremely capable in making these single, drip-type, deficiency audits, and were especially afraid to move to effectiveness reviews. Since we had found that by using a conceptual framework, we could very rapidly train a staff member to make deficiency type audits, we decided that we should develop a conceptual structure for training in auditing for the effectiveness of a management system or program. One person I had review my paper suggested to me that I give an illustration of how these concepts can be used. So, for this purpose, I have included an illustration in the appendix.

I mentioned earlier the military readiness review as an early start in the direction toward effectiveness reviews, but the audit effort in social areas often is more complex and difficult than that in military areas for the reason that often there is no consensus on the criteria that should be used as a basis for measuring results. Whenever the goals are already accepted and standards for accomplishing them are available, such as when the Bureau of Indian Affairs has the goal of bringing the level of education of Indian students to that of the average American within ten years, then an auditor can complete the audit without too much outside help. But when a program has no accepted goals and has no standards for measurement to determine whether the goals are being accomplished, some help from experts in the particular field of that program is needed. Take for example a program that has as its goal to make new buildings in each state more energy efficient. Obviously, if the program manager, such as a particular state agency, has not developed any standards for improving the energy efficiency of new buildings erected in the State, the program has little chance of accomplishing its goal or of being effective. But suppose the program manager had developed some standards that were being required in all new buildings. How would you be able to measure this unless you had some help from experts in that field to determine whether those energy efficiency standards were the right ones? GAO has found that help in many of the newer program areas is needed in order to evaluate some of the programs, and consequently many of the newer staff members coming into the GAO are from engineering, atomic energy, mathematics, actuarial science, economics, and other fields as well as from the accounting field.

But where are all of these improved approaches to auditing going to lead government auditing, and how will they affect us? To find out let us take a peek at the future of governmental auditing.

A Peek at the Future of Governmental Auditing

Some directions that I believe governmental auditing will take in the future are:

1. All governmental units—state and local as well as Federal—will require the same type of auditing now found in the GAO— that is, less emphasis will be placed on financial statement examinations and more will be placed on auditing for efficiency, economy, and effectiveness.
2. Public accountants will become more and more involved in governmental auditing and hence more and more involved in auditing for efficiency, economy, and effectiveness.
3. Once public accountants learn that there is very little difference in the practice of auditing in one area of management performance, i.e, financial statement examinations, as compared to the review of the activities of an organization for efficiency and economy and a program for effectiveness, they will be ready to move into the same type audits in private corporations.

Types of Audits in All Governmental Organizations

The Standards for Audit of Governmental Organizations, Programs, Activities, and Functions states:

> This concept of accountability is woven into the basic premises supporting these standards. These standards provide for a scope of audit that includes not only financial and compliance auditing but also auditing for economy, efficiency, and achievement of desired results. Provision for such a scope of audit is not intended to imply that all audits are presently being conducted this way or that such an extensive scope is always desirable. However, an audit that would include provision of the interests of all potential users of government audits would ordinarily include provision for auditing all the above elements of the accountability of the responsible officials.[7]

These elements include: (1) financial and compliance auditing, (2) economy and efficiency auditing, and (3) program results auditing. Program results auditing is what I am calling effectiveness auditing.

With the formation of intergovernmental audit forums, with at least one book and many articles on auditing management performance, and with the various departments and agencies of the Federal Government requiring better accountability in state and local management's use of Federal funds, I can see that it will not be very long until auditing in each of these areas becomes common place throughout all levels of government. It appears to me that the emphasis in the future in governmental auditing will be on compliance, efficiency, and effectiveness auditing, rather than on financial statement examinations.

I also believe that any increased emphasis in government on financial statement examinations for third party users will be on the audit of the overall governmental unit as an entity rather than on the fund as an entity. I believe this will come about: (1) because of the increasing use by third parties of government bonds as an investment and the need of those parties for information that they can rely on concerning the security behind those investments, and (2) because of the Federal Government's interest in the activities of State and local government—they provide at least one third of their financing. I doubt that you can obtain the information needed today by these parties from audited financial statements of governmental units on the fund basis, even though the statements for all funds are shown on a combined basis.

Of even less value than combined statements of municipalities are those individual statements of agencies and departments of states and the Federal government. For instance, I have very little confidence that the information from the statements of the GAO would help me to determine whether the Federal government has sufficient resources to back its bonds. The same lack of confidence applies to state agency financial statements. What value would the statements from the highway department be in convincing me that the state could pay its debts or provide matching funds for Federal grants? Maybe highway revenue bonds that did not have state backing would be considered by investors and the Federal government, but then you are into the area of income determination, using generally accepted accounting principles for this purpose, rather than generally accepted accounting principles for governmental agencies.

If this trend in government continues towards the need by third parties for total government information through desire for consolidated financial statements on the full accrual basis, it means that there will need to be a major change in what is now considered principles of accounting for governmental agencies. I believe that change will take place very rapidly.

From the above discussion you can understand why the Congress lost all interest in financial statement audits for agencies and became more interested in audits of efficiency, economy, and effectiveness of their operation. The user of the audit report has a great deal to say about what is audited and how it is reported, and the audit report should at least attempt to meet some of his needs.

It seems to me that one need by third parties in reports on efficiency and effectiveness is that audits should be more timely reported. To meet this need for more timely reports, auditors are going to have to learn a lot more about planning for, obtaining, and evaluating audit evidence, and about the way evidence determines our conclusion on an audit objective. This field of audit evidence, then, appears to me to be a very important area of research that universities and other research institutions should spend a great deal more time on in the future. This is so if auditors are to learn how to plan for, obtain, and evaluate sufficient evidence on the audit objective in order to have a timely report without the inherent risk that goes with insufficient evidence.

Another problem that I can see coming as a result of audits of management performance, one that may create a clash between the user and the auditor but one that I do not know how to give you a proper answer on, is that concerning independence. When auditors evaluate policy, policy makers want them to make the policy. Sometimes this seems the obvious way to go. Yet, if they make policy, they lose their independence and thus their capability as auditors. I have always made a distinction between program auditors and program analysts or program evaluators. The auditor must be independent in order to render an independent conclusion or opinion on his examination. The analyst does not necessarily have to be independent or even unbiased. His way, in his opinion, should be the only way to go, even if it is biased. Yet, without an independent audit on the way he chose to go, whether the right way or the wrong way, third parties would have no way of knowing whether he chose the right or wrong way.

This leads us to the part the independent public accountant will play in this increased emphasis on auditing for efficiency and effectiveness.

Public Accountants' Involvement in Auditing Management's Performance in Government

Touche Ross's recent *Report on Progress & Perspectives 1980* says: "The public sector remains one of the most important areas of growth for Touche Ross."[8] They then mention several national and international governmental organizations they have just started to audit and indicate that their engagements include both financial and operational audits.

I believe you can see that Touche Ross, the firm sponsoring this forum, is now in the process of doing what I have said has been done in the GAO—making financial, management, and program audits. And, I believe that public accounting firms will do more of this in the future. For example, this year Peat, Marwick, Mitchell and Company is auditing Virginia Tech not only for an opinion on its financial statements but also for a conclusion on the efficiency and effectiveness of particular operations. This has come about as a result of a change in attitude by the Auditor of Public Accounts of the State of Virginia, who gave them the contract. But will auditing governmental activities and programs have any effect on the work the public accountants do in the private area?

Possible Expansion of Audits of Corporate Activities and Programs

In the February 22, 1980 issue of Deloitte Haskins Sells *The Week in Review* they say:

> In a recent article in the Financial Analysts Journal, John C. Burton, Professor of Accounting and Finance at Columbia University, responded to questions from William C. Norby on accounting and reporting trends in the 1980's . . .
>
> Where do you see the accounting profession going?
>
> *My personal view is that, with the new kinds of data being presented, the profession is going to have to get used to different kinds of reports and to different levels of assurance regarding those reports. There will be greater emphasis on the accountant's review and his analytical services, and on internal control evaluation and reporting. The auditor's principal output will shift away from reports on whether the financial statements conform to GAAP.*
>
> Evidently the profession's average level of capability will have to gear up considerably?
>
> *I agree. Auditors will no longer be following a formula. They will have a more judgmental role to play. At the same time, they will be under pressure to do their job with greater efficiency.*[9]

I agree with John Burton 100%. I also believe that from understanding how to make these efficiency, economy, and effectiveness types of audits, by doing them in the governmental area, public accountants will be ready for whatever happens to them in the corporate reporting area. If you do not believe me in regard to the expansion of auditing, look at what is happening in the field of internal control. Audits of internal control, incidentally, are effectiveness audits. Or look at peer reviews—they also are effectiveness audits.

I believe you can see that I am very optimistic about the future of the accounting profession in government as well as in public accounting. Yet, I am also a little fearful, fearful that if the accounting profession does not accept these additional responsibilities, wherever found, that some other profession will. And, if others such as management consultants, program evaluators, EDP specialists, etc., take over the newer fields of auditing, and financial statement auditing becomes less and less important, then what happens to the accounting and auditing profession? I hope we have enough wisdom to make sure it doesn't go the way of the voucher auditor.

Appendix I

Illustration of the Use of Auditing Concepts in Reporting on Effectiveness Audits

Let me tell you what one GAO staff member said to me concerning the use of a conceptual structure in his audit. One Friday evening last fall, I was waiting in the airport in Atlanta for a flight home. Also waiting in the airport for his flight back to Washington was a high level member of GAO's directorate with one of his fairly new, advanced level, staff members. This director from GAO introduced me to the new staff member by saying to that person that I was the one in GAO who had thought up the idea of criteria, causes, and effects that they had so successfully used in developing their audit finding during the past week. Criteria, causes, and effects had come directly from the conceptual structure that was used in training this particular member of GAO's directorate.

To illustrate how these conceptual terms are used in an audit report, and can as easily be used in the various stages of making the audit, let me pick out some of these terms from a rather recent GAO audit report. The title of the report is "Energy-Saving Strategies for Federal Procurement," EMD-79-68.

As was said earlier, an effectiveness audit is one that determines whether management has carried out standards that achieved the goal of the program. Each of the particular elements of the audit are identified below.

Energy-saving Strategies for Federal Procurement

Background Information

The sheer volume of Federal procurement makes it an important process through which energy conservation can be effected. The Energy Policy and Conservation Act (EPCA) of 1975 states that the President shall . . . establish or coordinate Federal agency actions to develop mandatory standards with respect to energy conservation and energy efficiency to govern the procurement policies and decisions of the Federal Government and all Federal agencies, and shall take such steps as are necessary to cause such standards to be implemented. This responsibility was delegated by the President through Executive Order to the Office of Federal Procurement Policy (OFPP).

Goal of the Program

To reduce energy consumption in the United States by developing and using procurement techniques that are energy efficient.

Effects

The goal of reducing energy consumption in the United States by developing and using procurement techniques that are energy efficient has not been effectively accomplished.

Criteria

(Only three criteria as standards that should be followed are described. However others are listed but not described.)

—Life cycle costing

Life cycle costing should be used because it considers operating, maintenance, and other costs of ownership, as well as acquisition price. Because energy expenditures constitute an increasingly large portion of the operating costs of many items, life cycle costing represents significant energy conservation potential.

—Energy efficiency standards

Energy efficiency standards should be used because they are simple, item-by-item requirements of minimal energy efficiency. The procurement of an energy consuming product with less than the prescribed efficiency as set by the standard would be prohibited.

—Design versus performance specifications

Design specifications describe the way a product must be constructed. Performance specifications describe the way a product must perform; the product may be constructed in any way imaginable, and of any materials the contractor deems suitable. A greater emphasis on performance, rather than design, should be used because it offers more opportunity for improving energy efficiency.

—Value incentive clause

—Purchasing items made from recycled materials

—Transportation of Government purchases by energy efficient means

—Requiring use of returnable beverage containers in government installations

—Change in product

Causes

The Office of Federal Procurement Policy has not provided satisfactory guidance to procuring agencies and has not assured that measures to achieve energy conservation through the procurement process have been implemented. This responsibility for guidance to procuring agencies and for measures to achieve energy conservation was delegated to OFPP over three years ago, and all they have done is to issue a statement that principles of energy conservation and efficiency should be applied in the procurement of property and services.

The Department of Defense inserted in their procurement regulations that energy conservation and efficiency criteria shall be considered. The General Services Administration used the same statement in their procurement regulations. These general statements or other specific standards had not been included in implementing procurement regulations.

The Department of Energy had not given full recognition in their procurement policies and procedures to energy conservation.

Conclusion and recommendations

Although it has been over 3 years since EPCA was passed, the Federal Government has not satisfactorily developed and implemented procurement strategies for reducing energy use as intended. We recommend that OFPP emphasize the potential for saving energy through the procurement process by immediately revising its policy letter to (1) explicitly identify the types of action and strategies that can be used and (2) require procuring agencies to:

—determine which strategies should be implemented, based on the type of items to be procured,

—develop specific procedures and issue guidelines on when and how to apply energy efficient procurement techniques, and

—ensure that procurement officials are informed that they are to implement those techniques.

We also recommend that OFPP actively follow up on agency actions to make certain that energy does indeed become a major consideration in the procurement process.[10]

Footnotes

1. Herbert, Leo, ''Challenges to Creativity.'' *Accounting Papers, 1971 Conference of Accountants,* The University of Tulsa, 1971, p. 43.

2. Ibid, pp. 43-44.

3. Kohler, Eric L. and Pettingill, Paul W. *Principles of Auditing,* A. W. Shaw Company, 1925, p. 17.

4. Ibid, p. 17.

5. Mosher, Frederick C. *The GAO: The Quest for Accountability in American Government,* Westview Press, 1979, p. 225.

6. The Comptroller General, *Report to the Congress of the United States,* ''Increased Standardization Would Reduce Costs of Ground Support Equipment for Military Aircraft,'' The United States General Accounting Office, LCD-80-30. February 7, 1980.

7. The Comptroller General of the United States. *Standards for Audit of Governmental Organizations, Programs, Activities, & Functions,* U.S. Government Printing Office, p. 2.

8. Touche Ross & Co. *Report on Progress & Perspectives 1980,* p. 6.

9. Deloitte Haskins & Sells. *The Week in Review,* Feb. 22, 1980.

10. See Report by the U.S. General Accounting Office ''Energy Saving Strategies for Federal Procurement,'' General Accounting Office, EMD-79-68, June 19, 1979.

Discussant's Response to An Historical Perspective of Government Auditing With Special Reference to the U.S. General Accounting Office

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Critiquing Professor Herbert's paper is an assignment of great interest to me for a number of reasons. Some years ago while a doctoral student at Harvard University, I was literally forced by a professor to write a seminar paper on the U.S. General Accounting Office. Later I turned that paper into a doctoral dissertation, and ultimately into one of the world's smallest selling books. Shortly after this I was a consultant to the GAO and, among other tasks, helped the GAO update Senate Document 11: *Financial Management in the Federal Government.* And the relationship continues even now. The Kansas Legislative Division of Post Audit, the Kansas Legislature's audit agency which I head, is in reality a mini-GAO. Indeed the office was based on model legislation developed some years ago by the GAO. Like the GAO, my office performs a variety of audit work, including both financial and performance auditing. The audit staff in Kansas, like that in the GAO, is a multidisciplinary audit staff. I could continue this analogy in many ways.

Summary of Key Concepts In Paper

Professor Herbert makes it very clear that his paper is a record of his own impressions, a very personal account of government auditing and accounting, especially with regard to the GAO. He takes us from early voucher auditing, through balance sheet audits in the earlier days of the republic up to about 1920, and finally, with the GAO's creation in 1921, to the larger concerns of the profession with audits of financial statements and auditing with concern for generally accepted accounting principles and generally accepted auditing standards. Professor Herbert mentions the 1945 Government Corporation Control Act, which made the GAO's audits of government corporations comparable to those of CPA firms, and he also discusses the 1950 Budget and Accounting Act to a limited extent. This latter piece of legislation mandated that the GAO should be the public accountant for all agencies and departments, and not only for government corporations. In effect, this Act extends the 1945 lessons in commercial-type audits to all government entities, calling for on-site financial audits of all agencies.

The paper discusses several other developments which occurred in the mid-1950s, and it is important in this connection to keep in mind that Professor Herbert joined the staff of the GAO in 1956. According to Professor Herbert, of 6,000 employees at that time, only 1,226 could be classified as accountants and auditors. Of these, only 226 were "professionals." Moreover, "most of the agencies and departments of government," in Professor Herbert's words, "did not have an accounting system that would provide information that could in any way be said to be in accordance with GAAP." Thus, the GAO was unable to extend its financial auditing to all governmental entities in keeping with the thrust of the 1945 and 1950 legislation. And thus was born the term "comprehensive audit," the early term used by the GAO for a partial financial review, coupled with economy and efficiency audits of small parts of organizations. As Professor Herbert points out, Congress seemed pleased with the turn of events. Financial statement audits, according to the author, were eventually eliminated except for corporation audits.

In the 1960s there was still a further shift in the audit work of the GAO. A congressional push toward effectiveness audit work developed. Professor Herbert states: "By the end of the 1960s, GAO had practically divested itself of that punitive approach to auditing—reviews for legal compliance, for errors in individual vouchers, and for efficiency and economy of individual actions . . ." The trend toward overall reviews for effectiveness, according to the author, automatically brought about more concern for the future than for what had happened in the past.

Finally, Professor Herbert makes a few predictions for the future. He says that state and local governments will move to the same auditing mix as the GAO, that is, less auditing of financial statements and more auditing of program performance. He also feels that there will be a growing role for CPA firms in governmental auditing, including performance audit work, and that CPA firms will take the lessons they learn in their governmental practice to their audits of private sector firms, thereby expanding the scope of the traditional financial audits performed there. Professor Herbert also predicts fairly major and rapid changes in generally accepted accounting principles for government. Lastly, he concludes that while he is optimistic about the future of the profession, he is also a little fearful; fearful that if others "take over the newer fields of auditing, and financial statement auditing becomes less and less important, then what happens to the accounting and auditing profession?"

A Differing View of Events

Reading Professor Herbert's account of the history of governmental accounting and auditing in America, and the GAO's influence on it, brings to mind the story of the three young boys watching a couple embracing on the sofa:

—The seven-year old says: "They're fighting."
—The nine-year old says: "Don't be silly; they're making love."
—The eleven-year old says: "Yes, and badly at that."

In short, I view these same historical events quite differently. While I share Professor Herbert's concern for the future role of the profession, I believe the GAO has helped put us in this quandry. As I view the situation, the GAO, throughout its history, has made several key decisions the wrong way, and has failed to make some other decisions it should have made.

To begin with, the GAO had a very slow start in American financial management. The same 1921 Budget and Accounting Act which created the then Bureau of the Budget, also created the GAO. It is significant, however, that while the Bureau of the Budget proceeded rather rapidly to become a strong financial arm to the White House and to the Presidency, the same cannot be said of the GAO and its relationships to the U.S. Congress. The detailed on-site voucher checking and the associated attitude and atmosphere which permeated the early GAO lasted well into the 1940s. The more modern and broader view of auditing as a strong management and congressional tool of oversight did not take hold in the GAO until much later. Indeed, Professor Frederick C. Mosher writes in *The GAO: The Quest for Accountability in American Government:*

> The beginning of the transformation of the General Accounting Office coincided approximately with the conclusion of World War II . . . In 1947, for example, the GAO:
>
> —Maintained 100,000 appropriation limitation accounts, 44,000 personal accounts with accountable officers, and about 270,000 other accounts;
>
> —Countersigned 60,000 Treasury Department warrants and approved 14,000 requisitions for disbursing funds;
>
> —Audited 93,000 accountable officers' accounts (containing 35 million vouchers), 5 million transportation vouchers, 1.5 million contracts, 260 million postal money orders, 57 million postal notes, and 26 million postal certificates;
>
> —Settled 108,000 accountable officers' accounts, 354,000 postmasters' accounts, and 773,000 claims;
>
> —Reconciled 490 million checks;
>
> —Issued 1,300 reports on inspections, surveys, and special investigation, made 6,200 replies to miscellaneous inquiries from members of Congress, issued 400 reports to the President, Congress and to the Bureau of the Budget, and issued 7,400 decisions of the Comptroller General and 2,200 reports to the attorney general.[1]

Indeed, one could argue that it is only in the last decade or so that the GAO has come into national prominence as a strong financial management tool of and in American government.

Once having begun to become an effective force within government, there are scattered signs that the GAO may have moved too far, too quickly, and perhaps even in the wrong directions to gain recognition. As indicated above, the 1945 Corporation Control Act, coupled with the 1950 Budget and Accounting Act, were expected to extend commercial-type, financial statement audits to all entities of government. In essence, this would have entailed an audit of the financial statements of governmental entities, and in accordance with generally accepted auditing standards, leading to an opinion that the statements were fairly presented in accordance with generally accepted accounting principles. This development, however, has not occurred. Professor Herbert's data suggests that a lack of qualified staff, a lack of adequate accounting systems, and congressional disinterest are the culprits. Out of this period came the "comprehensive audit." While I am not entirely certain exactly what this audit is, it is certainly a very partial financial audit.

A glimpse of the division of audit effort today in the GAO is most revealing. Professor Mosher presents the following data in his study.[2]

Percentages of GAO Work by Program Category

	1972	1973	1974	1975	1976	1977
Financial	14	13	14	12	11	10
Economy & Efficiency	56	53	54	52	49	41
Program Results	30	34	32	36	40	49

Source: The GAO's monthly "Overview Report."

The bottom line is that ten percent of the GAO's audit effort in 1977 was devoted to financial auditing while 90 percent was spent on performance auditing, including efficiency and program results work. It is difficult to reconcile this situation with recent financial problems and crises in American government. It is also puzzling, given recent actions by the Federal government, through its Federal Revenue Sharing Act and through the Office of Management and Budget Circular A-102, Attachment P, to in effect mandate that all state and local units of government receiving substantial amounts of federal funds receive audits conducted in accordance with GAAS, of financial statements basically prepared on the basis of GAAP. One can not help wonder why, if this is such a good idea for state and local units of American government, the GAO has not found it necessary to work toward this same end in the Federal government. Moreover, it is worth noting that both of these efforts to bring about uniformity and accountability in American financial management have come through executive agencies, the Office of Management and Budget and the Department of Treasury, and not through the nation's audit agency, the GAO. At this very moment, as a variety of prestigious study groups are attempting to revise the concept of generally accepted accounting principles for American government, and while there seems to be a determination to ensure that state and local units of government are brought into compliance with such accounting and related audit requirements, there seems to be an equal determination that the Federal government itself shall not be covered by such requirements.

If there are difficulties with this end of the audit spectrum, the same could certainly be said of the other end of the audit spectrum—that relating to performance auditing. The GAO's movement to program evaluation occurred swiftly in the 1960's and 1970's. Yet we find Professor Herbert writing:

> I have always made a distinction between program auditors and program analysts or program evaluators. The auditor must be independent in order to render an independent conclusion or opinion. The analyst does not necessarily have to be independent or even unbiased. His way, in his opinion, should be the only way to go, even if it is biased. Yet, without an independent audit on the way he chose to go, whether the right way or the wrong way, third parties would have no way of knowing whether he chose the right or wrong way.

Program evaluation does indeed seem to be different than performance auditing in a few crucial ways. We can not pursue these differences in any depth here, but their existence and their importance is raised in a volume by Sar A. Levitan and Gregory Wurzburg, *Evaluating Federal Social Programs: An Uncertain Art:*

> By insisting on preserving its independence and, in particular, failing to adequately acknowledge other literature and incorporate it where appropriate, the GAO divisions that do the vast majority of the social program evaluations may be forcing their work into a strait jacket that reduces the effectiveness of their work. GAO tends to ignore the legislative and administrative agendas behind social legislation and oversimplify the reality in which social programs are implemented. The work rarely questions the practicality of congressional mandates and pays too little attention to the inevitable difficulties inherent in the implementation of social policies.
>
> The insistence upon independence for financial auditing is, of course, justified. But elsewhere, the limitations this puts on GAO reduce the usefulness of its products. The benefit of independence in evaluating the complexities and nuances of intricate social programs is ambiguous at best. . . .[3]

Much needs to be done to establish that performance auditing is still auditing, and, due to its volatile nature, independence will become more and not less important. More significantly, according to Professor Herbert, the GAO's effectiveness work necessitates a futuristic view. I do not agree with such an assessment, and the implications are serious. The GAO is in danger of becoming a "think tank" for the Congress—doing much work which is similar to that conducted by consulting houses, the Legislative Reference Service, and the Congressional Budget Office—and not an audit organization at all. (One person's definition of a policy analyst, incidentally, is a scholar who really wants to be governor or president but does not want to bother running for office or hold that kind of responsibility.) Professor Mosher concludes in his book that the "GAO has stretched its meaning of the word 'audits' beyond anything contemplated twenty years ago, and some of its work—an increasing share—can hardly fit within that rubric, however it is defined." One must question using the cloak of auditing, and the power and tradition normally associated with that term, to look not at past actions and performance of management, but instead to conducting future-oriented studies, analyses, and evaluations. In the wrong hands this becomes a method to use the power of auditing to second-guess elected representatives in a democratic system and perhaps even to wield their authority for them. Ultimately, such an approach may discredit government auditing of all kinds, whether financial or performance. In any event, there would seem to be other organizations around capable of doing such future-oriented analyses.

There is one final substantive comment that I would make on the content of the paper by Professor Herbert. That relates to the almost total lack of discussion of the vital role played by others in the evolution of government auditing over the last several decades. Nearly all developments are attributed to the U.S. General Accounting Office and the Federal government. Of course state officials grow accustomed to this, and officials from small states learn especially fast. Let me merely indicate that the American states are also involved in a leadership role in this area, and are certainly up with the GAO in matters relating to progressive auditing.

Item: performance auditing. Lennis Knighton's classic doctoral dissertation and book in the mid-1960s on *The Performance Post Audit In State Government,* makes it clear that the performance audit movement was well under way in the states at that time. Performance auditing is presently conducted in a number of states and is quite good. This work is presently as well done as that of the GAO, is probably presented to decision makers on a more timely basis, and has a considerable amount of impact.

Item: financial auditing. Financial auditing is done more frequently at the state level, practicing in effect what the "feds" are preaching.

Item: organizational advancements. Pressures for a national state auditors association, for the national system of intergovernmental audit forms, and for quality review have resulted as much from the pressures by state audit groups as from a leadership effort by the U.S. General Accounting Office.

Conclusions

In closing, let me return to Professor Herbert's predictions for the future. He states that state and local governments will move toward the same mix of audit work as the GAO. He must therefore mean that state and local entities will do less financial auditing and more effectiveness—including futuristic—kinds of studies. My assessment would be that this development is unlikely, given the varied federal laws and regulations which now exist and which in effect mandate a different kind of audit emphasis. Moreover, I personally do not believe state audit agencies should follow the GAO lead any longer in this matter. While state legislators are very interested in performance auditing and, indeed, are demanding such audits more than ever, it appears they are interested in performance auditing as an add-on to basic financial audit work, and not as a substitute for it. They seem far more concerned over auditing and assessing past performance than in using auditors to try to read the future.

Professor Herbert states that CPA firms will play a greater role in governmental auditing, including performance audit work, and that the lessons they learn in government will be brought into the corporate audit work that they conduct. I believe that this is probably a reasonable assessment of what is occurring in Kansas, as well as in a number of other states in America. This is so in large measure due to the recent requirements placed on state audit organizations by the federal government. It is unlikely that state audit staffs will be allowed to expand rapidly enough to themselves conduct all the required financial audit work. It should be noted, however, that CPA firms are unlikely to learn to conduct high-quality performance work in the near future. On one recent occasion one of the Big 8 public accounting firms was considering hiring me as a consultant to prepare a brochure on performance auditing for the firm. The effort was finally aborted by a national partner who feared that "someone might read the brochure and actually believe that his firm could do performance audit work!"

And finally, Professor Herbert fears that if others "take over the newer fields of auditing, and financial statement auditing becomes less and less important, then what happens to the accounting and auditing profession?" I share Professor

Herbert's concern in this regard. "Others"—the evaluators, the analysts—are indeed trying to take over the new fields of auditing. This trend, however, is in large measure due to a lack of forward-looking leadership by the GAO, the American Accounting Association, the American Institute of Certified Public Accountants, and most others who have an important role and stake in this matter. Apparently they are too easily satisfied that these newer kinds of auditing are simply not auditing at all, and so do not want to be involved. And thus, policy and decision makers are looking outside the auditing profession for the conduct of modern audit work, and these groups generally do not have the all-important traditions and guidelines of auditing to see them through.

Our professional societies and related groups must begin to be more responsive and imaginative, and begin to bring such new techniques and developments into the well-established audit fold. A related issue today is the fact that there is less interest in financial auditing by decision makers at a time when this should not and need not be the case. Again, however, in my view much of the blame for this development must be directed to our professional leadership organizations, including the GAO. Through their attention—their research priorities and their decisions—these groups have failed to persuade public officials that financial auditing is important and, coupled with the newer forms of auditing, can indeed provide a valuable service to them and to the taxpayers of this country.

Footnotes

1. Frederick C. Mosher, *The GAO: The Quest for Accountability in American Government,* Westview Press, 1979, p. 103.

2. *Ibid.* p. 179.

3. Sar A. Levitan and Gregory Wurzburg, *Evaluating Federal Social Programs: An Uncertain Art,* The W. E. Upjohn Institute for Employment Research, September 1979.

2

Critical Requirements of a System of Internal Accounting Control

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This paper will review those requirements of a system of internal control which can be considered to be "critical." First, it will be important to define and clarify some terms, and establish a context for the discussion in the paper. The body of the paper will review a series of critical requirements, considering first the required *elements* of a system and then considering the required *characteristics* of a system. And finally, the paper will explore the possibility that leadership is the most critical element of any internal control system.

Definitions and Context

Before beginning an analysis of the critical requirements of a system, it is important to ask, "critical for what purpose?" In fact, that question can be asked in a number of ways: We can ask what requirements are critical for the preparation of accurate financial statements, intended for public reliance. Or we can ask what requirements are critical for the preservation and protection of the entity's assets. Or we can ask what requirements are critical to the development of operating and analytical data, necessary for the running of the business. A system that is designed to assure reliable operating data will function at a level of detail, and with such breadth as to assure the protection of assets, and the development of accurate, public financial statements. Because that is the broadest objective, that will be the context of this paper.

By establishing that broad objective, we will also be saying that we expect the system to control errors at a fairly low level of materiality. Because the system must provide accurate information for operating decisions, materiality will be measured against the cost of a wrong decision. Because decisions are ongoing, a wrong decision can have a multiplying effect, and the measure of materiality—the tolerance of the system—must be quite low. Conversely, if we had said that the objective of the system was to preserve the entity's assets, the standards of the system—the materiality of the losses it is designed to control—could be relatively easier. The assets of the entity may be quite valuable, but it is usually more effective to insure against the loss of an asset, rather than to design a system which will provide comprehensive protection against its loss. Or, if we had said that the objective of the system was to produce accurate financial statements for public consumption, the standards applied to the system—the measure of materiality required—might have been even less stringent. Published financial statements present a macro view of the entity, summarizing a host of individual transactions. If our objective was only to produce accurate published statements, it would be wasteful to establish a system which controlled to a level of materiality greater than that which would impact the statements themselves.

The fact that there might be different standards and different measures of materiality for different objectives of a system seems clear, upon reflection. Still, we stumble over the idea that published financial statements might not be subject to a first level system of controls. That anomaly is one cause of the continuing conflict over the SEC's proposal to require public reporting on internal control systems. Careful research into this materiality question would be helpful to all of those who work with systems, at the various levels—corporate executives, internal auditors, and external auditors.

Also, when we talk about a system of internal control, it is important to understand how the word "system" is used. For purposes of this discussion, the word "system" must mean all elements of the company which are directed to the gathering and presentation of operating and analytical data—the objective of the system which we described at the outset. Let us be clear that we mean all of the quantitative factors which are normally ascribed to a "system," including policies and procedures, or tests and checks. But also the "system" must be understood to include qualitative factors characteristic of the entity, including its ethical code and its business atmosphere.

Because this discussion is directed to a "system," it should be understood that the discussion is directed to an entity of some size. Typically, the smaller entities find it impossible or impractical to employ the usual quantitative elements of a system and so they must rely on the qualitative elements for their internal controls. The unique internal control problems of the smaller entities warrant an entirely separate discussion. The discussion in this paper will assume that the system we are analyzing operates in an entity of enough size to justify both quantitative and qualitative aspects.

The body of this paper will discuss the elements and the characteristics of a system as individual factors. In an analysis of the critical aspects of a system, it is necessary to review the system in pieces. However, it should be understood that the pieces do not operate individually, but function as a *system* of internal control. We will presume that all of the elements of the system work together in a coordinated way, with proper balance. Coordination and unification may be one of the most critical requirements of a system of internal control. But that requirement may be presumed in an analysis of the individual factors which make up the total, and the search for critical requirements must go deeper into the system's component parts.

The Critical Elements of a System of Internal Control

There are two ways to approach an inquiry into the critical requirements of a system of internal control. One approach is to ask what *elements* are required. And this next section will review the elements of a system which can be considered to be critical to the system overall.

Checks and Balances One of the most critical elements of a system of internal control is a requirement that no one individual has complete jurisdiction over an accounting transaction. Typically, we say that the cashier must not have access to the accounts receivable records, lest he be given the opportunity to kite remittances. But also, checks and balances are important in a broader sense. It is important that a second perspective be brought to all accounting entries, including those which might not have a direct cash effect. For example, monthly journal entries ought to be reviewed and approved by someone independent of the preparer. That independent check is important not because the preparer might be tempted to manipulate an entry for his own advantage, but because the preparer cannot be expected to independently challenge his own work.

In the same way that a system of checks and balances is critical for the system of internal control overall, a clear line of responsibility is critical for the successful operation of the checks and balances. It is of course important that the lines of responsibility within the entity be clearly understood and maintained. But more fundamentally, the responsibility lines must be challenged to be sure that they are logical and not just traditional. It has been traditional to have the internal audit department report directly to the entity's top financial officer. However, to preserve the effectiveness of the internal audit function as a corporate balance wheel, it is more logical to make the internal audit department responsible directly to the Audit Committee of the Board of Directors.

Policies and Procedures Written policies and procedures are critical to the success of the system because they establish a consistent response, determined in advance, apart from the heat of the moment. Comprehensive, written policies and procedures promote the efficiency of the system, of course. But more importantly, they reduce the possibility of an ad hoc response to a problem, and they therefore reduce the possibility of management override.

The accounts receivable control clerk knows that he is responsible to reconcile the details of the customer accounts with the receivable control account. Written procedures tell him where he is to find the reconciling data, and they also tell others in the organization that he is entitled to have that data. But to have real payoff, the policies and procedures describing his job must tell him what he is to do, and who he is to contact when he encounters unusual, or unreconcilable items. His instructions should be sufficiently specific so that he will not be dissuaded from a vigorous pursuit of problems he encounters in the reconciliation process.

The written policies and procedures should establish the parameters of the system. The written procedures must establish who is authorized to enter into or approve transactions. And the operating procedures must set the limits of those authorizations. For example, if the accounts payable clerk is to monitor the entity's disbursements—to be sure that the entity pays only for what it ordered—he must understand:

1. How large a commitment the purchasing agent is entitled to make;
2. How much of an overshipment, beyond the amount ordered by the purchasing agent, the disbursement agent is entitled to approve; and
3. What he must do with the transaction that exceeds those limits.

Incidentally, the disbursing/purchasing agent example here provides an illustration of the need for a logical reporting relationship, and an opportunity to depart from a traditional relationship. Traditionally, it might have been appropriate for the disbursing agent to review all overshipments with the purchasing agent, and abide by his approval of any excesses. However, a logical analysis of the transaction and the objective of the controls suggests that the disbursing agent ought to refer all excess shipments to the purchasing agent's superior—so as to preserve the integrity of the control which restricts the ability of the purchasing agent to commit the entity to transactions of a limited amount.

Capable People The system must be operated by people who have the skills to do their job. There are some obvious skills which anyone participating in a system of control must have—including the ability to deal with forms and with numbers. But those skills may be presumed, and are not at issue here. More importantly, the people who operate the various aspects of the system must have the ability to understand the implications of their findings. The credit and collection people must understand the system enough to know what it means when the receivables of a division begin to show serious past-due problems. They must understand that a pattern of past-due receivables may be indicative of an economic problem in that division's region. But they must also understand that it may be indicative of account manipulation.

In addition to having the ability to do their job, the people operating the system must have the time (and the other resources required) to do their job completely. Internal controls are most effective when they are exercised on a timely basis. The timely exercise of controls preserves the integrity of the system. And in some cases (particularly where the objective of the system is to assure accurate operating data) timely exercise of controls may be critical, in and of itself. For example, the unit which is responsible for the preparation of customer invoices must be adequately staffed such that they are able to promptly account for the numerical sequence of shipping documents. Where that control is a vital step in assuring that all of the goods shipped are billed, it must be exercised on a timely basis:

1. To assure that the customer is invoiced promptly so that the entity's cash flow is maintained,
2. To let the people in the shipping unit understand that their activities are subject to the oversight of an independent unit,
3. To assure that the records of finished goods, and the resultant production schedules are maintained accurately.

And finally, the people operating the system must have a sense of personal integrity. Personnel procedures should be designed to inquire into the background of individuals who are hired to run the system, and of course appropriate bonding contracts provide fall-back protection. To maintain that individual integrity, the overall system must be maintained. The environment of the system, the atmosphere of the entity, is the subject of the concluding section of this paper.

Oversight and Supervision All of the elements described above presume a hierarchical structure which supervises the operation of the system. That supervision must be both apparent and real. The supervisory hierarchy ought not to be involved in the day to day affairs of their supervised units, but they should be involved in the resolution of conflicts, and the follow-up on exceptions. To the extent that they do so, the involvement of the supervisory hierarchy in the system is real. But for the system to be effective on a long-term basis, that supervision must also be apparent. The supervision must follow up on exceptions promptly to keep the pipeline clean *and* to demonstrate the strength of the controls. Without that supervisory follow-up, the system soon appears to be weak, and eventually becomes weak.

A healthy system requires a balance between strong supervision and individual integrity. The individuals operating the system must understand that their operations are scrutinized: But they also must understand that there are limits to the authority of the supervision. They must feel confident of their position so that they can maintain their own integrity, and the integrity of the system. There is something about that individual confidence which is within the individual himself: But that individual confidence can be enhanced by a comprehensive set of policies and procedures which describes the individual's position, establishes his authority, and spells out the role (and the limits) of the supervisor.

The Critical Characteristics of a System of Internal Control

As noted earlier, there are two ways to approach an inquiry into the critical requirements of a system of internal control. The first approach, above, was to inquire into the *elements* of a system. A second approach is to ask what *characteristics* are required in a system.

A Cost/Benefit Relationship All controls have benefits, and of course every control has a cost. One of the characteristics of a properly designed system of internal controls is that the cost/benefit relationship has been thoroughly thought out, and the tradeoffs carefully evaluated. To make that evaluation, the system planners must identify all of the costs of the proposed controls, and all of the benefits as well. For example, a department store's credit experience would benefit from a control that required specific approval of every credit card transaction. However, the cost in customer frustration would likely exceed the benefits obtained. Therefore, most stores have established a floor limit, which allows the sales clerk to complete the sale without obtaining credit department approval so long as the transaction is below a designated dollar limit.

Often, there are different levels of benefits which accompany a control. There are the obvious benefits which inspired the control in the first place. But on a second level, the system as a whole may be enhanced by individual controls—the system as a whole may benefit from an atmosphere of control which flows from strengthened individual controls. And there may be benefits outside the entity, which will in turn benefit the entity. Stronger controls over purchasing (for instance, a requirement to obtain a number of bids for purchases beyond a certain amount) may benefit the entity's suppliers and in turn may benefit the entity. If the suppliers are freed from the possibility of paying gratuities to the entity's purchasing units, the supplier's prices may be lower and service more businesslike and straightforward.

The passage of the Foreign Corrupt Practices Act in 1978, introduced a new element to the cost/benefit analysis. The Act talks only about controls and benefits, but does not deal with costs. Many critics of the Act have said that it is impractical because it does not explicitly deal with the cost/benefit question. However, one of the Congressmen who sponsored the Act answered those challenges in the following way:

a. Congress understood the need for a cost/benefit relationship, and there was never any intention that an entity would have to control itself out of business. However, Congress was not prepared to legislate an analysis of a cost/benefit tradeoff. Instead, they felt that it was more appropriate to let that tradeoff be analyzed in the courts. That approach is traditional for Congress—they reason that laws cannot be totally precise, and ambiguities are to be settled on a case-by-case basis through the court system. Nonetheless, most business people are very uncomfortable with that traditional approach to a law which goes to the heart of their business. To the legislators it may be a traditional approach, but to the business people it appears cavalier.

b. The sponsor of the bill has also cautioned business people to consider all of the benefits when they make their cost/benefit analysis. He observed that an entity must of course consider the benefits which accrue to it directly and indirectly. But also he suggested that an entity must consider the benefits which accrue to society as a whole. He agreed that controls against bribery might not benefit an entity directly, and perhaps not even indirectly. However, he stated that Congress had concluded that society would benefit greatly from controls against bribery, and that the societal benefit ought to be included in each entity's cost/benefit equation. In the abstract, that notion is noble: In a specific situation, however, that idea makes a rational cost/benefit analysis almost impossible.

Specific and Anticipatory A system of internal control should not be designed in the abstract but in the specific. The system should not be designed to establish specific controls, but it should be designed to control specific potential errors. The designers of the system (and those who are asked to evaluate the system) must ask themselves, "What could go wrong, and what controls will prevent those errors from getting out of hand?" That analysis requires a thorough understanding of the entity's objectives and the transactions to be controlled.

The development of controls to deal with specific error types will of course proceed from experience. It will not be difficult to design controls to deal with errors that have occurred before. It takes more imagination to anticipate problems that could occur, given a little twist on history.

There are a number of tools which have proven to be helpful to this error/control analysis:

1. The analysis might begin by developing a series of control questions suitable to each of the entity's business systems. For the payroll cycle, the control questions might ask—What controls assure that payroll cost is properly classified? What controls assure that individuals are paid only for time worked? What controls assure that payroll records are accurate?
2. Often, the analysis is enhanced when the entity's data flow is flowcharted. Good flowcharting procedures identify potential conflicts of interest and control omissions.
3. The analysts should plan to spend a disproportionate amount of time and attention on the more exotic transactions. It is relatively easy to design a system which exercises control over purchasing of raw material. It is more difficult to design a system to control purchasing of fixed assets, because the transaction is usually one of a kind. It is even more difficult to design a system to control purchases of services, because of the intangible nature of the benefit received.

Implementability The system will be operated by people and the system's demands must not exceed their capabilities. Earlier, this paper argued that one of the critical elements of a system was that it be manned by capable people. To say that the system must be implementable is not to contradict that earlier requirement—nor is it redundant. Rather, to ask that the system be implementable is to ask that it be practical. For example:

1. The system should not ask the petty cash clerk to approve the President's travel expense report;
2. The system should not ask a clerk to obtain his supervisor's approval for transactions in excess of $500 if the average transaction is $400;
3. The system should not ask for the simultaneous participation of two people if manning tables provide for two people only during peak periods.

Leadership Is The Critical Requirement

All of the features of a system of internal control which we have discussed so far are important. However, the most critical requirement of any system is leadership. With appropriate leadership, the most rudimentary of systems can function effectively. Without control-conscious leadership, the most tightly drawn system will fail.

The leaders of the entity can affect the system in many ways. Most obviously, they affect the system in the way they allocate resources. Control systems cost money, and use valuable people. Even where a careful cost/benefit analysis apparently justifies a control, the leadership of the entity may be hesitant. They may be reluctant to commit the resources because the payout is immediate while the benefit appears to be a longer term thing. Or they may be tempted to put their money where the return is more tangible. But, there is no free lunch; an under-resourced control system carries a sure cost which must ultimately be paid. The investment in controls requires an element of vision and a sense of perspective.

Also, the leaders of the entity affect the system in the way that they operate it. By definition, the leaders of the entity are in a position to make the system work or fail. Where the system calls for a cross check, or a follow-up, the leaders of the entity must allocate their attention to those duties. Careful attention to the control system by the subordinates will be for naught if the leadership fails to diligently play their role.

Ultimately, the leadership of the company affects the control system most by the tone they set for the entity. An Audit Committee, or a Board of Directors who tolerate unethical conduct in a corporate officer is inviting unethical conduct from other officers and employees as well. An officer of an entity who winks at his own system is inviting his associates to do the same. Control is an attitude, and establishing an entity's attitudes is a prime responsibility of leadership.

Discussant's Response to Critical Requirements of a System of Internal Accounting Control

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The first time I met Bob Sack was as a participant in the 1976 Trueblood Seminar that I attended. Bob led many of the case discussions we had, and I was impressed with his forthrightness and succinct comments. Many of you have probably had similar experiences with Bob. It was not surprising, therefore, to find Bob's paper also very succinct. So succinct at times, that the transition seemed to be missing between sections. For example, in the first part of the paper, Bob stresses that there are three levels at which one can address the subject of controls: (1) accurate financial statements, (2) protection of assets, and (3) development of operating and analytical data. He seems to argue that any controls at the third level would encompass any controls at the two higher levels, and that at the third level, a lower level of materiality would be required than would be true of the other two levels. He then selects the third level for his paper, but the body of the paper never touches this point again, either to substantiate the claim of all-inclusiveness, or to indicate how his critical requirements would have differed if a higher level of objectives had been selected. I found that one must read carefully to capture all the nuances Bob is implying. In fact, filling in between the lines is somewhat risky, for one is never sure if he is filling them in the way Bob would do it. On the other hand, on a topic like internal control, I, as a discussant, must admit that brevity and succinctness is a quality to be admired.

After receiving Bob's paper last week, I read through it and then decided I should do a little catching up myself on the internal control literature of the past few months, both from official sources and otherwise. I have found it increasingly difficult to keep up on accounting developments to use in the intermediate accounting text I am involved with and also keep current in auditing literature. Reading material in either one by itself is a full job. Thus, some of the incoming auditing material had been filed in that proverbial drawer marked "To Be Read Later." "Later" arrived, and I went through the pile and identified the many pamphlets, articles, research reports, exposure drafts, and statements issued on the general topic of internal control. The FCPA has triggered a flurry of activity by almost everybody even tangentially related to accounting in the general topic of internal control. Just a comment on the inevitable move to alphabetical identifiers. FCPA sounds like some special type of CPA. Perhaps it is fitting to have accountants increasingly involved in an act that almost bears the name of the profession.

Most of the publications I scanned were prepared by national CPA firms and were directed to management in an attempt to help them meet their newly defined responsibility concerning maintaining an adequate internal control system to safeguard assets and maintain meaningful and accurate records. Some were addressed to CPA's and dealt with the auditor's role in assuring readers of the adequacy of the internal control system. Almost all of the articles referred somewhere to the FCPA, and discussed how it was going to affect the auditor's role in evaluating and reporting on internal control. Few of them discussed criteria for evaluating a control system. Generally, the material merely observed that standards were lacking and that the profession was addressing the problem.

Turning back to Bob's paper, it became more clear that he was trying to set up a framework for such criteria. He calls them critical requirements that a system must have. By critical, I assume he means that no internal control system can be evaluated as ''good'' or ''adequate'' without these ingredients. These requirements are then separated by Bob into two parts—elements and characteristics—plus one super element that overrides all the rest. This division confuses me. I have looked in vain in the paper for a definitional distinction between the terms, but I found none. In fact, it took some careful review to see what Bob had identified as elements and characteristics. The list is as follows:

Critical Elements of a System of Internal Control
1. Checks and balances
2. Policies and procedures
3. Capable people
4. Oversight and supervision.

Critical Characteristics of a System of Internal Control
1. A cost/benefit relationship
2. Specific and anticipatory
3. Implementability

Overriding Element
1. Leadership

Webster defines an element as a constituent part; one of the factors determining the outcome of a process. A characteristic is defined as a distinguishing trait, quality, or property. As I reread the paper, I found myself asking, ''Is this item really an element or a characteristic?'' For example, ''capable people'' could be considered an essential element of the control system, but it also represents a quality that must exist in all parts of the system. As a further level of capable people, Bob has identified ''leadership'' ability and attitude as an overriding element.

As indicated earlier, much of the recent literature has emphasized the objectives a system should have and hasn't addressed the question of what criteria is needed for a good system. One classification of accountants interested in establishing criteria is the auditing textbook writer. A review of recently published textbooks on my book shelves revealed a great diversity, both in terminology and content, in lists prepared of internal control essential requirements. The summary chart in the Appendix illustrates the problem. In some cases, I had to stretch the concept to fit a given category. The sources are listed across the top with criteria down the side. I used criteria because no one else did. Details of the sources are also included in the Appendix.

Several observations could be made based on my somewhat limited survey of textbooks. I hope I didn't miss someone's favorite text.

First, there really are no accepted terms that are emerging as descriptive of the criteria. Elements, characteristics, conditions, features, principles, factors—all of them are used interchangeably in the current texts.

Second, I found no one that included in their lists two different levels of criteria such as Bob developed. In fact, no one included in their lists cost/benefit analysis, although somewhere in the discussion, the trade-off between costs and benefits was included. None of the other sources included implementability, perhaps because it was taken for granted that any system had to be implementable.

Third, most discussions were very brief and broad in scope. The one notable exception was Rod Anderson's taxonomical treatment. I have reproduced the topical outline of the seven control elements he defines with his subdivisions of those elements that he includes in Chapter 7 of his exciting two-volume text. (See Appendix.) I want to revisit that chapter when I have more time to digest all that Rod has to offer.

Fourth, although the broad objectives of the FCPA called for a periodic reconciliation of the assets and the records, only two textbooks included this concept as a specific item in their lists. The concept was not identified in Bob's paper. Another objective included in the FCPA and included in almost all of the lists except Bob's was physical control over assets and records, or the safeguarding of assets. I'm really not sure how Bob looks at this area. As I indicated earlier, he listed this ingredient as a possible objective of an internal control system, accepted a lower objective, and indicated that maybe it was cheaper to insure against asset loss than to provide a system to protect the asset. I'm sure the cost of insurance would rise if there was no system to protect the asset.

Fifth, almost all of the criteria in the lists were static in nature. They emphasized the elements that should be present in a system at a point in time. I only found one of the sources that discussed the need to provide for continuous development of the system as conditions change. The Minihan report issued in 1979 by the AICPA identified this characteristic as "monitoring," their last phase of a three phase approach. I didn't see any reference to this element in Bob's paper, but I consider it to be a critical requirement for any internal control system. Perhaps a good term to describe this criterion would be "adaptability." The system must be established to be sensitive to changed conditions. I had personal experience with this in my one "missing asset" audit experience while in public accounting. It involved a country club in Southern California. There had been no control problems year in and year out, and then the environment changed. An essentially cash-oriented club permitted members to charge their accounts. Within six months, the entire control system had disintegrated. Cash was unaccounted for, and the records were in shambles. There was no procedure for monitoring the system and adapting it to the changed conditions. I would consider this to be a critical requirement, feature, element, characteristic or whatever in any system.

After making this brief survey, I am convinced we need a conceptual framework for internal control systems. I do not think Bob's list is complete nor always mutually exclusive in coverage. But neither were any of the others I looked at. A standardization of terms and professional agreement as to the level of objectives, the degree of materiality required, and the critical requirements of the control system are needed. I did not see this developed in the Minihan report. Before auditors can be expected to evaluate internal control systems, there must be more agreement as to what constitutes an acceptable system.

Enough of these comments on the overview of Bob's paper. Let me say a few things about some of Bob's specific comments on individual elements and characteristics. In the discussion of "capable people" and later in discussing "leadership," Bob emphasizes the importance of basic integrity in the leaders and members of the organization. While no one would argue that such an ingredient is not desirable, it becomes a very difficult element to obtain or evaluate. We will be having presentations tomorrow on the subject of management fraud. As Steve Albrecht and Marshall Romney have emphasized in their study, part of the problem creating the increase in fraudulent acts is the environment within which business operates. With a constant erosion of personal integrity evidenced in government and business activities, it is easy for people in the system to rationalize their failure to observe the system or even to overtly circumvent it. Control systems are designed to prevent and/or detect honest mistakes and intentional mistakes. If the basic integrity of personnel were unquestionable, the system would only have to be concerned with honest mistakes and, because of this, could be less complex and specifically directed to just this area. However, because no one has designed a successful measuring device for personal integrity, we can never know objectively how the people in a system rate as to personal integrity. It seems that the system, therefore, must assume a level of integrity equal to the average integrity of society at the time, and thus systems must establish controls more extensive than might be the case in a more perfect world.

This, of course, leads naturally to the cost/benefit relationship. The FCPA stresses that the controls should provide "reasonable assurance." As Bob points out there is no mention of cost in the bill, but at least one U.S. Congressman who is not identified in the paper has verified that the cost/benefit trade-off was considered but then left to the courts to evaluate. To me, that seems like an extremely inefficient way to deal with this basic issue. Not only is using the court system expensive for all parties, but it is time consuming and does not always lead to a workable and fair conclusion.

The quotation Bob included from the sponsor of the bill seems to imply that any cost is justifiable because of the overall societal benefit which, though not measurable, is always felt to be large.

We have still had very little solid research in the area of cost/benefit analysis. The same type of analysis is needed by auditors when they must decide between compliance and substantive audit tests and select that set of procedures that leads to a solution of minimum costs with maximum assurance. I personally do not think societal benefits can be brought into either analysis. An auditor must evaluate long-term benefits to his firm that operates in a free enterprise system and so must a company in evaluating its control system. Not only is there a benefit from avoiding loss by safeguarding assets, but there is a benefit competitively by establishing an image of integrity and orderliness that well-oiled systems can generate to employees, customers, suppliers, and the government. No one can produce numbers to place on this benefit but management itself.

In their several volume work on internal controls, Price Waterhouse recognizes the difficulty of measuring the cost and benefits in the following statement:

> Cost-benefit analysis for internal accounting control is an emerging practice that will evolve as experience is gained through implementation. Cost-

benefit analysis should not be ignored simply because it is practically difficult, nor simply because it is not yet well defined.[1]

They go on to discuss a practical approach to the problem, and this seems to be a type of analysis which must be done to reach more desirable conclusions in this area. I don't think Bob gives too much help in carrying out this need. He primarily argues that it should be a consideration, and again, I cannot disagree.

A third specific area that I would like to comment on is the error analysis approach to internal control review that Bob introduces under the heading, "specific and anticipatory." I'm not sure if that title really captures what Bob is saying. Two basic approaches to dealing specifically with internal control analysis seem to be developing. One relates to establishing control objectives and evaluates the system against the objectives. This approach, for example, is used by Arthur Andersen & Co. in their booklet on internal controls. They divide five processing cycles into 117 objectives for analysis. The recently issued SAS exposure draft, "Financial Statement Assertions, Related Audit Objectives, and the Design of Substantive Tests" suggests this approach as being preferable. Another approach to the analysis is to focus on the specific errors that could occur in any system and to evaluate the controls that are in place to prevent or detect these errors. This approach focuses on the mirror image of the objective. Perhaps the major advantage of the error analysis approach is its specificity. For example, a common internal control objective is "Each authorized order should be accurately shipped on a timely basis." Restating this from an error analysis approach, the following specific errors could be identified and analyzed.

I. Goods shipped differed from goods ordered.
   A. Goods ordered but never shipped.
   B. Goods shipped but never ordered.
   C. Goods shipped but in a different quantity or different quality from that ordered.

II. Wrong time period credited for the sale.
   A. Goods invoiced in one period, but shipped in a subsequent period.
   B. Goods shipped in one period, but invoiced in subsequent period.

In my research project with Peat, Marwick, Mitchell & Co., I attempted to establish criteria to determine what substantive audit procedures are required, regardless of the circumstances, and which ones can be deleted if accounting controls are found to be sufficient. I found conceptually the task much easier to pursue when I analyzed specific error types than when I tried to analyze this problem from an objectives approach. At least two national firms are approaching their analysis in the way Bob suggests: his own, Touche Ross and Co., and Deloitte, Haskins and Sells. It was also discussed by Loebbecke and Zuber in the February 1980 **Journal of Accounting** article, "Evaluating Internal Control." I believe it is an area that deserves much more attention and evaluation than it has received.

There are many other items that I could comment on, many again that are found between Bob's lines. He has touched on many topics that are germane to this field. I would, however, like to conclude my remarks by commenting on the oversight element. I make a plea from an educator for the profession to cease its negative posture on accepting added responsibility for evaluation of a client's internal control system and, in the place of these efforts, more actively pursue the development of the critical requirements against which any control system can be evaluated. There are many subjective elements to internal control evaluation, but so are there in the evaluation that leads to audit opinion. Why must the profession always be pulled protesting into the lights of a new arena? Why can't we for once be ahead of the SEC and Congress in cleaning our houses or accepting responsibility that only we can best meet?

I was personally pleased when the Cohen Commission on Auditor's Responsibilities concluded:

> A major step in implementing the commission's proposed evaluation, which should be adopted as soon as possible, would require the auditor to expand his study and evaluation of the controls over the accounting system to form a conclusion as to the functioning of the internal accounting system.[2]

Since this recommendation was made, I have been discouraged by the professional accountants who have spent much of their effort trying to prove that this major step is neither possible nor desirable. Typifying this negative approach to this vital issue was an article that appeared in the May issue of the **CPA Journal.** A partner of a national CPA firm concluded the article by saying:

> The passage of the Foreign Corrupt Practices Act has added to the increasingly heavy burden that practitioners and corporations have to bear. It should not become the basis for imposing additional impractical requirements, however well-intended.[3]

The requirement referred to was the proposed reporting on internal control still under SEC study. I think our profession is capable of establishing the critical requirements for a system of internal controls and of adding an independent evaluation on top of management's oversight and evaluation. The currently outstanding exposure draft "Reporting on Internal Accounting Control" is a step in the right direction. I think the SEC's proposed requirement, by-and-large, is a reasonable request. I do feel badly that the request must always come initially from outside the profession and result in a law that forces action in a legal environment.

Footnotes

1. Guide to Accounting Controls, "Establishing, Evaluating, and Monitoring Control Systems," #1, (New York: Price Waterhouse & Co., 1979), p. 26.
2. *The Commission on Auditor's Responsibilities: Report, Conclusions, and Recommendations,*" (New York: The Commission on Auditor's Responsibilities), p. 60.
3. Chazon, Charles, "An Accountant Looks at the FCPA," *CPA Journal,* May 1980, p. 45.

APPENDIX
SURVEY OF ESSENTIAL CRITERIA OF INTERNAL CONTROL SYSTEMS

	Source												
Essential Criterion	Sack	TRAP	SAS 320	FCPA	Anderson	A & L	Bailey	Herman-son	Kell	Meigs	Robertson	Stettler	Taylor
1. Checks and Balances (Segregation of Duties Organizational Plan)	X	X	X		X	X	X	X	X	XX	X	X	X
2. Policies and Procedures (Authorization Policies)	X	XX	XX	X	X	X	XX	X	XX		XX	X	X
3. Capable People	X	X	X		X	X	X	X		X	X	XX	X
4. Oversight and Supervision (Independent review, Internal Audit	X	X			X	X	XX	X	X	X			
5. Cost/Benefit Relationship	X												
6. Specific and Anticipatory (Potential error analysis)	X										X		
7. Implementability	X												
8. Documentation		X			X	X			X				
9. Physical control over Assets and Records. (Limited Access to Assets)		X	X	X	X	X		X	X				X
10. Reconciliation of Assets and Records			X	X	X								X
11. Procedure for Updating and Developing System					X								
12. Recording in Accordance with GAAP				X	X								X
13. Terms used for criteria													
a. Elements	4				7+	6 or	6						
b. Characteristics	3		6			6					5	4	6
c. Features									6				
d. Factors		*		**				5		4			
e. Other	*Conditions 7 **Objectives 4												

See p. 39 for Sources

Source Reference

Sack	Sack, Robert J., ''Critical Requirements of a System of Internal Accounting Control, Auditing Symposium V, University of Kansas, 1980
TRAP	*The Touche Ross Audit Process Manual,* August 1978, pp. 75-77
SAS 320	*Statements on Auditing Standards,* SAS 320.35-48
FCPA	*Foreign Corrupt Practices Act.*
Anderson	Anderson, R. J. *The External Audit 1,* (Toronto: Copp Clark Pitman, 1977), Ch. 7
A & L	Arens, Alvin A. and James K. Loebbecke, *Auditing, An Integrated Approach,* 2nd ed. (Englewood Cliffs: Prentice-Hall, Inc., 1980) p. 217.
Bailey	Bailey, Larry P, *Contemporary Auditing,* (New York: Harper & Row, 1979), p. 179.
Hermanson	Hermanson, Roger H., Stephen E. Locb, John M. Saada, Robert H. Strawser, Revised *Auditing Theory and Practice,* (Homewood: Richard D. Irwin, Inc., 1980) p. 164
Kell	Kell, Walter G. and Richard E. Ziegler, *Modern Auditing,* (Boston: Warren, Gorham and Lamont, 1980), p. 115
Meigs	Meigs, Walter B., E. John Larsen, Robert F. Meigs, *Principles of Auditing,* Sixth ed. (Homewood: Richard D. Irwin, Inc., 1977) p. 143
Robertson	Robertson, Jack C., *Auditing,* Revised ed. (Dallas: Business Publications, Inc., 1979) p. 191.
Stettler	Stettler, Howard F., *Auditing Principles,* 4th ed. (Englewood Cliffs: Prentice-Hall, Inc., 1977), p. 56.
Taylor	Taylor, Donald H. and G. William Glezen, Auditing, Integrated Concepts and Procedures, (New York: John Wiley & Sons, Inc., 1979), pp. 164-65.

ELEMENTS OF INTERNAL CONTROL
Rodney J. Anderson

I. Organizational Controls
   A. Honest and competent personnel
   B. Segregation of functions
   C. Overall plan of organization
   D. Accounting/finance plan
II. Systems Development Controls
III. Authorization and Reporting Controls
   A. General authorization, specific authorization, and approvals
   B. Budgets, responsibility reporting, management information system
IV. Accounting Systems Controls
   A. Ensuring that the transactions are initially recorded
   B. General ledger and chart of accounts
   C. Journals, sub-ledgers, balancing routines
   D. Document design
   E. Cost accounting
V. Additional Safeguarding Controls
   A. Restricted access
   B. Periodic count and comparison
   C. Protection of records
   D. Insurance
VI. Management Supervisory Controls
VII. Documentation Controls

Source: Anderson, R.J., *The External Audit, Volume 1, Concepts and Techniques,* (Toronto: Copp, Clark Pitman, 1977), p. 142.

3

A Taxonomization of Internal Controls and Errors for Audit Research

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The Foreign Corrupt Practices Act (FCPA) of 1977 and the advent of increased electronic data processing in organizations have focused increased attention on management's responsibility to establish and maintain adequate systems of internal accounting controls.

The Act requires organizations to maintain a system of internal accounting controls to provide reasonable assurances that

—transactions are authorized
—transactions are recorded to
  a) permit preparation of financial statements
  b) maintain accountability for assets
—access to assets is restricted
—assets are accounted for

These requirements are similar in nature to the definition of accounting control codified in SAS#1 (AICPA, 1973).

The advent of widespread use of electronic data processing led to changes in the nature of accounting controls prompting increased scrutiny and further formalization. Manual systems had allowed for informal controls of a pattern recognition nature by human information processors. Special emphasis was given to the examination of processing consistency and supervision. Automated systems partially changed the nature of control systems. The emphasis now is on system design and integrity as consistency is substantially assured.

These two major developments led to a series of procedural reactions by major CPA firms (e.g. Arthur Andersen & Co., 1978; Deloitte, Haskins & Sells, 1979; Peat, Marwick, Mitchell & Co., 1978), to statements of position and proposed rules by the AICPA and other standard setting bodies (e.g. AICPA, 1979; SEC, 1979), and to the renewed interest of the academic accounting profession in the theoretical issues surrounding internal accounting controls.

Among the expressions of interest by the academic profession is the research

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proposal by the author (Vasarhelyi and Ginzberg, 1978) which suggests a set of experiments for the measurement of internal controls. This project is composed of eight steps, the first two of which examine the literature and construct schemae for classifying types of internal controls and errors. These two steps are discussed in this paper. The remaining steps will encompass a more complete analytical formulation of the categories specified in the schemae of this paper, and the development and utilization of typical but simplified cases in both computer and behavioral laboratory simulations for internal control evaluation purposes. Yet these subsequent steps first require the taxonomic specification criteria developed in the next section.

Definitions, Criteria, and Objectives

Cushing (1974) attempted, as one of his objectives, "to describe a means of representing internal control in mathematical terms," showing the usefulness of this approach and pointing out "implications of this approach for future research" (p.24).

Cushing's emphasis was on the utilization of reliability theory for the evaluation of internal control procedures. Bodnar (1975) expanded Cushing's work by incorporating the problems of human reliability in a chain of controls (Meister, 1971) and the issues relating to control redundancy (serial vs. parallel components) and complementarity. Bodnar also raised, but did not satisfactorily resolve, the issues surrounding the validity of simple multiplicative probability models and the statistical independence of multiple controls and errors. Carmichael (1970, p. 238) is mentioned as asserting that "an assumption of independence is necessary in internal control because of the commonly expressed opinion that an internal control system collapses with collusion" (Bodnar, p. 753). A third issue that may be raised concerning Cushing's approach is that it does not discriminate between different types of controls and errors.

We shall start with Cushing's formulation and notation but will not use reliability theory in our development. Cushing's basic statements and presentation are of great value as foundations for the work here presented. It is necessary, however, to define a few basic concepts to place the internal control problem in context.

Churchman (1968) points out five basic considerations to be kept in mind while thinking about a system: 1) Objectives, 2) Environment, 3) Resources, 4) Components, and 5) Management. The business organization's objectives are to be met by its management utilizing efficiently the organization's components and resources within its corporate environment.

The business organization is the macro-system where internal controls are located. Internal controls are sub-systems within it. These sub-systems may be considered as a whole, or in part with different resulting environmental boundaries, system interactions and available components.

> "Control is a function through which the executive is able to identify change, discover its causes, and provide decisive action in order to maintain a state of equilibrium . . ." (Strong & Smith, 1968, pp. 2-3).

It is necessary to identify the mechanisms through which organizations exert controls.

"An internal control procedure (ICP) is a single control measure, such as the checking of a control total" (Cushing, 1974, p.25).

We shall differ slightly from Cushing by defining: An *internal control cluster* (ICC) consists of one or more internal control procedures related to one or more types of error or activity, while an *internal control system* (ICS) is a set of ICCs that constitute a particular cycle of the business organization.

Figure 1 displays the five dimensions of the internal control process within the organization. The cycles of a business entity are simply subsystems of the ICS as defined by the auditor. The department or function is another type of component to be set in the systems design stage. Finally, numerous types of ICPs and errors can be found in the literature with a varied array of features. These ICPs or errors must be classified on the basis of similar nature into a more restrictive set of categories if they are to be adequately represented in analytic formulations.

Figure 1

EXAMPLES OF THE
FIVE DIMENSIONS OF THE INTERNAL CONTROL PROCESS

Cycles	Objectives	Department or Function	Internal Control Procedures	Types of Errors or Irregularities
I. Treasury II. Purchasing III. Payroll IV. Conversion V. Revenue VI. Financial Reporting	A. Authorization B. Accounting B1) Transaction Processing B2) Classification B3) Substantiation C. Safeguarding	1. Order Entry 2. Shipping 3. Billing 4. Credit & Collection 5. Maintenance of Receivables Records Etc.	a) Segregation of duties b) Physical assets restriction c) Direct Supervision d) Indirect Supervision e) Periodic Compliance Audit f) Backups g) Insurance & Fidelity Bonds h) Safes, etc. i) Batch Totals j) Controlled Custody k) Prenumbering l) Accounting for Prenumbering m) Physical Counts n) Organizational Charts o) Job Descriptions Etc.	i. Lack of Approval ii. Bad Total iii. Incorrect Posting iv. Incorrect Amount v. Unauthorized Adjustment vi. Missing Transaction vii. Duplicate Transaction viii. Missing Assets Etc.

In order to further clarify issues relating to ICPs and their features we shall use Cushing's (1974) multiple-control multiple-error case to introduce a general formulation of the problem (see Figure 2).

The formulations in Figure 2 may be expanded by assuming an infinite population E of potential errors that may exist in a system.

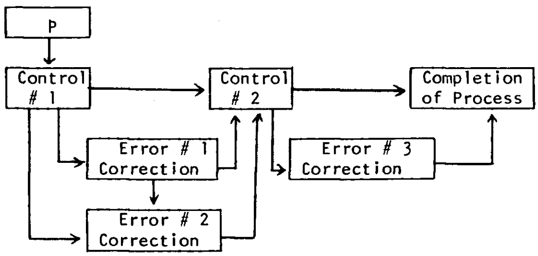
An error may be defined as a discrepancy between the empirical relational system (ERS) (containing all transactions, economic entities, and levels within the system) and its numerical relational system (NRS) (representing the measurements of these entities made within a framework of measurement rules). When there is a discrepancy between the "real" value of an entity within the ERS and its measured value in the NRS under the established rules of measurement and coding (in this case GAAP) an error is said to exist.

The population E of potential errors is infinite, reflecting the fact that any measurement of the value of an entity may be incorrectly stated with an infinite number of variations. Despite this set being infinite, in practice internal control systems are developed considering three main aspects: (1) designer's (or management's) perception of exposures due to errors, (2) corporate experience with er-

Figure 2

Cushing's Generalized Control Case

C: Multiple Control - Multiple Error Case



$$R_i^j = R_i^{j-1} \; P(s_{ij}) + R_i^{j-1} \; (1-P(s_{ij})) \; P(d_{ij}) + (1-R_i^{j-1}) \; P(e_{ij}) \; P(c_{ij})$$

where: R_i^j = Reliability of the system with respect to the i^{th} error at the completion of the j^{th} control step

$P(e_{ij})$ = Probability that the control step j will not signal an error i given that none exists

$P(c_{ij})$ = The probability that the correction step j will correct an error i given that one exists and has been signaled

$P(d_{ij})$ = The probability that a failure of the control step j will be detected and no correction made given that the control signals an error i when none exists

$$R = (R_1^r) \; (R_2^r) \; \ldots \; (R_n^r)$$

R = Overall system reliability (probability that no errors of any kind are present subsequent to the last control step)

n = number of different error types possible in the system

rors and irregularities, and (3) the cost/benefits of internal controls.

However, not *all* errors and irregularities can be predicted by the designers. With the passage of time new errors are experienced and new controls will have to be enacted. Therefore the set of errors that a particular ICS may attempt to cover is E' (a subset of E).

This population of errors can be represented by a vector E' ($e_1, e_2, \ldots e_n$) where each e is a particular type of error which may assume different magnitudes and characteristics. This vector has a definable length commensurate with the designer's perception of potential errors within any group of designed controls, but still a subset of vector E.

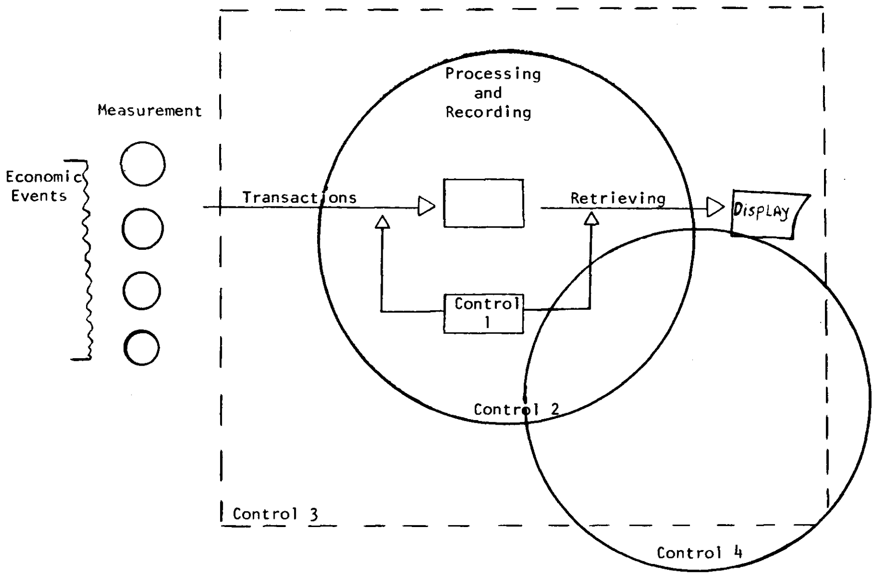
The same reasoning can be extended to ICSs. An ICS is composed of ICCs which may or may not be the "cycles" as defined by the auditors. ICCs are composed of ICPs. Therefore we have a global population C of potential controls, of which the population C' is formally implemented. C' can be represented as a vector C' ($C_1, C_2, \ldots C_n$) of the types of internal control procedures used within the

ICS. Each of these types of ICPs may assume a value (if ordinal, interval or ratio) or a nature (if nominal) within an ICC. As internal control procedures are mainly nominal in measurement nature the element C_n (say separation of duties) may assume different values (for example at different levels of the organization). Therefore C' can be represented as C'(Cij, . . .) where j represents the different values for ICP Ci.

The question that follows concerns the relationship between controls and errors, both at general and specific levels. In general Figure 3 can represent a control phenomenon:

FIGURE 3

A Control Phenomenon



In order to clarify, let us suppose that control 1 is a system of batch totals, control 2 is separation of duties, control 3 encompasses a good organizational chart and careful job descriptions, while control 4 is supervision. Controls 2 and 3 will be effective against collusion and control 1 ineffective in this dimension. On the other hand in the case of errors in amounts, or bad client numbers, or incorrect posting to accounts, control 1 may prove effective while others are ineffectual. Using this example as a base and considering the assertions in some of the scholarly literature, [for example, (Cushing, (1974,1975); Bodnar, (1975); Toba (1975)], the following assertions may be made:

Each control will have a potentially different effect upon each type of error.

Cushing states: "... the probabilities pertaining to the control procedure and to the error correction procedure should be unique for each control procedure."

Each transaction will be controlled by different sets of controls and may generate a multiplicity of errors of identical and/or different types.

Each cluster of controls may have different effects upon different errors.

The finer the focus of a control upon a particular error type the more likely it is to be ineffectual in relation to other errors.

The combination of controls may have additive, counteractive, multiplicative and neutral effects upon particular error types.

Bodnar (1975) criticizes Cushing's multiplicative probability modeling and shows differences in the effects of parallel and serial controls. The problem is still rather simple if it can be represented in these terms. The difficulty lies in dealing with the lack of independence between controls and between errors (collusion) as well as in defining the configural relationships between controls.

In consequence the relationships between controls and error types should be represented in two types of matrices. The first would relate each type of ICP to each type of error. The second would relate internal control clusters and types of errors. The entries in the matrix may be expressed as the probabilities of an error of the particular type being detected. These matrices are represented in Figure 4.

Figure 4

Illustration of
Control & Error Interrelationships

		Error Type 1	Error Type 2	Error Type 3	.....
	ICP 1*				
ICC 1	ICP 2				
	ICP 3*				
ICC 2	ICP 4				
	ICP 5				
	ICP N*				

* These controls are part of ICC n

Figure 1 represented the five dimensions of the internal control process. Any combination of its elements (e.g. II.A.3.a.iv) may describe a type of internal control and error. The limited number of categories considered already allows for 18000 (6x5x5x15x8). The consideration of ICCs versus ICPs, described while discussing Figure 4 above, further expands the number of alternatives that may be considered. Methodologies are necessary for the evaluation of clusters as well as of the independent effect of an individual control upon a given error type.

Ciearly some combinations are nonsensical, others may make sense but are not currently implemented and finally a few are currently in use. This leads to the conclusion that comprehensive formulations are infeasible and that analysts should pursue two main routes:

(1) use of a building block type of approach for simplifying their analyses and

(2) construction of taxonomies of internal controls and errors that will summarize and add parsimony to the number of possible combinations.

This study addresses the second of these routes.

Some Existing Classifications

Arthur Andersen & Co. (1978) divides controls into preventive and detective controls. Cushing (1975) uses three categories: structural, feedforward and feedback. Mair, Wood and Davis (1976) divide controls into: preventive, detective and corrective controls.

We would define *preventive* controls as those that reduce the probability of an error (or irregularity) occurring.

A *detective* control reduces the actual frequency of errors in the system.

A *corrective* control changes the nature of the probability distribution in the discrepancies between the ERS and the NRS.

Other classifications also cited by Mair, Wood and Davis (1976) include logical vs. technical controls or vertical vs. horizontal controls.

SAS #3 divides controls into: general and application controls. The first relate to all EDP activities while the latter refer to specific accounting tasks. Within general controls one would include six general classifications: (1) Organization, (2) Operations, (3) Documentation, (4) System development and programming, (5) Hardware and systems software, and (6) Access and library. Application controls are, on the other hand, divided into: (1) Input controls, (2) Processing controls and (3) Output controls.

SAS #1 states that the "... essential characteristics of internal accounting controls include: "(AICPA, 1973, Secs. 320.30 and 320.35-.48)

Personnel
Segregation of functions
Execution of transactions
Access to assets
Comparison of recorded accountability with assets

Recent internal studies at Peat, Marwick and Mitchell have proposed the classification of controls into six categories:

1) Authorizations
2) Validity
3) Population
4) Transfer
5) Process
6) Segregation

Additional classifications may be found in the literature relating to internal controls. On the other hand, classifications of types of errors are somewhat less frequent in the literature. Touche Ross and Co. (1979) classifies control weaknesses and resultant risks into four categories:

1) A flaw that will always result in error
2) A flaw that has produced occasional error
3) A probable flaw signaled by skewed analytical results
4) Universal and improbable flaws (p. 15)

Yu and Neter (1973) classify errors into two categories: monetary and non-monetary. Each ICS is classified by whether it has one of these two errors. ICSs range from s1 = (0,0) (no errors of any type) to s4 = (1,1) indicating the presence of both monetary and nonmonetary errors.

In order to simplify the difficult task of providing an evaluation, which compares each type of ICP combination to every other type of ICP combination and to ICCs, and then of relating this evaluation to all error types, we shall next attempt to provide summary taxonomies of controls and errors. We shall aim to develop classifications that allow:

1. Development of a matrix of ICP combinations
2. Development of a matrix relating ICC classes to error classes
3. Development of control combination rules for evaluating the impact of combinations of controls
4. Usage of analytical representation
5. Usage of a common measurement method for evaluation

And we shall also try to:

6. Devise precise, mutually exclusive classifications
7. Develop a comprehensive set of classifications

This paper is restricted to logical and conjectural developments in objectives 1 thru 5 since their quantification requires the experimental and analytical work to be pursued in the later stages of this research (Vasarhelyi and Ginzberg, 1978).

Two Taxonomies of Controls

The control and error taxonomies were developed through successive element listings followed by successive iterations attempting to improve the classification schema. Elements were drawn mainly from professional publications (e.g. Touche Ross and Co., 1978) while starting schemae were based on some of the classifications discussed in the previous section.

The Peat, Marwick and Mitchell classification was modified into an 8 class framework, one of which divided into four subclasses. These classes and subclasses are:

1. Authorizations
2. Validity Controls
3. Population and Transfer Controls
4. Process Controls
5. Coverage Controls
   a. Segregation
   b. Supervision
   c. Rules and Procedures
   d. Insurance

6. Access Controls
7. Audit (ex-post facto) Controls
8. Compliance with GAAP Controls

A distinction was made between internal accounting controls and exclusively management oriented controls. The first were considered to be directly related to the types of controls mentioned in the FCPA while the second were mainly oriented towards quality and efficiency issues. These management controls were excluded from the study.

Authorization Controls prevent the occurrence of exchanges, allocations, or valuations not in accordance with company policy (e.g. a credit check may be required before a sale is completed).

Processing Controls ensure accuracy when data has changed form through aggregation or disaggregation, content through processing, or mode of presentation through different formats of presentation and timing (e.g. calculation of depreciation controls, footing, etc.)

Coverage Controls are generic in nature, applicable to one particular process or set of transactions.

Segregation of Duties ensures that certain activities or responsibilities are assigned to separate individuals. It implies the need for collusion to override controls as well as the application of sequential controls on tasks.

1. Custody *vs* recordkeeping for an asset
2. Activity *vs* control over that activity (sales/credit approval)
3. Interrelated activities (credit/approval/bad debt writeoffs)

Supervision Controls refer to the supervision by a superior of a task being performed. It does not imply authorizations or specific approvals.

Rules and Procedures refers to the formalization and documentation of control steps.

Insurance Controls relate to the expenditure of resources, to counterbalance potential losses related to a particular event.

Access Controls ensure limitations placed on access to physical or informational entities in the system (e.g. passwords).

Audit Controls serve to ex-post facto find errors and irregularities in the control and accounting data (e.g. visual checks for authorization on a sample bases).

Compliance with GAAP Controls cover procedures used to verify whether transactions are being registered in accordance with current accounting rules.

Appendix I lists controls drawn from several publications (Arthur Andersen & Co., 1978, p. 43-44; Touche Ross & Co., 1978, p. 75 and p. 100; Peat, Marwick & Mitchell, 1978, p. 33 and p. 40; Ernst & Ernst, 1978, p. 24, among many) and classified into the above categories. The taxonomy seemed to fit the controls in the list but often controls were found in the boundary of two classes.

An additional taxonomy of controls with very similar characteristics was developed and can be found in Appendix II. The choice between these will be based on the ease of developing analytic formulations.

A Taxonomy of Errors

After a series of classification attempts a feasible classification of seven categories was developed for errors:

I. *Procedural Errors* (violations or lack of internal controls)
II. *Computation Errors* errors in the numerical processing of transactions)
III. *Accounting Errors* (incorrect accounting transactions)
IV. *Integrity Errors* (addition, deletion of unauthorized transactions or duplication of authorized transactions)
V. *Timing Errors* (transaction registered at the wrong time)
VI. *GAAP Errors* (transactions not measured in accordance to accounting practice)
VII. *Irregularities* (fraudulent & deliberate transactions)
VIII. *Legal Errors* (transactions or events that violate legal clauses)

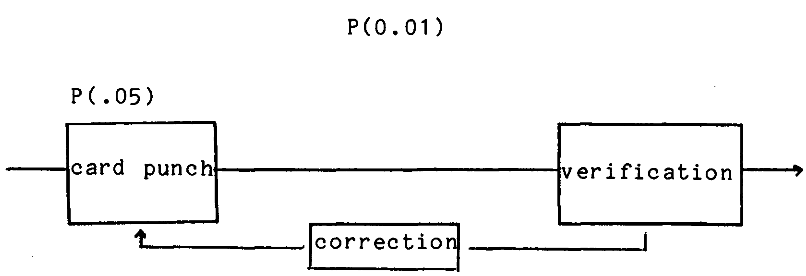
Appendix III lists a series of errors within each class of the taxonomy developed along similar lines to the classifications of internal controls described earlier.

These two taxonomies, which allow for the classification of the ICPs and errors, seem to present some of the previously mentioned desirable features.

Composite Modeling

The complexities involved in the assessment of the reliability of internal controls, even if process consistency over time is assumed, are overwhelming. Let us consider a simple key stroke verification of card punching preparation of worked hours, as diagrammed in Figure 5.

Figure 5



The probability of error (in other data preparation) at the punch step is 0.05 but is reduced to .01 with keystroke verification. The real difficulty, of course, arises with the combining of controls. Figure 6 displays some potential inter- relationships of controls. Finding the rules for control combination becomes an empirical question to be answered by future research.

FIGURE 6

Sample

Control Relationships

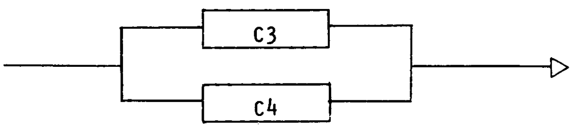
I. Sequential Controls

$C = C_1 + C_2$

or

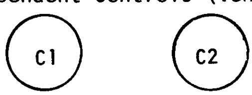
$C = C_1 \times C_2$

II. Parallel Controls

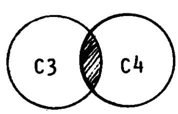


$\frac{1}{C} = \frac{1}{C3} + \frac{1}{C4}$

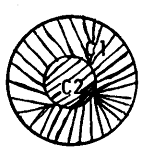
III. Independent Controls (Venn Diagram)



IV. Overlapping Controls



V. Redundant Controls (different boundaries)



Conclusions

This paper examines the nature and multiplicity of internal control procedures and errors. It shows that a nearly infinite number of combinations of alternatives may be used in the attempt to decrease or eliminate a wide set of errors of different nature. In order to simplify the formulation of the problem, two taxonomies were developed that reduce the number of ICPs and errors to eight each.

These simpler sets lead to a smaller group of combinations for composite modeling where combination rules are to be developed on the basis of empirical data. Future research entails empirical laboratory developing of combination rules, analytic modeling, and field testing of the results obtained.

Bibliography

AICPA. *The Auditor's Study and Evaluation of Internal Control Systems,* American Institute of Certified Public Accountants, New York, 1977.

______. *Codification of Statements on Auditing Standards.* New York: AICPA, 1977.

______. *Management Control and Audit of Advanced EDP Systems,* American Institute of Certified Public Accountants, New York, 1977.

Arthur Andersen & Co. *A Guide for Studying and Evaluating Internal Accounting Controls,* Arthur Andersen & Co., Chicago, January 1978.

Ashton, Robert H. "An Experimental Study of Internal Control Judgments," *Journal of Accounting Research,* Spring 1974.

______. "Cue Utilization and Expert Judgements: A Comparison of Independent Auditors with Other Judges," *Journal of Applied Psychology,* August 1974.

______. "Judgment Formation in the Evaluation of Internal Control: An Application of Brunswick's Lens Model," University of Minnesota.

Bailey, Andrew D. and Daniel L. Jensen. "A Bayesian Decision Analysis of Related Audit Tests," Institute for Research in the Behavioral, Economic, and Management Sciences, Purdue University, 1978.

Barefield, Russell M. "The Impact of Audit Frequency on the Quality of Internal Control," *Studies in Accounting Research,* AAA, no. 11, 1975.

Bariff, Martin L. "A Study of EDP Auditors' Evaluations of Internal Control Systems," University of Chicago, 1979.

Bartfield, Charles I. "Systems Control in Organizations by Analogous Model," Ph.D. dissertation Columbia University, 1969.

Block, Dennis J. and Ellen J. Odoner. "Enforcing the Accounting Standards of the Foreign Corrupt Practices Act," *Financial Executive,* July 1979, pp. 19-26.

Bodnar, George. "Reliability Modeling and Internal Control Systems," *The Accounting Review,* Vol. 50, No. 4, October 1975, pp. 745-757.

Brown, R. Gene. *A Scientific Approach to Auditing,* Ph.D. Dissertation, Ohio State University, 1961.

______. "Objective Internal Control Evaluation," *Journal of Accountancy,* November 1962, pp. 50-56.

Brown, N. V. "Auditors Internal Controls: An Analyst's View," *CPA Journal,* Vol. 47, Summer 1977, pp. 27-31.

Burns, David C. and James K. Loebbecke. "Internal Control Evaluation: How the Computer Can Help," *Journal of Accountancy,* Autumn 1977, pp. 60-70.

Carmichael, D. R. "Behavioral Hypotheses of Internal Control," *The Accounting Review,* Vol 45, No.2, April 1970, pp. 235-245.

Cash, James I. et al. "The *TICOM* Model—A Network Data Base Approach to Review and Evaluation of Internal Control Systems," Institute for Research in the Behavioral Economic, and Management Sciences, Purdue University, September 1977.

Churchman, C. West. *The Systems Approach.* New York: Dell Publishing, 1968.

Committee on Auditing Procedure. *The Auditor's Study and Evaluation of Internal Control,* Statement on Auditing Procedure No. 54, AICPA, 1972.

Coopers & Lybrand. *Coopers × Lybrand Internal Control Reference Manual* 5 vols., Coopers & Lybrand, 1978.

Cushing, Barry E. "A Further Note of the Mathematical Approach to Internal Control," *The Accounting Review,* Vol. 50, No. 1, January 1975, pp. 151-154.

______. "A Mathematical Approach to the Analysis and Design of Internal Control Systems," *The Accounting Review,* Vol. 49, No. 1, January 1974, pp. 24-41.

Deloitte, Haskins & Sells. "Internal Accounting Control: Current Developments and Implications of the Foreign Corrupt Practices Act," Deloitte, Haskins & Sells, 1978.

______. "Internal Accounting Control: An Overview of the DH&S Study and Evaluation Techniques," Deloitte, Haskins & Sells, 1979.

Elliot, Robert K. and John R. Rogers. "Relating Statistical Sampling to Audit Objectives," *Journal of Accountancy,* July 1972, pp. 49-52.

Erick, Norbert. "Quality Control and Reliability," 6th Edition, Industrial Press, 1972.

Ernst & Ernst. "Evaluating Internal Control," Documentation Supplements, Ernst & Ernst, 1978.

Felix, William L. and James L. Goodfellow. "Audit Tests for Internal Control Reliance," *Pro-*

ceedings of the Symposium on Audit Research III, University of Illinois at Urbana-Champaign, 1979.

Fraser, J. D. ''Some Aspects of Internal Control,'' *Certified General Accountant,* May-June 1965, pp. 8-12.

Gonedes, Nicholas J. ''Optimal Timing of Control Messages for a Two-State Markov Process,'' *Journal of Accounting Research,* Vol. 9, No. 2, Autumn 1971, pp. 236-252.

Hinsey, Joseph. ''The Foreign Corrupt Practices Act—The Legislation as Enacted,'' *Financial Executive,* July 1979, pp. 13-18.

Ishikawa, Akira. ''A Mathematical Approach to the Analysis and Design of Internal Control Systems: A Brief Comment,'' *The Accounting Review,* Vol. 50, No. 1, January 1975, pp. 148-150.

Jancura, Elise G. and Fred L. Lilly. ''SAS No. 3 and the Evaluation of Internal Control,'' *Journal of Accountancy,* March 1977, pp. 69-74.

King, Barry G. ''A Statistical Basis for Audit Reliance on Internal Control,'' Ohio State University, 1964.

Kinney, W. R. Jr. ''Decision Theory Aspects of Internal Control System Design Compliance and Substantive Tests,'' *Journal of Accounting Research,* Vol. 13, Supplement 1975, pp. 14-29.

Kirchheimer, Harry W. ''Flow Charting—The Modern Method of Evaluating Internal Control and Procedures,'' *Internal Auditor,* Vol. 24, Fall 1967, pp. 46-50.

Kneer, Dan C. ''Auditing Distributed Data Processing Systems: Evaluation of Internal Controls,'' dissertation proposal University of Missouri at Columbia, 1979.

Lea, Richard B. ''Issues Involved in Mandatory Public Reporting by the Auditor on the Quality of Internal Accounting Control Systems,'' draft, Peat, Marwick, Mitchell & Co., New York, March 1977.

Lin, W. Thomas, et al. *A Review of Audit Research,* Working Paper, Graduate School of Business, University of Southern California, March 1978.

Liberman, Arthur Z. ''Methodology for the Automation of the Audit Process Involving the Evaluation of the Plan of Internal Control,'' University of Arizona, December 1977-January 1978.

Loebbecke, James K. ''Impact and Implementation of the Auditing Statement on Internal Control,'' *The Journal of Accountancy,* May 1975, pp. 81-83.

______. ''Some Developments Regarding Audit Judgment Making,'' Touche Ross & Co., 1979.

______. ''Use of Decision Theory in Auditing,'' Auditing Symposium III, Proceedings of the 1976 Touche Ross University of Kansas Symposium on Auditing Problems, pp. 107-123.

Mair, William C., Donald R. Wood and Keagle W. Davis. *Computer Control and Audit,* The Institute of Internal Auditors, Altamonte Springs, Florida, 1976.

Martin, Albert S. and Kenneth P. Johnson. ''Assessing Internal Accountancy Control: A Workable Approach,'' Coopers & Lybrand, 1978.

Meister, David. *Human Factors: Theory and Practice,* Wiley International, 1971.

Peat, Marwick, Mitchell & Co. ''Action Plan for Reviewing Internal Accounting Controls,'' Peat, Marwick, Mitchell & Co. New York, 1978.

Price Waterhouse & Co. ''An Analysis of the Proposed SEC Requirement and an Action Plan for Management Reports on Accounting Controls,'' Price Waterhouse & Co., New York, 1979.

Roberts, N. A. *Mathematical Methods in Reliability Engineering* (New York: McGraw Hill, 1970).

SEC. ''Statement of Management on Internal Accounting Control,'' Securities & Exchange Commission, Release No. 34-15722, File No. 57-779, U.S. Government, 1979.

See, Malin E. and Tom S. Eason. ''Systems Auditability & Control,'' Executive Report for the Institute of Internal Auditors, Stanford Research Institute, 1977.

Short, Frank G. ''Internal Control from the Viewpoint of the Auditor,'' *Journal of Accountancy,* September 1940, p. 226.

Smith, Kenneth A. ''Measurement of Internal Control in Audit Environments,'' University of Texas at Austin.

Stratton, William O. ''Accounting Internal Control Systems: Their Reliability & Dichotomic Structure Functions'' Ph.D. dissertation, Claremont Graduate School, 1977.

Strong, Earl P. and Robert D. Smith. *Management Control Models.* New York: Holt, Rinehart, 1968.

Swieringa, Robert Jay. ''A Behavioral Approach to Internal Control Evaluation,'' *Journal of Internal Auditors,* March-April 1972, pp. 30-45.

______. ''A Positional Analysis of Internal Control,'' *The Journal of Accountancy,* February 1971, pp. 34-42.

Toba, Yoshihide. "A General Theory of Evidence as the Conceptual Foundation in Auditing Theory." *The Accounting Review,* Jan. 1975, pp. 7-24.
Touche Ross Co. *The Touche Ross Audit Process Manual,* Auditing Standards Series, Touche Ross & Co., August 1978.
Turner, Jerry L. and Theodore J. Mock. "Economic Considerations in Designing Audit Programs," University of Southern California, November 1978.
______. "The Economics of Audit Evidence Collection and Evaluation," draft, Peat, Marwick, Mitchell and Co., April 1978.
Vasarhelyi, Miklos Antal and Michael Jay Ginsberg. "Experimental Studies in the Measurement of Internal Controls," Columbia University, November 1978.
Warren, Carl S. "Discussion of a Statistical Technique for Analytical Review," *Journal of Accounting Research,* Vol. 13, Supplement 1975, pp. 10-13.
Whittington, Oliver R. "An Examination of the Effects of Analytical Evidence & Time Budgets on Audit Judgments," University of Houston, Ph.D. dissertation, Sep-Oct '78.
Willingham, J. J. and D. R. Carmichael. *Auditing Concepts and Methods* (New York: McGraw Hill, 1971).
Yu, Seongjae. "A Markovian Model for the Review of the Internal Control Systems," University of Minnesota.
Yu, Seongjae and John Neter. "A Stochastic Model for the Internal Control System," *Journal of Accounting Research,* Vol. 2, No. 2, Autumn 1973, pp. 273-295.

Appendix I

ICP'S (Ordered)

I. AUTHORIZATIONS
1. Approval of Master File maintenance reports
2. Proper procedures of authorization
3. Customers must receive advanced approval for returns
4. Written authority required for removing assets from premises

II. VALIDITY
5. Control over unused and voided billing forms
6. Approved list of suppliers
7. Preprinted official order forms
8. Matching invoice to receipt
9. Goods counted and inspected before acceptance
10. Unmatched receiving reports and invoices investigated

III. POPULATION AND TRANSFER CONTROLS
11. Unissued checks numerically accounted for
12. Batch totals
13. Prenumbering
14. Accounting for prenumbering
15. Records maintained of costs incurred under product warranty
16. Verification and validation of data entered in EDP system
17. Scanning data for reasonableness before entry
18. Reconciliation of interface amounts exiting one system and entering another
19. Algorithms, check-digits
20. Transmission verification techniques
21. Written requisitions and purchase orders with multiple copies

IV. PROCESS CONTROLS
22. Reconciliation of balances (subsidiary to general ledgers)
23. Transaction-by-transaction balancing

24. Depreciation calculations independently checked for accuracy and reasonableness
25. Calculations independently checked for accuracy and overall reasonableness (capitalization and amortization)

V. COVERAGE

V.a SEGREGATION

26. Segregation of duties
    operational resp/financial record keeping
    custody of assets/accounting for assets
    authorization of transactions/custody of assets
    within the accounting function
27. Segregation and rotation of input and processing duties
28. Separate areas maintained for receiving, storage, and shipping functions
29. Each cash fund assigned to one individual, independent of others
30. Monthly statements sent to all customers
31. Complaints (about monthly statements) handled independent of cashier or accounts receivable bookkeeper
32. Delinquent accounts handled independent of cashier

V.b SUPERVISION

33. Employee performance reviews
34. Direct supervision
35. Indirect supervision
36. Physical storage methods reviewed to spot inventory deterioration
37. Interest expense regularly posted (fluctuations investigated)
38. Operational planning

V.c RULES AND PROCEDURES

39. Competitive bidding
40. Clearly defined processing and exception procedures
41. Competent and trustworthy personnel
42. Adequate documents and records
43. Established cut-off procedures
44. Chart of accounts and accounting procedures manual
45. Procedure for reflecting necessary general ledger corrections
46. Continuing education programs
47. Formal policy for capitalization and amortization
48. Flowcharts of control system
49. Prompt processing of billings and credits
50. Each day's receipts deposited intact that day
51. Paid notes cancelled and retained
52. Organizational charts
53. Job descriptions

V.d INSURANCE

54. Insurance and fidelity bonds
55. Backups (for master files)
56. Retention paid of source documents, tape and disc files (son, father, grandfather)

VI. ACCESS
57. Dual signatures required for access to securities and adjustments on a timely basis
58. Physical access restriction
59. Safes, etc. (locked enclosures to protect assets from people and physical hazards)
60. Controlled custody
61. Password procedures in EDP system
62. Movement of inventory subject to verification by the area assuming responsibility for it
63. ID tags or serial numbers affixed to assets
64. Guards and/or alarm system used
65. Employees identified by badge or card
66. Unissued checks locked up

VII. AUDIT (ex-post analysis)
67. Regression analysis for forecasting expected activity level
68. Physical counts
69. Internal auditing
70. Variance analysis
71. Periodic compliance audit
72. Intercompany accounts balanced regularly

VIII. COMPLIANCE WITH GAAP
73. Assignment of responsibility and establishment of procedures for accumulation of notes to financial statements including a review
74. Revenues recognized on long-term projects based on engineering estimates
75. Formal policies for assigning lives and depreciation method
76. Allowances for depreciation regularly reviewed for adequacy
77. Leases reviewed for classification as capital or operating
78. Intercompany profits eliminated
79. Periodic analysis of intangible assets; review for loss in value
80. Formal policies for identifying, reporting permanent and timing differences
81. Timing differences allocated between current and non-current
82. Warranty reserve regularly reviewed for adequacy
83. Estimated costs to complete long-term contracts regularly reviewed.

X. Management Controls
84. Appropriate cost system in use (job v process v standard v direct cost)
85. Compliance with loan covenants and lease agreements monitored
86. Current intercompany accounts zeroed out regularly
87. Investments previously written off, or fully reserved, regularly reviewed for possible realization
88. Selling and administrative expenses under budgetary control
89. Employees handling receipts bonded

Appendix II

Alternate Taxonomy of ICP's
(by number)

A. Organizational Controls
   2, 3, 6, 10, 15, 26, 27, 28, 29, 30, 31, 32, 33, 37, 39, 40, 41, 42, 43, 44, 45, 46, 47, 49, 50, 52, 53, 73
B. Repetition and Matching Type Controls
   8, 9, 11, 12, 13, 14, 18, 22, 24, 25, 68, 72, 76
C. Authorization and Supervision
   1, 4, 34, 35, 57, 62
D. Physical Controls
   7, 21, 51, 55, 56, 58, 59, 60, 61, 63, 64, 65, 66
E. Audit Type Controls
   48, 67, 69, 70, 71
F. Economic Compensation Controls
   54, 89
G. Process Moment Controls
   16, 17, 19, 20, 23
H. GAAP Obedience Controls
   74, 75, 77, 78, 79, 80, 81, 82, 83

Appendix III

A Taxonomy of Errors

I. PROCEDURAL ERRORS
 1. Lack of approval
 5. Unauthorized adjustment
11. Goods shipped to bad credit risk
17. Assets unnecessarily exposed to unauthorized use.
25. Unauthorized services performed
27. Lack of communication between departments (purchase v. production depts) resulting in overstocking of useless materials

II. COMPUTATION ERRORS
 2. Bad total
32. Miscalculation for depreciation
39. Miscalculation of contingent lease payments

III. ACCOUNTING ERROR
 3. Incorrect posting
19. Sales discounts not recognized, or recognized when they shouldn't be
23. Misapplication of overhead
29. Sales misclassified
35. Misclassification of long- or short-term debt

IV. INTEGRITY ERROR
 4. Incorrect amount
 6. Missing transaction
 7. Duplicate transaction
 8. Missing assets

9. Sales recorded but goods not shipped
10. Goods shipped but not invoiced
13. Inflated payroll
14. Misappropriation of funds (cash received posted at lower amounts or not at all)
22. Accepting shipments of unauthorized quality/quantity
24. Fictitious employees
38. Capital leases not recorded/operating leases recorded
42. Dividends paid to wrong parties/wrong amounts
45. Investment losses not monitored
46. Goodwill, patents, other intangibles carried in excess of value
49. Investment losses not reflected in accounting records

V. TIMING ERROR

12. Sales recorded in wrong period
16. Conditions affecting accounting valuations not recognized on a timely basis
43. Profits recognized prematurely on intercompany sales
47. Intangibles remain on books after disposal or expiration
48. Tax liability/expense not reflected in accounting records

VI. GAAP ERROR

15. Nonconformity to GAAP
26. Computation of LIFO inventory does not meet IRS regulations

VII. IRREGULARITIES

18. Defalcation and fraud
33. Kickbacks
36. Pledged assets not disclosed
44. Management conceals permanently impaired value of investment (uncollectibility of intercompany receivable)

VIII. LEGAL ERRORS

37. Violation of restrictive covenants resulting in default
40. Unauthorized sale of shares (violates legal requirements)
41. Unauthorized stock options exercised (violates option terms)

MISCELLANEOUS MANAGEMENT ERRORS

20. Financial reports do not fairly represent firm
21. Receiving or producing poor quality assets
30. Idle assets not identified
31. Undetected deterioration of property
34. Company becomes obligated for debts at unfavorable terms

Discussant's Response to A Taxonomization of Internal Controls and Errors for Audit Research

John K. Wulff

Main Hurdman & Cranstoun

The objective of Dr. Vasarhelyi's project, namely "... to formalize and summarize the key issues in the relationships between individual internal control procedures, clusters of internal controls, internal control systems and the diverse types of errors which may occur." is admirable. The sheer number of controls and combinations thereof coupled with the multiplicity of possible errors renders the project particularly challenging. However, the project offers the potential to significantly enhance our understanding of internal controls and thereby to improve existing techniques used to evaluate the effectiveness of internal control systems.

I tend to agree with Dr. Vasarhelyi that a crucial first step in the project is the development of a succinct taxonomy of internal controls and errors. Indeed, the subject of internal control, because of its complexity is difficult to analyze or discuss without first grouping controls and errors with similar attributes.

The development of taxonomies, of course, is not an end in itself but rather a means to assist the author in portraying internal control situations analytically—thereby clarifying the relationship between controls and errors. Because the overall project is only in its initial stages, it is impossible to evaluate the effectiveness of the suggested taxonomies in enabling Dr. Vasarhelyi to achieve his ultimate objectives. The paper, moreover, fails to demonstrate why the particular taxonomies suggested by the author are likely to be more useful than alternative classifications. Under these circumstances, it is difficult and probably premature to either praise or criticize the author's groupings. Nevertheless, I will make a few brief observations.

Classification of Controls—Exclusion of Management Controls

Dr. Vasarhelyi distinguishes between internal accounting controls and "exclusively management oriented controls" with the stated intention of excluding the latter from his study. It is not clear whether the phrase "exclusively management oriented" refers to the characteristic of the control or its purpose. A budgetary system, for example, is traditionally characterized as an administrative or management control. Nevertheless, effective budgeting (including variance analysis) may highlight unauthorized disbursements and otherwise improve management's ability to meet internal accounting control objectives. I believe that distinctions between management controls, on the one hand, and internal accounting controls, on the other hand, are, in many instances virtually impossible to make, either on the basis of control characteristic or control objective. Moreover, even if such distinctions were feasible, the exclusion of management controls which serve accounting control objectives would severely limit the usefulness of Dr. Vasarhelyi's project. The presence or absence of certain management controls such as a budgeting system will impact the relative effectiveness of internal accounting controls. As the AICPA Special Advisory Committee on Internal Accounting Controls noted, "Internal accounting controls cannot be evaluated in a vacuum."

Classification of Errors

The author's attempt to classify errors represents a potentially fruitful line of research—an area which, perhaps, has not received the degree of attention directed to the development of control taxonomies. In this regard, however, consideration should be given to eliminating the "accounting error" category on the basis that all accounting errors may be classified as either "computation" or "GAAP."

Introduction—Historical Perspective

Dr. Vasarhelyi leaves the unfortunate and incorrect implication that the enactment of the Foreign Corrupt Practices Act lead to a series of procedural reactions by major CPA firms. In general, the so-called procedural reactions represented the culmination of many years of work initiated long before enactment of the FCPA.

In summary, I believe that Dr. Vasarhelyi's work offers significant potential. Because the project is still in its infancy, it is premature to evaluate the suggested taxonomies. However, I suspect that the author will find it necessary to address more effectively the problem of management controls and their relationships to accounting controls in order to achieve his ultimate project objectives.

4

An Investigation of a Measurement Based Approach to the Evaluation of Audit Evidence

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Several definitions of the auditing function have been proposed, e.g., Mautz and Sharaf (1961, p. 15); American Accounting Association (1972). At the root of these definitions is the notion that the accumulation of *evidence* is the cornerstone of the auditing, attestation process. There is also widespread recognition that the "quality" of the many types of audit evidence varies considerably (AAA, 1971; Toba, 1975; Robertson, 1976; AICPA, 1973). In evaluating the propriety of a given assertion, an auditor must weigh the quality as well as the quantity of evidence gathered. Some forms of evidence are compelling such as observation of marketable securities while others are merely suggestive. Thus, evidence evaluation is a complex, vital decision. How should an auditor, then, consider the many factors involved and arrive at an appropriate judgment? What guidelines or tools are available to aid in this difficult task? Although there have been numerous attempts to provide theoretical frameworks which examine the nature of evidence,[1] the concepts proposed are generally vague and not operational. Most importantly, an overall approach for evaluating evidence has not been presented.

The purpose of this paper is to investigate the usefulness of a measurement based approach as an integrative, operational process to evaluate audit evidence. Towards this end the paper addresses four main topics. The first section considers the nature of audit evidence and its role in the audit process. This discussion is followed by a review of the literature. Several evidence evaluation frameworks are identified and analyzed. The third section introduces the measurement based approach and illustrates its use in audit evidence evaluation. The final section discusses the implications of this approach for practice and explores avenues for future research.

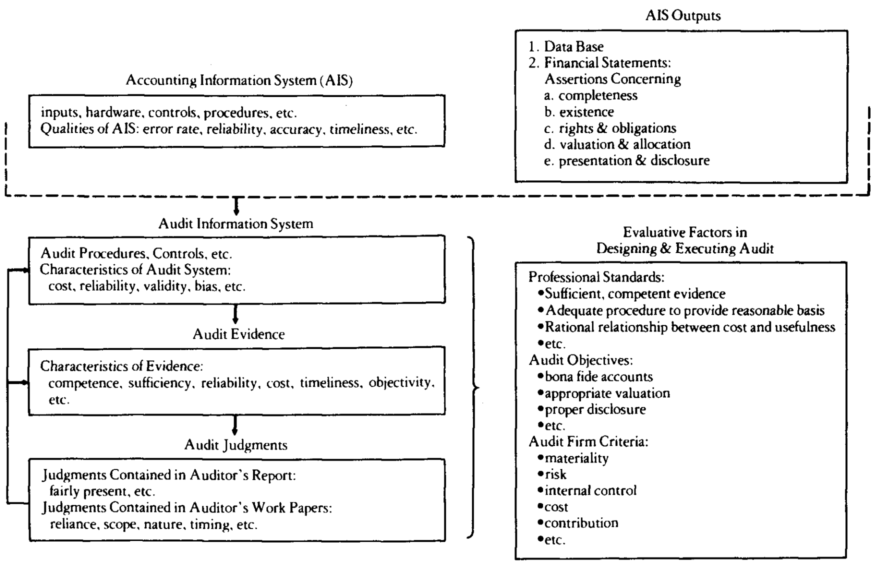
The Nature of Audit Evidence and its Role in the Auditing Process

Figure 1 presents a model of the role of evidence in the audit process. The model contains three major elements:

* The authors wish to gratefully acknowledge the comments and ideas expressed by the participants at the University of Southern California Accounting Research Forum.

(1) the Accounting Information System (AIS);
(2) the Auditing Information System (ADIS); and
(3) the evaluative factors in planning audit tests and analyzing the evidence gathered.

Figure 1
ROLE OF EVIDENCE IN THE AUDIT PROCESS



The primary output of the AIS is the financial statements. Underlying these statements are several broad assertions represented by management:

completeness;
existence;
rights and obligations;
valuation or allocation;
presentation and disclosure (AICPA Auditing Standards Board, 1979).

The vital role of the audit process is to independently test whether these assertions appear warranted based on the evidence accumulated and, thus, express an overall opinion as to the fairness of the financial statements.

The ADIS attempts to gather evidence to provide the basis for various audit judgments. Toba (1975, p. 9) emphasizes this significant function of evidence as "the basis on which one ought to fashion one's belief or draw some conclusion with respect to the proposition established." The value of an audit lies in the "warranted assertions" (AAA, 1972) made by the auditor. Warranted assertions are those believed to be appropriate based on the evidence examined and the circumstances. The audit opinion, thus, adds credibility to the financial statements because of the declared belief by the professional auditor that management assertions are appropriate.

Figure 1 identifies three key evaluative factors that appear to be significant considerations (criteria) in weighing various types of audit evidence to support a given assertion:

(1) professional standards, e.g., SAS #1, Section 330 (1973);
(2) audit objectives (AICPA Auditing Standards Board, 1979); and
(3) audit firm criteria.

The first two factors are self explanatory. Audit firm criteria are matters relating specifically to the given assertion under investigation in its client setting. Some of the important firm criteria noted are (SAS #1, Section 330, 1973 and Anderson et al., 1970):

- risk of assertion;
- evidence cost;
- materiality; and
- internal control.

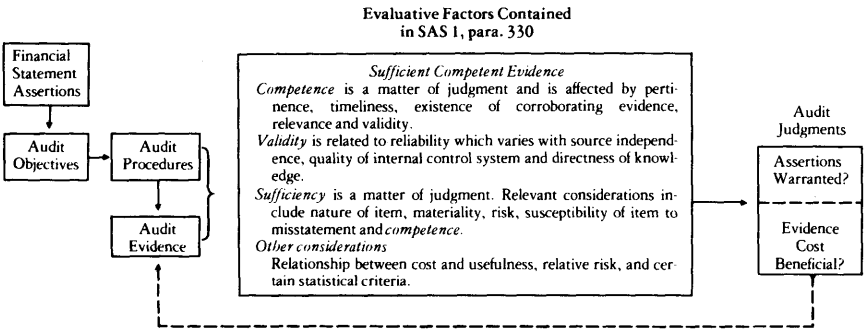
The model of the role of evidence in the audit process, as discussed in the preceding paragraphs, highlights the function of evidence as the means of affording the auditor the basis to state beliefs regarding financial statement assertions. Therefore, the auditor must be able to evaluate the "adequacy" of various evidential matter necessary to support a warranted assertion. The evaluation of evidence is a very complex decision involving numerous variables (Peat, Marwick, Mitchell and Co., 1976, p. 20-24; AAA, 1972, pp. 34-50). Thus, guidance and aids in this area appear vitally needed. Additionally, an overall systematic approach that encompasses the major factors to be considered would be highly desirable and promising.

The next section examines some of the existing evidence evaluation approaches found in the professional and research literature. An overall summary and critique of these approaches is then presented. Finally, the need for an integrated process is discussed.

Existing Approaches to Evaluating Audit Evidence

Professional Standards. SAS No. 1, Section 330 is the primary normative framework available in the professional literature on evidence evaluation. Figure 2 outlines the criteria advanced by this framework.

Figure 2
AUDIT EVIDENCE AS INDICATED IN SAS 1, 330



The third standard of field work states:

Sufficient competent evidential matter is to be obtained through inspection, observation, inquiries, and confirmations to afford a reasonable basis for an opinion regarding the financial statements under examination (para. .01). [emphasis added]

The decision as to what constitutes "sufficient" evidence is considered to be a "matter of professional judgment," although four factors are mentioned as significant to the decision (para .09):

(1) the nature of the item examined;
(2) materiality;
(3) the risk involved, which is dependent upon the adequacy of internal control and the susceptibility of an item to misstatement; and
(4) the competence of the evidence available.

"Competent" evidence is defined as that which is both valid and pertinent. A final criterion is presented in paragraph .10: "In the great majority of cases, the auditor finds it necessary to rely on evidence that is persuasive rather than convincing." Thus, SAS No. 1, Section 330, entitled "Evidential Matter," provides three general criteria to guide practitioners in assessing the quality of audit evidence:

(1) competency;
(2) validity; and
(3) sufficiency.

Additionally, a number of other considerations such as cost effectiveness and risk are noted in SAS No. 1.

The criteria provided by SAS No. 1, although identifying significant concepts and issues, appear to have several shortcomings:

(1) the concepts noted are vague and not operational;
(2) measurement of the criteria is not addressed; e.g., how does one measure "validity?"
(3) a scientific, systematic approach is not presented. Thus, the reliability and validity of evidence gathered employing this standard is open to question; and
(4) on occasion, terminology and concepts appear to be used in an inconsistent, imprecise manner which may result in confusion. For example, validity is said to be directly related to reliability (para .08). Such concepts have distinct, separate scientific meaning, as will be noted later.

A later exposure draft (AICPA Auditing Standards Board, 1979) outlines the nature of major audit assertions and related objectives and substantive tests but does not address the issue of evidence evaluation criteria.

Research findings. Mautz and Sharaf (1961) propose essentially the same evaluation criteria as Section 330:

> In the degree of influence it exerts on the mind of the auditor, audit evidence varies from compelling through persuasive to inconclusive. . . . Audit evidence must be reviewed critically with respect to its *validity* and *pertinence* before it is permitted to influence the mind of the auditor with respect to an assertion at issue (p. 110).

Robertson (1976) similarly defines competent audit evidence as: relevant, objective, and free from bias.

Toba (1975) provides valuable insights as to the nature and evaluation of evidence. The concept of the *weight of evidence* is discussed. Evidence is divided into two categories: confirming evidence and supporting evidence. Confirming evidence establishes the validity of a proposition. Supporting evidence merely makes a proposition more tenable.

> Statement (evidence) q may be said to have *confirming* power for statement p if statement q is well established and renders p more probable than not $-$ p (expressed as $\bar{p}$). In symbols, for q to have confirming power:
>
> $P(p \mid q) > P(\bar{p} \mid q)$
>
> Statement (evidence) q may be said to have *supporting* power for statement p if the probability $P(p \mid q)$ is greater than the prior probability of statement p. In symbols, for q to have supporting power:
>
> $P(p \mid q) > P(p)$ (Toba, 1975, p. 9)
>
> Toba also classifies propositions as:
>
> (1) elementary, stating facts or events;
> (2) general, describing a value judgment or generality;
> (3) immediate, self evident; and
> (4) demonstrable, subject to proof.

A general proposition cannot be directly proven, as can an elementary statement, but must be rephrased into elementary propositions while maintaining equivalence between the general proposition and the surrogate elementary statements. Demonstrable propositions can be proven to some degree of confidence (probability), while immediate statements do not require proof. Thus, in Toba's framework the evaluation of internal control is not evidential matter, but an elementary proposition to be proven, providing supporting evidence as to the fairness of the financial statements. Finally, Toba notes that auditing is essentially a heuristic, demonstrative process of persuasion rather than an investigative, learning approach.

While Toba does much to develop a general theory of evidence, the concepts provided are broad and not operational. For example, evidence is said to have confirming power if it is "well established and renders p more probable than not-p." However, neither a definition nor criteria are proposed to determine what constitutes "well established" evidence in a given situation. Further, a basis to analyze the strength of various forms of evidence is not offered.

Kissinger (1977) addresses a number of "deficiencies and oversights" in Toba's paper and extends the framework. He especially disagrees with Toba's conclusions as to the conditions necessary for fair presentation. Kissinger proposes twelve general propositions considered in an audit and symbolically presents the necessary and sufficient conditions for the various types of opinions.

Sneed (1978) examines similarities in evidence accumulation problems and objectives for historians and auditors.[2] Several evidence evaluation criteria are advanced:

(1) authenticity;
(2) credibility;
(3) reliability; and
(4) relevance.

Schandl (1978) proposes five "Principles of Evidence":

(1) availablity (sufficient evidence needed);
(2) independence;
(3) directness (reliability, distance source is removed from the assertion tested);
(4) confirmation (need corroborating evidence); and
(5) bias.

These principles should be jointly considered in examining the strength of various evidence sources.

A Statement of Basic Auditing Concepts (ASOBAC) (AAA, 1972) deals extensively with the nature of audit assertions and the investigative process. However, the issue of evidence evaluation is only incidentally addressed. ASOBAC merely notes that evidence must be competent and sufficient to provide adequate belief that an assertion is warranted. A prerequisite to competency is "intersubjectivity" (objectivity).

There has been extensive research on the nature of the audit decision process and the role of evidence in this process (Kinney, 1975; Scott, 1973; Tracy, 1969; Elliot and Rogers, 1972). These works discuss the usefulness of various decision models to auditing such as the Bayesian method. However, an integrated approach to assess the strength of a particular type of evidence is not proposed. Instead, these papers provide a general framework to organize and direct audit efforts.

Summary and Critique of Existing Evidence Evaluation Approaches

Generally accepted auditing standards (SAS No. 1, Section 330) emphasize the importance of obtaining "sufficient competent" evidential matter to provide a reasonable basis for the auditor to express an opinion. However, only vague criteria are provided to assess the adequacy of evidence gathered, i.e., validity; competency and sufficiency. Mautz and Sharaf (1961), Schandl (1978), Robertson (1976), and others attempt to provide criteria to evaluate evidence but do little to clarify or provide more concrete guidelines.

Toba (1975) and Kissinger (1977) present a general theory of evidence and outline the heuristic decision process employed during an audit. These works provide a theoretical framework to address the purposes and evaluation of evidence. However, the model proposed is not operational and does not outline an approach to evaluate the strengths of various forms of evidence.

The existing approaches, thus, suffer from two major deficiencies:

(1) they provide only heuristic intuitive concepts, i.e., they are not operational nor subject to empirical testing; and
(2) they do not provide an integrated, scientific approach to the evaluation of evidence.

The first deficiency has resulted in several heuristic beliefs in auditing to access the strength of evidence. While many of these heuristic rules are undoubtedly useful and valuable, some of these "rules of thumb" may result in serious errors in audit judgments. Few of these beliefs have been empirically verified.

An example of such a heuristic rule is contained in SAS No. 1:

> When evidential matter can be obtained from independent sources outside an enterprise, it provides greater assurance of reliability than that secured solely within the enterprise (para .08).

This belief has, for example, resulted in heavy reliance by auditors on accounts receivable confirmations. Recent empirical results suggest that, in fact, such evidence has a high error rate (Sorkin and Meuwissen, 1978).

Need for an Integrated, Scientific Approach

Many individuals would argue that the evaluation of audit evidence is by its very nature a matter of professional judgment and, thus, cannot be subject to any scientific approach. The same argument existed for many years about the entire auditing process. Undoubtedly, auditing should not be viewed as a purely precise scientific discipline. However, Mautz and Sharaf (1961) have demonstrated the applicability and advantages of a scientific approach to auditing. Since that time several scientific notions have been applied successfully such as statistical sampling (noted in SAS No. 1, Section 330) and the explicit recognition of audit assertions or hypotheses (AICPA Auditing Standards Board, 1979).

The scientific approach tends to add rigor, precision, and greater reliability to an endeavor, thus, improving quality control. As Anderson et al. (1970) state:

> The auditor must be able to say that he has *enough* evidence to sustain or refute one of the evidential propositions. Thus, *quantification* of the evidence needed, however crude the measurement, is an essential aspect of the discipline (p. 527).

Two additional factors that support the need for a scientific approach to evidence evaluation are:

(1) difficulties generally encountered by decision makers in arriving at complex judgments; and
(2) the threat of government intervention into the auditing profession and the extensive legal exposure facing CPAs.

Research findings (Libby and Lewis, 1977; Slovic and Lichtenstein, 1977) on human information processing indicate that individuals often arrive at judgments that seriously deviate from normative models in complex decision settings, e.g., demonstrate poor accuracy, low consensus, poor consistency. For instance, several studies of auditor's judgment have found widely varying recommendations even when auditors were presented with identical problem situations (Ashton, 1974; Joyce, 1978; Weber, 1978; Wright, 1979). This type of finding also has been observed with respect to auditor's evaluation of the nature of audit evidence. In a series of five related field experiments, Mock and Turner (1978, 1980) found that experienced auditors frequently differed as to whether three audit procedures were compliance, substantive or dual purpose tests. Such findings strongly suggest that, if quality control is to be maintained at high levels, professional judgment alone cannot be relied upon. Guidance, training, a rigorous approach, and/or other tools are needed.

The Metcalf (1976) and Moss (1977) reports allege that a number of bankruptcies and frauds have led to loss of confidence in the auditors' opinion. Federal government intervention was recommended. The prospect of intervention, coupled with the legal exposure accompanying certified audits, attests to the vital need for the profession to maintain and improve quality control and to provide proper documented support for audit judgments. A systematic, scientific approach appears promising in addressing these concerns for the assessment of audit evidence.

In response to these needs, the measurement based approach is now introduced. An illustration of the use of this approach in the area of inventory is then presented.

A Measurement Based Approach to the Evaluation of Audit Evidence

The preceding review of the audit evidence evaluation problem has indicated that this is a complex, multiple-factor problem. Professional standards suggest that the decision as to what constitutes "adequate" audit evidence should be based upon factors such as competency and sufficiency and is primarily a matter of "professional judgment."

From the perspective of information economics and measurement theory, the issue of developing sufficient competent evidence might be viewed as the issue of designing and implementing an efficient audit information system (ADIS) which provides audit evidence of acceptable quality. Our discussion begins with a consideration of those factors which affect the factual quality of audit evidence (a viewpoint based upon measurement theory concepts). Then the question of the cost-effectiveness of the ADIS is considered.

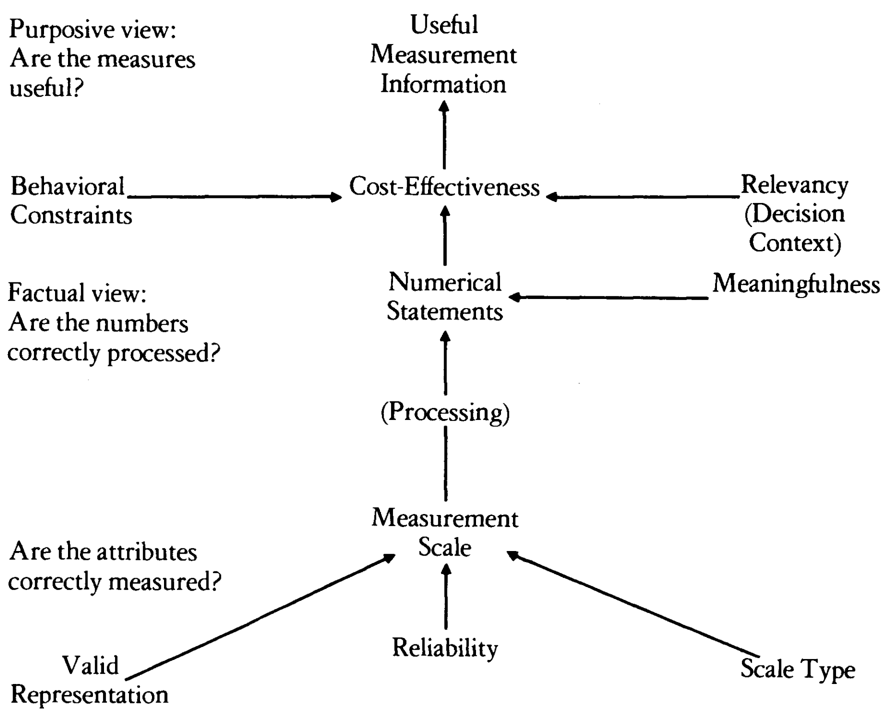
The factual quality of evidence. Research directed at the evaluation of the data, evidence, or measures provided by an information, audit, or measurement system[3] may focus on two interrelated questions. The overriding question is whether the evidence is useful. This question is labeled the *purposive view* in Figure 3 which depicts the basic factors underlying measurement system evaluation. The purposive view will be discussed in detail in the following section.

A second view identified in Figure 3 asks two related questions concerning the factual quality of measures. Are the attributes correctly measured and are the assigned numbers correctly processed? An attribute may be thought of as a characteristic of an object such as accounts receivable or an event such as a sale. Relevant attributes in auditing might include the *reliability* of a system of accounting controls over payroll, the *bona fides* of a receivable or the *net realizable value* of obsolete inventory.

As indicated in Figure 3, the factual quality of measures of such attributes depends on three criteria: (1) reliability, (2) valid representation or validity, and (3) scale type. In discussing each of these criteria, our concern will be with the advantage, if any, of these criteria as compared to existing audit evidence criteria as discussed in professional standards and the literature in general. Some of the potential advantages of the measurement based approach include improved guidance, a more systematic approach, and more operational and rigorous definitions.

Reliability. The notion of the reliability of a measurement procedure emphasizes the errors inherent in that process. Measurement error may be the result of a number of factors including calibration errors, observer errors, and sampling errors. Ackoff (1962, p. 208) reports upon experiments which showed important differences in observer error rates among auditors who were testing credit-

Figure 3
A BASIC FRAMEWORK FOR MEASUREMENT SYSTEM EVALUATION



Adapted from: Mock and Grove (1979).

compensation forms. Sampling error (sampling risk) has been an important audit consideration for many years and results when the audit procedures are not applied to the entire population of interest. Sorkin and Meuwissen (1978) have researched alternative audit confirmation procedures and have reported significant differences in terms of their reliability.

An important feature concerning reliability as a potential criterion for audit evidence evaluation is the previous research which has been done on defining and operationalizing the concept. Definitions of reliability focus on the stability and accuracy of a measurement procedure. Stability implies that a measurement procedure applied to the same object or event should arrive at identical (or at least very similar) numerical assignments (assuming the attributes have not changed in the period between measurements). Clearly the reliability of audit tests could be measured (estimated) in this manner.

Reliability has also been conceptualized in terms of accuracy defined as a function of the difference between a measure (Y) of an attribute and its true value (X). Thus the error (e) in a test is mathematically defined as $e = X - Y$ and reliability is operationalized as the average error ($\bar{e} = \Sigma_i(X_i - Y_i)/N$), the mean squared error

$\sigma^2 = \Sigma_i(X_i - \bar{e})^2/N)$ or some other transformation of e. Further details of this approach can be found in Mock (1976) and Mock and Grove (1979). Clearly the reliability aspect of measurement procedures offers several alternative approaches that would assist the auditor in obtaining operational measures of the reliability of audit procedures and evidence.

Validity. The issue of validity or whether the numerical assignments are a valid representation of the attributes being measured is a more difficult concept to define and operationalize. Rigorous definitions have been developed in formal measurement theory which emphasize that the assigned numerals should be related in the same manner as the measured objects or events (i.e., the measures should be a homomorphism of the measured phenomenon). The auditor has the same objective in mind when deciding that the reliability attribute of one system of controls is .95 and another is .85. Hopefully, the first system is *in fact* more reliable than the second. A number of operational approaches to empirically testing validity in this sense are reported in Mock (1976).

In the behavioral sciences a valid measure is one that measures the attributes it is designed to reflect, e.g., an IQ measure actually reflects intelligence. Many audit attributes may be as difficult to validly measure as intelligence: nonsampling risk, audit risk, audit materiality, and reliability of an accounting control. Several approaches to operationalizing the validity of a measurement system have been developed in the behavioral sciences including construct and criterion validation (see Kerlinger, 1973). Such approaches would seem to be applicable to the evaluation of the validity of audit evidence.

Scale type and meaningfulness. The third evaluative factor identified in Figure 3 is the scale type of the measurement system being evaluated. Possible scale types include nominal, ordinal, interval and ratio scales. Scale type is important in that it relates directly to the *meaningfulness* of numerical statements which are based upon processed (aggregated) measures. The meaningfulness of a numerical statement, inference, or assertion may be determined analytically (see Ackoff, 1962 or Mock 1976). The analogous issue in auditing would be whether audit assertions were or were not meaningful. This would depend partly upon the underlying scale type of the audit procedures. Potential areas where the meaningfulness of audit assertions and aggregations may be questioned include (1) reliability scores and compliance rates which are aggregated into reliance factors, (2) ordinal reliance judgments and internal control questionnaire enumerations which are factored into beta risk and ultimately sample size decisions and (3) the aggregation of multiple, related tests such as negative and positive confirmations into an audit judgment.

As is apparent in the preceding, consideration of the factual qualities of measurement systems may have some application in evaluating audit evidence and procedures. Purposive aspects are also important.

The purposive view. The question in Figure 3 associated with the "purposive view" asks whether the obtained measures, related measurement procedures, and numerical statements are useful. Although factual level criteria are depicted as impacting usefulness, they are not sufficient criteria. The designer of the measurement, information, or audit system will also need to consider relevancy, cost, and certain behavioral constraints.

In a management information system, relevancy is dictated by a decision problem or decision context. In auditing, relevancy seems to depend on the particular audit assertions which are being evaluated. A recent exposure draft concerned with evidential matter (AICPA, 1979), translates audit assertions into audit objectives and the auditor is expected to implement the necessary audit procedures to achieve these objectives. The exposure draft presents an illustration but does little in the way of providing guidance in evaluating alternative audit procedures except to suggest that the evidence be "adequate to achieve the audit objectives" and "provide a reasonable basis concerning the validity of individual assertions" (paraphrased from AICPA, 1979).

Cost and behavioral constraints may also affect the usefulness of alternative measurement and auditing procedures. Cost is clearly an important factor in comparing packages of audit procedures in light of the reliance that may be placed on a system of internal accounting controls (Turner and Mock, 1980). Behavioral constraints may include tendencies of auditors to anchor on last year's audit program, halo effects and idiosyncratic information search heuristics (Mock and Turner, 1978).

Although both the identified considerations in the factual and purposive views could be discussed in much greater depth, we now turn to the question of application and then present an illustration. References are included in the bibliography for those interested in further details.

Application of Evaluative Factors Contained in the Measurement Based Approach to Auditing

The evaluation of audit evidence and audit procedures involves two issues that are identified in Figure 2: Are management's assertions as contained in the financial statements warranted? Does the benefit of the evidence collected justify its cost? To consider the applicability of the evaluative factors identified in the preceding section, Figure 4 replaces the criteria contained in Figure 2 with the measurement based criteria. The questions contained in the figure are identical except that "Are the numbers correctly processed?" is replaced by "Are the assertions correctly drawn?" As discussed earlier, this question may be evaluated in terms of the meaningfulness of the assertions given the results of an audit test of a certain reliability, validity and scale type. As before, the issue of the correctness of the attribute evidence is directly a function of reliability and validity. Note also that the figure replaces measurement scale with audit test (procedure).

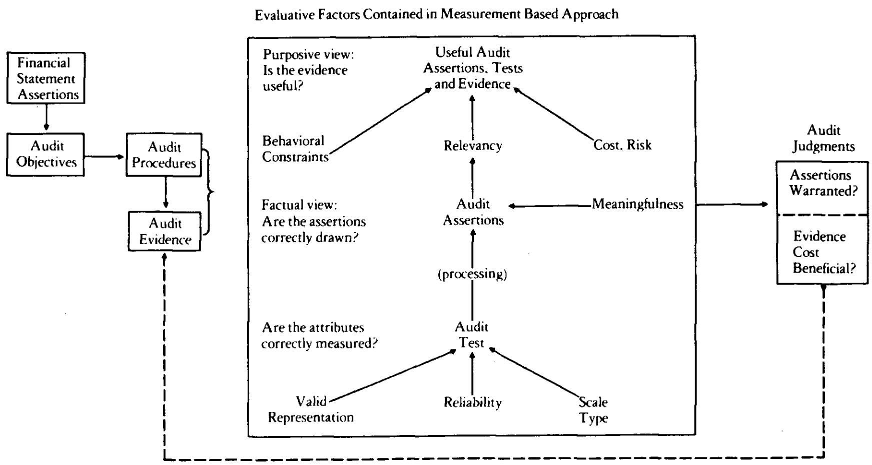
Given that the factual qualities of an audit test or a set of audit procedures is known or knowable (recall that each of these underlying factors has been operationalized), the analysis shifts to the usefulness of the evidence. As before, important evaluative factors include cost, relevance, and behavioral constraints. In addition, audit risk is added to the figure. As will be discussed in the illustration, risk is a necessary addition to the evaluation which is somewhat unique to the audit information system.

Some previous research has been completed on the procedures one might apply in using a measurement based approach in evaluating information systems in general (Mock and Grove, 1979). In the case of audit evidence evaluation, the following reformulated steps seem appropriate.

Step 1: Identify audit assertions to be evaluated.
Step 2: Identify the financial statement attributes which need to be investigated.

Figure 4

AUDIT EVIDENCE EVALUATION AS INDICATED IN MEASUREMENT BASED APPROACH



Step 3: Identify alternative audit tests (programs) which may provide evidence on the appropriate attributes. Analyze each alternative in terms of the validity and reliability of the evidence and the meaningfulness of possible audit assertions.

Step 4: Analyze the usefulness of each alternative in terms of relevancy, cost, audit risk, and behavioral constraints.

Illustration of the Use of the Measurement Based Approach: Audit of Inventory

To illustrate the application of the measurement based approach, the effectiveness of the procedure of inventory observation is now examined. The analysis parallels the four step process outlined earlier.

Step 1: Identify audit assertions to be evaluated.

The general assertion is that inventory is fairly presented on the financial statements. To test this assertion, the auditor must partition the general proposition into several elementary assertions such as (AICPA Auditing Standards Board, 1979):

completeness
existence
rights and obligations
valuation
allocation
presentation and disclosure

Step 2: Identify the financial statement attributes which need to be investigated.

The attribute of inventory *existence* will be the focus of this illustration. Of course, during the course of the audit all of the above attributes would be addressed through the various audit tests.

Step 3: Identify alternate audit tests (programs) which may provide evidence on the appropriate attributes.
Analyze each alternative.

For brevity, only inventory observation is examined as a source of evidence to test the assertion of existence. In fact, audit tests are often interrelated and may provide corroborating evidence. For example, analytical review may also be relied upon as evidence of inventory existence. Audit assertions may also be related. For instance, the attributes of *existence* and *valuation* of a jeweler's inventory are affected by the grade and quality of diamonds.

For simplification, such interrelationships are not dealt with in this illustration. However, such complexities do not appear to impair the value of the measurement based approach. This approach can alert the auditor to apparent problems in a particular source of evidence. Greater reliance can then be shifted to other evidence sources or strategies can be taken to reduce the problems (errors) suggested by the measurement based approach. Three alternate forms of evidence that may be evaluated along with observation are:

(1) outside expert observation;
(2) greater reliance in and testing of the purchasing system; and/or
(3) analytical review with limited observation.

Unless the choice is obvious, each of the alternative audit tests should be analyzed employing the measurement based approach to select the most advantageous procedure.

At the factual level the following measurement characteristics of inventory observation could be examined:

(1) *validity:* can an auditor appropriately identify an inventory item when viewed?
method of testing: a series of field experiments to see if auditors can spot deliberate misrepresentations of inventory.
(2) *reliability*[4]: to what extent are there errors in auditor test counts? How does the count plan affect reliability?
method of testing:
(a) field experiments where various auditors take controlled test counts;
(b) field experiments where the error rate is determined under alternate count plans.
method of measurement: reliability could be operationalized as the mean error or mean squared error. Analysis of variance could also be utilized in a multi-variate approach.
(3) *scale type:* no apparent problems

Step 4: Analyze the usefulness of each alternative in terms of relevancy, cost, audit risk, and behavioral constraints.

Inventory observation appears to be a highly relevant source of evidence since it directly tests the assertion of existence. However, observation is a costly procedure and is of unknown effectiveness. There are several behavioral constraints to consider such as limited auditor experience and environmental biases (Wright, 1979). Additionally, inventory is usually a high risk area in that it is often a material amount and, if misstated, could result in the financial statements being misleading. The ultimate risk of testing the assertion of existence is significantly dependent on the internal control system. Ultimate risk may be stated as (Robertson, 1976, p. 368):

$$UR = \beta \times (CUPL) \times (1\text{-}SP)$$

where: UR = ultimate risk

β = probability substantive tests will fail to detect a material error.

CUPL = probability the internal control system has allowed and failed to detect a material error.

SP = probability supplemental procedures will uncover a material error.

At the purposive level the overall cost-effectiveness of a source of evidence must be determined by weighing all of these variables (cost, relevance, risk, behavioral constraints). If two procedures appear equally effective, the less costly one should be employed. The implications of the measurement based approach, as illustrated by the evaluation of inventory observation, are addressed in the final section. Avenues for future research and conclusions are then presented.

Implications and Avenues for Future Research

From the illustration several implications of the measurement based approach are brought forth. First of all, the systematic nature of the process is displayed. The approach requires specific statements as to assertions, measurement criteria, methods of testing effectiveness, and overall considerations in arriving at a conclusion. Secondly, the effectiveness of a procedure is subject to empirical testing.

The analysis indicates several hypothesized tradeoffs in relying on inventory observations:

(1) unknown validity;
(2) unknown reliability;
(3) significant costs;
(4) high relevance; and
(5) behavioral considerations.

Observation is traditionally considered among the most competent forms of evidence (Windel, 1961, SAS #1, Section 330, 1973). The measurement based approach analysis suggests that there may be important validity problems in relying on such evidence. Specifically, do the auditors assigned to observe the count and take test counts have the expertise to identify various inventory items? For example, can an auditor correctly differentiate between types of electronic printed circuit boards or a transistor and a capacitor? Often the auditors performing such tasks have limited technical knowledge in the client's industry. Obviously, the ability of the auditor to identify the inventory and, thus, the validity of this evidence source varies among industries. The illustration indicates that the validity of the procedure should be empirically tested when in question. An important general hypothesis, thus, emerges from this analysis for future auditing research:

- Inventory observation may produce evidence of limited validity.

The heuristic evidence evaluation approaches discussed earlier tend to lead auditors to accept inventory observation as a highly compelling form of evidence. A similar possible misperception regarding the apparent strength of accounts receivable confirmations was alluded to earlier. It is of interest to note that both inventory observation and accounts receivable confirmations are required under generally accepted auditing standards. Such requirements may have resulted in unwarranted perceptions of the quality of these forms of evidence.

Another implication of the approach is that alternate evidence sources should also be evaluated when a decision is not evident. Alternate sources to inventory observation were noted earlier.

Several additional avenues for future research in this area appear promising. An obvious extension would entail attempting to apply the approach to evaluate alternate evidence sources in practice. Much work needs to be done to operationally define and obtain agreement on the measurement of the criteria presented in this paper. The problem of the interrelationship of various audit evidence is not addressed in this study. Another significant area of research would be to use the approach to identify overlapping, duplicate forms of evidence that may be unnecessary and, thus, lead to inefficiencies in the audit.

The purpose of this paper is to introduce the measurement based approach as a systematic means of evaluating audit evidence. Grounded in measurement theory and the scientific method this approach appears to offer greater rigor and precision than traditional heuristic evidence evaluation procedures. Further research in applying and refining the approach is, thus, greatly encouraged and needed.

Footnotes

1. For example: see Mautz and Sharaf (1961); Mautz, (1964); Arens, (1970); AAA ASOBAC (1971); Kissinger, (1974); Toba, (1975).

2. Evidence evaluation is also a significant concern in many other disciplines such as law and history. See Mautz and Sharaf (1961, p. 76) for a comparison of evidence approaches in various fields.

3. Although some significant differences exist between information systems in general and audit or measurement systems in particular, this paper emphasizes their similarities. Each system is concerned with the development of data which meets both factual and purposive objectives. Rather than mix terminology, our discussion relies primarily upon measurement concepts and definitions. The basic concepts are developed in Mock (1976) and Mock and Grove (1979).

4. In the statistical sampling literature (Vanasse, 1976; Robertson, 1976) the term "reliability" is used to indicate the confidence level provided of making a correct decision given sample results, i.e., the representativeness of the sample or $1 - \alpha$. This concept of reliability actually provides a measure of decision *risk* and does not conform to the precise meaning adopted in measurement theory, as defined earlier on page 18 (Mock and Grove (1979). The approach presented in this paper corresponds closely with the constructs of measurement theory.

References

Ackoff, R. L., *Scientific Method* (John Wiley, 1962).

AICPA Auditing Standards Board, *Financial Statement Assertions, Related Audit Objectives, and the Design of Substantive Tests.* Exposure Draft (American Institute of Certified Public Accountants, December 31, 1979).

American Accounting Association Committee on Basic Auditing Concepts, "Report of the Committee on Basic Auditing Concepts," *Supplement to the Accounting Review,* 1972.

American Institute of Certified Public Accountants, *Statement on Auditing Standards No. 1* (AICPA, 1973).

Anderson, H. M., J. Giese, and J. Booker, "Some Propositions About Auditing," *Accounting Review* (July 1970).

Ashton, R., "An Experimental Study of Internal Control Judgments," *Journal of Accounting Research* (Spring 1974).

Elliott, R. and J. Rogers, "Relating Statistical Sampling to Audit Objectives," *The Journal of Accountancy* (July 1972), pp. 46-55.

Ijiri, Y., *Theory of Accounting Measurement,* AAA Studies in Accounting Research No. 10 (American Accounting Association, 1975).

Joyce, E., ''Expert Judgment in Audit Program Planning,'' *Studies on Human Information Processing,* Supplement to *Journal of Accounting Research* (1976).
Kerlinger, F., *Foundations of Behavioral Research* (Holt, Rinehart and Winston, 1973).
Kinney, W., ''Decision Theory Aspects of Internal Control System Design/Compliance and Substantive Tests,'' *The Journal of Accounting Research Supplement* (1975), pp. 14-29.
Kissinger, J., ''A General Theory of Evidence as the Conceptual Foundation in Auditing Theory: Some Comments and Extensions,'' *The Accounting Review* (April 1977).
Libby, R. and B. Lewis, ''Human Information Processing Research in Accounting: The State of the Art,'' *Accounting, Organizations and Society* (1977).
Mautz, R., *Fundamentals of Auditing* (John Wiley & Sons, 1964).
Mautz, R. and H. Sharaf, *The Philosophy of Auditing* (American Accounting Association, 1961).
Metcalf Report . . . See United States Congress, Senate.
Mock, T., *Measurement and Accounting Information Criteria,* Studies in Accounting Research No. 13 (American Accounting Association, 1976).
Mock, T. and H. Grove, *Measurement, Accounting, and Organizational Information* (Wiley, 1979).
Mock, T. and J. Turner, *Internal Accounting Control and Auditor Judgment,* Audit Research Monograph No. 3 (American Institute of Certified Public Accountants, 1980).
Moss Report . . . See United States Congress, House.
Peat, Marwick, Mitchell & Co., *Research Opportunities in Auditing* (Peat, Marwick, Mitchell, 1976).
Robertson, J., *Auditing* (Business Publications, Inc., 1976).
Schandl, C., *Theory of Auditing* (Scholars Book Company, 1978).
Scott, W., ''A Bayesian Approach to Asset Valuation and Audit Size,'' *The Journal of Accounting Research* (Autumn 1973), pp. 304-330.
Slovic, P. and S. Lichtenstein, ''Comparison of Bayesian and Regression Approaches to the Study of Information Processing in Judgment,'' *Organizational Behavior and Human Performance* (November 1971).
Sorkin, H. and K. Meuwissen, ''A New Technique in Confirmations: The Expanded Field,'' *The Internal Auditor* (October 1978), pp. 88-92.
Sneed, F., *Parallelism In Two Disciplines* (Arno Press, 1978).
Toba, Y., ''A General Theory of Evidence as the Conceptual Foundation in Auditing Theory,'' *The Accounting Review* (January 1975), pp. 7-24.
Tracy, J., ''Bayesian Statistical Methods in Auditing,'' *The Accounting Review* (January 1969), pp. 90-98.
Turner, J. and T. Mock, ''Economic Considerations in Designing Audit Programs,'' *Journal of Accountancy* (March 1980).
United States Congress, House. Subcommittee on Oversight and Investigation, Chairman Rep. J. Moss, *Federal Regulation and Regulatory Reform* (October 1976).
United States Congress, Senate. Senate Subcommittee on Reports, Accounting and Management, Chairman Sen. L. Metcalf, *The Accounting Establishment* (November 1977).
Vanasse, R., *Statistical Sampling for Auditing and Accounting Decisions: A Simulation* (McGraw-Hill, 1976).
Weber, R., ''Auditor Decision Making on Overall System Reliability: Accuracy, Consensus, and the Usefulness of a Simulation Decision Aid,'' *Journal of Accounting Research* (Autumn 1978).
Windal, F., ''Standards of Reliability for Audit Evidence,'' *The New York Certified Public Accountant* (June 1961).
Wright, A., *An Examination of the Effect of Environmental Cues on Audit Judgments* (Ph.D. dissertation, University of Southern California, 1979).

Discussant's Response to An Investigation of a Measurement Based Approach to the Evaluation of Audit Evidence

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The paper by Mock and Wright contains the kernel of a good idea which if more rigorously defined and/or redirected might enhance the auditor's ability to anticipate and control potential threats to the validity of evidential inferences in auditing. However, the paper may implicitly lead some readers to over value the benefits from attempting to "objectively measure" the validity and reliability of audit procedures.

For the most part I will discuss limitations associated with the scope, findings, and conclusion of this paper. Doing so will provide the opportunity to explore alternative findings and conclusions that might result from elimination or relaxation of limitations or oversimplifications in the Mock and Wright study. My objective in exploring limitations and simplifications are two. One of my objectives is to clarify the overall performance evaluation criteria for an audit. The other objective is to broadly explore the fundamental heirarchy of inference and decision in auditing. This hierarchy provides a framework for relating evidential matter (through inductive inference) to audit conclusions, to the overall goals of an audit and to the performance of a professional firm.

To accomplish these objectives, I will first set out the purpose and method of the Mock and Wright study as I understand them. I will then organize my comments accordingly.

Concerning Purpose and Method

This study proposes an investigation of a measurement-based approach to the evaluation of audit evidence. This investigation is accomplished by:

1) Establishing a framework for the audit process.
2) Identifying a role for evidence evaluation within that framework.
3) Assessing the ability of existing approaches to perform the evidence evaluation role *required by that framework.*
4) Outlining an alternative evidence evaluation scheme whose performance in the *required evidential evaluation rule* dominates the performance of existing approaches with regard to the scientific criteria of rigor and precision.
5) Illustrating (synthetically) the use of this alternative (measurement based) approach.

Concerning the Audit Framework

I am in essential agreement with Mock and Wright with respect to the goal of an audit. We agree that the goal of an audit is to, in Mock and Wright's words:

> Independently test whether financial statement assertions appear warranted based on evidence accumulated, and, thus to express an overall opinion as to the fairness of the financial statements.

We may disagree, however, as to the implication of this goal on measuring audit performance. The Mock and Wright model seems to reduce this goal to a single criterion measure—success or failure in verifying or refuting financial statement assertions at several levels of reduction.

The primary dilemma encountered by any audit process developed from their model is a simple one; but one with important implications. The dilemma follows: no single criterion can fully express success or failure of a professional firm or of an audit, even though a single decision must be reached in each engagement. At best therefore, the audit process must rely on some composite of several criteria to direct and evaluate evidential relationships, inferences and conclusions.

Perhaps it is not widely known or understood that a professional organization such as a public accounting practice is not appropriately judged exclusively by either the non-monetary outcome assessments typical of not-for-profit enterprises nor by the single and all encompassing criterion of profit so widely applied to business enterprises. Just as it is unproductive to judge a professional firm's performance on the basis of profitability so too is it unjust to evaluate professional performance based exclusively on the effectiveness (in the scientific sense of rendering a correct or incorrect opinion about financial assertions) of each engagement.

The audit goal statement does not suggest that audit performance be adjudged *exclusively* by whether or not the opinion was correct. If it did then considerations related to the *appropriateness* of the audit conducted, and the *efficiency* of the audit would matter not in adjudging audit performance. These considerations would be relegated instead to the role of "firm criteria" as has been done by Mock & Wright. At all levels of criterion reduction, appropriateness and efficiency would be simple intervening variables imposed in the interest of self-interest by the auditor. In such circumstances the measure of audit success would be an absolute one based on congruence (or lack of same) between the truth (veracity) or falsity of financial statement assertions and the related support or lack of support for those assertions by the audit report. As a result terms such as *warranted* assertion and *opinion* (based on reasonable degree of certitude) would be forced out of audit goal statements.

I believe that the customary and agreed upon audit goal statement should lead to composite criteria which measure not only effectiveness, but *appropriateness* and *efficiency* as well. As used here, effectiveness may be measured by whether a given audit report has veracity for a given financial statement. Appropriateness deals with whether the audit was properly conducted. Efficiency compares resource consumption to proper performance norms. At one level of reduction, appropriateness requires adherence to professional standards. Similarly, efficiency might reduce to maximal cost containment.

A fuller set of criteria, such as the triad just defined, correctly leads to audit process models which reduce evidential requirements to more than simple financial assertion objectives. Consideration in such models is correctly given at the *first level of reduction* to such criteria as (and measures for) strategic and operational threats to financial statement integrity; the detection of appropriate professional responsibilities; and professional viability. At lower levels of reduction these criteria may in turn suggest assessments (measurements) related to the degree of credibility of assertions, material error limits, etc. More importantly multiple criteria provide for cross fertilization. Cross fertilization allows the auditor to consider determining the potential for material error as it might relate to specific threats, and to allocate resources accordingly, not in the interest of self-interest but in order to achieve congruence with the agreed upon and well established goal of auditing.

Acceptance of efficiency and appropriateness in the composite criteria set for audits also suggests that dynamic branching and bounding can and should be used in pruning down all the alternative combinations of procedures and techniques which could be employed to achieve particular audit objectives. Such a conclusion would make it unnecessary—even inappropriate—to conduct such an extensive and rigorous an evaluation of alternatives as suggested by Mock and Wright.

In my opinion over allegiance to the single criterion of veracity in audit result has led Mock and Wright to a model (see their Figures 2 and 4) of the audit process which at best deemphasizes (and perhaps ignores) the role of evidence in planning for an audit.

The paper appears to suggest that factors such as the nature of items examined, materiality, risk, and the competence of evidence available are merely matters of judgement. Undertaken perhaps without supportative evidence. In fact, however, there are fairly extensive evidential searches ranging from "knowledge-of-the-business" to analytical review which support these judgments. Furthermore, these judgments are continually reevaluated and programs redesigned accordingly as audits progress.

Essentially then, the Mock and Wright study downplays the role of evidence in structuring audits and *formulating* assertion at the testing level. It does so because it deemphasizes the role of appropriateness and efficiency as criteria inherent in overall audit goal attainment.

Concerning the Role of Evidence

The role of evidence is to support or contribute to a result. A result (even a 'fact') is meaningful only as it can be determined to predict or measure some criterion. It is therefore no more relevant to goal assessment than is the criterion itself.

The principal problem in auditing is *not* in selecting and calibrating test procedures at the 'factual' level. Rather the principal problems are 1) searching for goal relevant criteria and means of combining or generalizing attributes (data points) about specific occurrences or conditions into results which can be combined in turn to measure the criteria *and* 2) coping at the same time with the practical difficulty of being incorrectly adjudged not on the long-run effectiveness of a professional firm, but rather on a short-run engagement-by-engagement basis which is fundamentally incongruent with the culturally well established goal of attestation. Unfortunately, the single criterion model of Mock and Wright exacerbates both of these problems, in order to focus on problems of selection and calibration. Selection, calibration and similar issues brought to the forefront by the Mock and Wright model are not unimportant. But they should not be resolved at the expense of more important issues. Selection, calibration and validation of individual measures at the factual level of reduction are dominated by goal relevance and overall evaluation problems not for intrinsic reasons, but because an occurrence, event, condition or even an inferred result from such factual data can frequently be far removed from and/or minute with respect to its impact on overall evaluation of the fairness assertion and on overall performance. (Similar problems arise in other disciplines as well [Smith].)

For example, Mock and Wright mention that in experimental study, receivables confirmations have been shown unreliable with regard to the valuation objective (valuation assertion). But just how important is such a conclusion? Of what consequence is it?

Shall the auditor understand this potential for bias with respect to valuation and consider this flaw when assessing the likelihood that a material overstatement of receivables might be missed by *this* procedure when arriving at a composite result concerning the valuation assertion? Shall he conduct field experiments on the veracity of his clients' customers in hopes of isolating and measuring the *extent* of potential bias associated with the application of confirmation to the population of receivables at hand? Shall he run the risk of generalizing from (i.e. assuming the external validity of) the results of confirmations with respect to these characteristics; or shall he in the interest of efficiency simply be content to confine his generalization of results from confirmations to the existence objective (with which he can usually be fairly comfortable as demonstrated by a recent study) [Ashton and Hylas]?

In many audit circumstances a rough cost/benefit analysis of such alternatives will probably eliminate those courses of action which are most closely allied with the measurement-based approach of Mock and Wright.

Concerning Arguments Against Contemporary Evidential Evaluation Schemes

There are four primary criticisms advanced by Mock and Wright regarding the contemporary evidential evaluation schemes they reviewed. These criticisms are:

1. Concepts are vague and not operational.
2. Measures of criteria such as validity are not defined or set forth.
3. Contemporary approaches are not scientific, and systematic. Both the reliability and validity of evidence evaluated under contemporary approaches are open to question.
4. Terminology is confusing. For example, validity is said to be directly related to reliability, but such concepts have *distinct separate scientific meanings.*

As to the first of these four criticisms, I agree that concepts of evidence evaluation in auditing are vague but I disagree with the assertion that auditing concepts are *not* operational. They are merely subject to various operational interpretations. They are flexible enough to enable different auditors to achieve ends of similar value by *different* combinations or styles of evidential relationships. Of course, whether such flexibility is dangerous or desirable remains a moot question.

As to the second criticism, I agree. Measures of relevant evidential criteria are not set forth by contemporary audit evaluation schemes. Again, however, this may suggest that individual auditors' styles may dominate choice of measures without necessarily denying adequacy of performance. This is certainly an area in need of further investigation, by those wise in the ways of organizational behavior.

The first two criticisms of contemporary auditing provide fertile ground for research. The third criticism however, seems misdirected. The audit approach is not that of science, nor should it be given our composite criteria for success. Furthermore, to imply that the auditor is not systematic (presumably because he is not scientific) is unwarranted.

The essential first step in any discipline or science is the determination and conceptualization of criteria relevant to the goal. Most contemporary audit processes are systematic in attempting to employ criteria, results and evidential inference relationships that are relevant to the composite criteria I mentioned.

I do not believe that the relevance of an evidential chain is as stated by Mock and Wright, "*dictated* by a decision problem or decision context and therefore depends on the particular audit assertions which are being evaluated." If this were so then the auditor's goal, like that of the scientist, would be exclusively the verification or denial of hypotheses and he would appropriately be adjudged by success or failure in ferreting out truth. As established earlier, however, the auditor is not properly evaluated in this way. The important question in auditing is not how to eliminate the question of whether an hypothesis is true (as it is in science) but rather to structure resolution of this question in each audit engagement, in a manner consistent with the composite criteria of appropriateness, efficiency, *and* effectiveness.

The final (fourth) criticism is one with which I agree. Terminology in auditing is imprecise. However, I do not believe the "scientific" measurement-based approach can end such confusion by distinctly and separately defining "validity" and "reliability." Indeed, it may not be proper even in science to distinctly or separately define validity and reliability.

To quote Kerlinger, "The subject of validity is complex, (and) controversial . . . it is not possible to study validity without sooner or later inquiring into the nature of one's variables." [Kerlinger, p. 444]. In auditing this inquiry would bring us to the evidential criteria debate concerning appropriateness and efficiency as well as effectiveness.

Distinctive definition. In reviewing research methods literature, I discovered in reading about validity and reliability the following alternatives for "validity" in science: Content validity, predictive validity, construct validity, convergent validity, discriminant validity, external validity, internal validity, and statistical validity. I eliminated still other forms which were not clearly distinct from one or more of the above. This same review provided several reliability definitions as well. The essence of all this is summed up by John Campbell, an eminent behavioral scientist: "nobody needs to be reminded that there is no such thing as *a* reliability or *a* validity." [Campbell, p. 220]. Perhaps not, but auditors ought to be initially informed about this dilemma before adopting a measurement-based approach.

Separation of validity and reliability. Several behavioral science sources consulted stated that validity and reliability are not separate at all but rather representative of ends of a continuum concerned with representations about measurements. According to this view the problem of reliability turns on the extent to which scores on a sample of observations can generalize to the class (population) of observations to which they belong.

For example, the reliability of internal control evaluation *procedures* might be thought of as the extent of agreement between different evaluators and operationalized by comparing internal control questionnaire results compiled by an internal audit staff member from time to time on repeated reviews of a stable system. (Under control conditions involving limitations on access to prior audit work, etc.).

Alternatively, we might operationalize reliability of control evaluation by including different results, all at the same level of evidential reduction such as questionnaire results, flowchart analysis, and attribute test results. In this case reliability could be viewed by some as the variance among these several indicators and any associated inferences about the accuracy of the control evaluation. Others would view this second approach as a means for determining the validity of the separate methods based on whether the measurement results converge one with the other.

Clearly then, only to the extent that we can agree on the content of the structure for the audit evidence evaluation chains of inference and decision can we agree as to the significance of a particular attempt to meaningful operationalize the notions of reliability and validity—or is it representativeness?? As previously noted the preeminent problem will still be one of criterion(ia) validity (or meaningfulness as addressed by Mock and Wright).

Concerning the Illustration

I have only limited comment here. As an illustration of an operational process within the context of an audit the example given is obscure. It is impractical to conduct the test required in a single audit. Yet I question the generalizability of the inventory experiments beyond the context of a single engagement. Even within a line of business, factors such as channels of distribution, warehousing techniques, financial policies, etc. make generalization risky.

Conclusion

The central premise of the Mock and Wright paper is that the concepts of validity and reliability as known in science can be used to improve the quality of evidential inference in auditing. I believe that this notion merits pursuit. However, we should choose avenues of pursuit different from those emphasized by implication or illustration in the work of Mock and Wright.

In my opinion, we should focus initially on identifying candidate procedures which hold promise with regard to construct validity. In auditing this involves searching for multiple criteria which are goal relevant in the audit context. These multiple criteria in turn should control our search for procedures (measures) relevant to the audit goal. Frequently in auditing the search must be carried through several levels of reduction involving a complex chain of data, results, and implications. In this process construct validity, the search for rigorous definition of potential causes and effects so that tailoring of evidential procedures can logically (deductively) be thought to be relevant to the goals and criteria of the audit, is paramount. It must be noted that even within this dimension of validity there is a role for inductive (empirical) studies using such techniques as factor analysis, process tracing and convergent correlation studies to investigate and confirm hypothesized (deduced) relationships within the evidential inference chains in auditing. There is work to be done here which in my opinion is important to the core of audit theory and practice and to the ultimate meaning of audit evidence. Such study is far more urgent than studies of the relevative reliability or predictive validity of alternative audit procedures, whose contribution to audit inference and decision even under ideal conditions is often far removed from the criteria they serve.

I believe that the full meaning of much audit evidence is obscured by questions of construct validity and that the threats to external validity associated with much of the research suggested by the Mock and Wright illustration will severely restrict the generalization of results concerning measures of the reliability and validity of data gathering audit techniques. Therefore, I recommend an alternative direction for empirical study in auditing. I call not principally for pursuit of reliability and validity measurements for audit techniques but for fuller delineation and development of threats to reliability and validity of evidential inference in auditing so that the potential source of such threats can be more fully known, considered, and avoided or controlled when designing audit programs.

References

Ashton, R. H., and R. E. Hylas. "The Return of 'Problem' Confirmation Requests by the U.S. Postal Service." *The Accounting Review* (forthcoming, October, 1980).

Campbell, J. P. "Psychometric Theory." *Handbook of Industrial and Organizational Psychology.* Edited by M. Dunnette. Chicago: Rand McNally College Publishing Co., 1976.

Kerlinger, F. N. *Foundations of Behaviorial Research.* New York: Holt, Rinehart and Winston, Inc., 1964.

Smith, Patricia C. "The Problem of Criteria." *Handbook of Industrial and Organizational Psychology.* Edited by M. Dunnette. Chicago: Rand/McNally College Publishing Co., 1976.

Authors' Reply to Discussant's Response An Investigation of a Measurement Based Approach to the Evaluation of Audit Evidence

Theodore J. Mock and Arnold Wright

The purpose of this reply is to help clarify the scope and objectives of our paper. Many of Professor Ward's comments appear to have resulted from a confusion as to the intended purpose of the paper. Thus, a restatement of the objectives of our study seems warranted. Additionally, we would like to take the opportunity to respond to a number of other important observations by Ward.

Purpose of the Study

Ward begins his discussion by a consideration of the goal of an audit and the issue of measuring audit and firm performance. He states that audit performance should be judged by three criteria:

(1) appropriateness,
(2) efficiency, and
(3) effectiveness.

Ward concludes that the approach presented in the paper "seems to reduce this (audit performance) goal to a single criterion measure—success or failure in verifying or refuting financial statement assertions."

To restate, the primary focus of the study is stated in our paper to be ". . . to investigate the usefulness of a measurement based approach as an integrative, operational *process to evaluate audit evidence*" (emphasis added). The specification of appropriate performance measures for an audit of a firm, although important issues, are outside the scope of the study. Given that auditors must evaluate the competency of evidence to establish reliance on such information, the study advances an approach that may be used to systematically judge the relative qualities of various evidence sources.

Ward's three audit performance criteria are enlightening; however, there does not appear to be a consensus among practitioners or academics that such criteria are sufficient. Scholars have wrestled for many years with the appropriate goals for the private enterprise firm itself, e.g., profit maximization, survival, maximizing firm share prices, societal responsibilities. There continues to be wide disagreement as to the proper objectives for the firm. Then, what are the chances that accountants would agree on the criteria established by Ward? Are there other important criteria that should be considered such as ethics or development of staff? What about the difficulties of weighting the relative importance of the criteria themselves? Additionally, Ward's criteria are vaguely defined and do not appear operational. For example, how is "appropriateness" to be measured?

The measurement based approach does not ignore the importance of multiple criteria in evidence assessment; such factors as ''appropriateness and efficiency'' are incorporated in step 4 of the process. These criteria are considered along with several others, since, as discussed, there is no universally agreed upon criterion of audit performance.

Ward does concur that ''effectiveness'' is a vital criterion. Thus, there is a real need for the evaluation of evidence in order to appropriately render an opinion regarding management assertions. The measurement based approach addresses that need.

Ward's apparent resolution of the evidence assessment problem is stated as:

> Acceptance of efficiency and appropriateness in the composite criteria set for audits also suggests that *dynamic branching and bounding* can and should be used in pruning down all the alternative combinations of procedures and techniques which could be employed to achieve particular audit objectives.

This process of ''dynamic branching and bounding'' is vague and unspecified and offers little hard guidance to an auditor in judging the strength of various sources of evidence.

Other Issues

Ward indicates that the measurement based approach ''de-emphasizes (and perhaps ignores) the role of evidence in planning for an audit.'' This statement directly contradicts perhaps the major envisioned role of the approach: to provide *ex ante* information on the quality of various forms of evidence through field or other testing techniques. Such findings would provide guidance to auditors in *designing audit programs* and interpreting audit results.

Ward suggests that the measurement based approach is almost solely based at the factual level. ''The central premise of the Mock and Wright paper is that the concepts of validity and reliability as known in science can be used to improve the quality of evidential inference in auditing.'' The approach addresses the factual *and purposive* views and does not suggest at all that evidence be evaluated solely on factual considerations. This confusion may have resulted from the illustration, which does tend to focus perhaps unduly on the factual level.

Ward notes that receivable confirmations have been found to be unreliable in empirical studies. He then poses the important questions of: ''But just how important is such a conclusion? Of what consequence is it?'' Such findings indicate that the significant reliance placed on confirmations may be misplaced; the auditor may be underestimating the ultimate risk on an engagement. Recognizing this exposure, alternate procedures can then be evaluated. Confirmations may be supplemented or replaced by alternate tests in designing programs. Such alternatives are now being actively investigated such as confirmation of individual invoices (Krogstad and Romney, *Journal of Accountancy,* February 1980). Ward perhaps answered his own questions at the conclusion of his discussion by saying:

> Therefore, I recommend an alternative direction for empirical study in auditing and call for . . . fuller delineation and development of *threats to reliability and validity* of evidential inference in auditing so that the potential source of such threats can be more fully known, considered and avoided or controlled when designing audit programs.

The comment that the paper implies the audit process itself is not systematic or scientific is unfounded. The study does not attempt to evaluate the entire audit process. Auditing is certainly systematic. The paper indicates that in the one area of evaluating audit evidence there does not appear to be an *integrated, scientific approach* present. Instead, heuristic rules, various concepts, learning and judgment predominate.

We concur that the statement in the paper indicating validity and reliability ''have distinct, separate scientific meaning'' was unjustified. The point we wished to make would have perhaps been better stated as: ''Reliability and validity are indeed related but are not the same and are on two ends of a spectrum.'' We also agree that there are a number of definitions in the literature of these concepts. However, reliability and validity still provide normative guidelines in evaluating the competency of various alternate procedures. Agreement by the auditing profession on one or a select few operational definition(s) of these terms, such as those presented in the paper, can lead to valuable evidence assessment criteria.

Conclusion

Dr. Ward presents a number of interesting ideas and issues for the auditing profession. He suggests that the measurement based approach does not properly address the three audit performance criteria of appropriateness, effectiveness, and efficiency but instead simplifies by relying on a single criterion, success in verifying assertions. The purpose of the paper is not to specify the performance measures for an audit or a firm. Rather, the objective is to address the complex problem of evaluating the strength of audit evidence. Accordingly, an integrated approach is presented based on concepts in measurement theory. Ward's proposed performance criteria are, of course, subject to dispute and a matter of opinion. It is believed these criteria, among others, may be incorporated into the measurement based approach.

Nonetheless, the performance framework suggested by Ward does not obviate the real need for guidance on the evidence assessment judgment. This vital need was the reason for the formulation of the recent AICPA Audit Evidence Task Force. Hopefully, the measurement based approach has provided a beginning by offering a systematic evidence evaluation process.

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A Look at the Record on Auditor Detection of Management Fraud

Donald R. Ziegler
Price Waterhouse & Co.

Concluding that a perfect game has been pitched is a relatively simple matter. If the winning pitcher goes a full nine innings, during which his team has scored at least one run, and the first twenty-seven batters on the losing team fail to reach first base, we have a "perfect game." A single hit ruins a "perfect game" and even though the pitcher can claim 96.4% effectiveness, few people will long remember his performance.

It's quite the opposite where auditors and management fraud are concerned. Turn in a "perfect record" and get no credit for it—that's what auditors are paid for, isn't it? But turn in a 96.4% performance and you've made it into the Hall of Fame.

When it comes to detection of management fraud, what is a perfect record? In its strictest sense, it can only mean that every attempted fraud situation has been thwarted by the auditor. Similarly, an imperfect record is one in which an attempted fraud was successfully perpetrated without detection by the auditor.

Until such time as would-be perpetrators of fraud are required to report each attempt (perhaps to some governmental agency), there is no way to determine how perfectly or imperfectly auditors have performed. In the meantime, auditors will be presumed to have perfect records in the absence of evidence to the contrary.

Undoubtedly, a number of management frauds have been successfully perpetrated without detection by auditors or others. It's only when the fraud comes to light that the possibility of audit failure becomes an issue. What this means is that some of the apparently perfect records may not be so perfect after all.

"Failures" Widely Publicized; "Successes" Little Noted

While alleged audit "failures" have received widespread publicity in recent years, little has been written about audit "successes." The reason is quite simple; unless the fraud or alleged fraud becomes a matter of public record the auditor can get no credit for its detection.

Frauds or attempted frauds that have been detected by auditors during an ordinary examination (directed at the expression of an opinion on financial statements) rarely become part of the public record. This is because remedial action is taken prior to the time the audit report is issued.

Since their reports are directed to the integrity of the financial statements and not (at least at the present time) to the integrity of management, auditors have no basis or requirement for publicly reporting that a fraud was perpetrated or attempted. Similarly, management that has perpetrated or attempted to perpetrate fraud can hardly be expected to come forward and report that alert auditing detected it.

Even if I thought some benefit could result from quantifying specific past performances in the area of fraud detection (which I don't), there is no valid basis for tabulating successes and failures.

So much for the record *of* auditor detection of management fraud. Let's now turn to the record (i.e., the known or recorded facts) *on* auditor detection of management fraud. This record consists essentially of:

1. Information concerning auditors' responsibility for detection of management fraud, and
2. Information concerning specific past fraud and alleged fraud situations.

Differing Views on Auditors' Responsibility

What is the auditor's responsibility for the detection of fraud? The answer to this question depends upon the person of whom it is asked. Ask an auditor who is up-to-date on professional literature, and you will be told that the responsibility for detection of fraud extends only to those frauds which would result in a material misstatement of financial statements. Ask certain judges, Congressmen or regulatory agency officials and the answer is likely to be that auditors are responsible for detection of *all* management fraud.

The different answers can be attributed to different perceptions as to the standards against which auditors' performance should be measured. In the area of fraud detection, is it sufficient to simply comply with generally accepted auditing standards ("GAAS"), or is a higher standard of performance to be the benchmark? Auditors believe that they should be held accountable for failure to detect fraud that materially affects a client's financial statements only if such failure results from an inadequate performance, measured by GAAS. Others have often taken the position that compliance with GAAS is not enough.

While there is always the risk that the auditors will be held to a higher standard in a particular situation, I think it is reasonable to assume that auditors who can demonstrate that their work was performed in accordance with GAAS should have little to worry about when it comes to undetected management fraud.

GAAS and Fraud Detection

Having concluded that, in the area of fraud detection, all the auditor need do is comply with GAAS, we turn to GAAS and look for the heading "How to Detect Management Fraud." Since, unfortunately, there is no such heading, we must look elsewhere to see what GAAS says about fraud detection.

A good place to commence looking is Section 4 of The Report of the Commission on Auditors' Responsibilities (commonly referred to as the Cohen Commission Report) which was issued in January 1978. This Section, entitled *Clarifying Responsibility for the Detection of Fraud* presents a reasonably concise dissertation on the history of auditors' responsibility for fraud detection as perceived by auditors and by users of audited financial statements.

Contrary to popular belief, the auditing profession wants to assume as much responsibility for fraud detection as can reasonably be expected by users of financial statements. Toward this objective, it has taken a number of significant positive steps in recent years. One of them was the establishment by the AICPA of the previously mentioned Commission of Auditors' Responsibilities. Among other things, the Commission was charged with considering whether there was a gap between public expectations and needs and auditor performance, and to make appropriate recommendations if a gap were determined to exist. The final report presents a number of recommendations on a standard of care for fraud detection.

Other steps taken by the AICPA include the issuance of several Statements on Auditing Standards ("SAS's") which were intended to clarify auditors' responsibilities in the fraud detection and related areas.

Statements on Auditing Standards

The first of these SAS's was SAS No. 6—Related Party Transactions (1975). Its purpose was to provide guidance as to procedures to be followed in identifying and evaluating disclosure of related party transactions. It was issued in the aftermath of a number of publicized cases concerning alleged management fraud involving non-arm's-length transactions with controlled or otherwise related entities. The substance of this SAS is proposed to be incorporated in a pending revision of The Securities and Exchange Commission's Regulation S-X. It is of interest to note that SAS No. 6 effectively established disclosure requirements that would more appropriately fall under generally accepted accounting principles, but as to which generally accepted accounting principles were silent. Today, it continues to be the only authoritative guidance as to the accounting for and appropriate disclosure of related party transactions.

In 1977, four SAS's which should be of interest to persons concerned with fraud detection were issued. Perhaps the most important of these is SAS No. 16—The Independent Auditor's Responsibility for the Detection of Errors or Irregularities. It was issued to clarify existing authoritative pronouncements concerning its subject matter. It acknowledges that ". . . the independent auditor has the responsibility, within the inherent limitations of the auditing process, to plan his examination to search for errors or irregularities that would have a material effect on the financial statements, and to exercise due skill and care in the conduct of that examination . . ." While implicit in prior pronouncements (at least in the views of many, including my own), this is the first time that the professional literature acknowledges that the auditor has a responsibility in an ordinary examination *to search* for fraud which may have a material effect on the financial statements. It was not an easy acknowledgment to incorporate in the literature. What finally tipped the scale, I believe, was the fact that both the courts and the regulatory agencies such as the Securities and Exchange Commission were, in fact, holding the independent auditor to that level of responsibility. With this in mind then, the issuance of SAS No. 16 does not really impose a new level of responsibility, but only acknowledges in writing what the auditor presently perceives and has accepted his responsibilities to be. It is interesting to note, however, that SAS No. 16, while it is the most comprehensive authoritative pronouncement on *fraud,* uses the word only once.

SAS No. 17—Illegal Acts by Clients—provides guidance to an auditor as to actions to be taken with respect to possible illegal acts that come to his attention during an examination of financial statements. It also provides guidance to the auditor as to the attention that should be given, in performing an examination, to the possibility that illegal acts may have occurred. It is somewhat of a companion to SAS No. 16 and is equally concerned with the integrity of management and with possible acts by management which could result in a material misstatement of the financial statements.

SAS No. 19—Client Representations—established a requirement for auditors to obtain certain specific written representations from management as part of an examination of financial statements. It cautions, however, that the representations are not substitutes for auditing procedures which would otherwise be necessary to provide a basis for the expression of an opinion. Insofar as possible fraud is concerned, the potential benefit of requiring written representations is that the requirement may be a deterrent if management knows that ultimately a representation will have to be made in writing to the effect that no fraud has been committed. The value of requiring written representations in this regard has recently been enhanced by legislation which makes it a criminal offense for management to knowingly make a materially false or misleading statement to an auditor in connection with an examination of financial statements.

SAS No. 20—Required Communication of Material Weaknesses in Internal Accounting Control—is, among other things, responsive to the auditor's concern with the possibility that material weaknesses in internal control could be conducive to the perpetration of fraud. While, of itself, the communication of such weaknesses does not provide the auditor with any significant assistance in his current examination of financial statements, the attention given and actions taken by management in respect to such communications may go a long way in the future toward preventing frauds that might otherwise have occurred.

AICPA Standing Subcommittee

One of the recommendations of the Cohen Commission was the establishment of a separate Subcommittee of the AICPA, of which I am chairman. The committee has been designated *The Standing Subcommittee on Methods of Perpetration and Detection of Fraud* (hereinafter referred to as the "Fraud Subcommittee"). It has been given the responsibility of studying and publishing analyses of methods of perpetration and means by which various types of fraud have been detected and to study specific instances of alleged audit failures and to publish the results of such studies if they indicate that new or revised auditing standards are necessary.

The steps that have been taken by the profession provide, in my view, a record of which we can be justly proud. This is not to say that we can be complacent. We can't. We must always be alert to the possibility that financial statements may be materially false and misleading as the result of management fraud.

In March 1979, the Fraud Subcommittee published a list of warning signals to alert the profession to conditions under which increased attention should be directed in an examination of financial statements to the possibility that management fraud may have been perpetrated.

The Fraud Subcommittee is assisting in the development by the AICPA of a continuing professional education program on the subject of management fraud. This program is expected to be made available to state societies later this year.

The Public Record

Finally, the Fraud Subcommittee has been involved (during the two-plus years of its existence) in looking at the public record of past frauds and alleged frauds to determine what is available that may help auditors detect fraud in the future.

One thing that has become quite clear to me, particularly during the past couple of years, is that readily available information (i.e., information contained in SEC releases, courtroom transcripts, news clippings and the like) on past frauds and alleged frauds is not all that helpful when it comes to trying to determine how we should go about developing a plan or program for detecting (or deterring) possible future frauds. At the risk of being criticized for oversimplification, my reading of what's readily available tells me:

1. Watch out for overstated assets and understated liabilities,
2. Be wary of related party transactions,
3. Pay particular attention to large complex transactions, and
4. Get to know your client, his business and his industry before you report on his financial statements.

Not very enlightening, to say the least but very necessary. There is no substitute for healthy skepticism and alertness on the part of the auditor when it comes to possible material fraud situations.

Information concerning fraud or attempted fraud cases that is readily available ordinarily does not go into sufficient detail to give us an insight as to the methods by which the frauds were perpetrated or attempted. What we need to know is which audit procedures or techniques were successful in detecting frauds that were perpetrated and which were helpful in thwarting frauds that were attempted. I believe that a wealth of information concerning methods of perpetration and detection could be obtained from sources that heretofore have either been unavailable, except to parties at interest, or not readily available. What is needed especially are in-depth analyses and understandings of the auditors' successes in the detection of material management fraud in examinations of financial statements.

Difficulty in Obtaining Non-Public Information

Difficulty in obtaining non-public information has stalled our efforts to provide auditors with much information that would help them to detect management fraud. On several occasions we have requested (in the CPA Letter and in presentations to numerous interested groups) information, disguised as appropriate, concerning management fraud situations. To date we have received no meaningful or helpful response.

While all information supplied to us will be held in strict confidence, we are still looking for a way to guarantee those who provide us with non-public information that it will not be available to law enforcement agencies, plaintiff's lawyers, regulatory agencies or the AICPA's Ethics Committee. Until such time as we're successful, it is somewhat doubtful that much non-public information will come into our possession.

Summary

The Fraud Subcommittee has a long way to go and a lot of work to do if it is to accomplish its overall objective of determining whether there is a need for new or revised auditing standards with respect to the detection of material management fraud. I guess it would be fair to say that we have come about as far as possible in the profession in closing the loop when it comes to the auditor's responsibility for the detection of fraud. In the early 1900's one of the auditor's primary objectives was the detection of fraud; in the late 40's and early 50's, the auditor considered it to be a "responsibility not assumed"; in the 60's he acknowledged that he was responsible for the detection of fraud that would normally be uncovered by an examination performed in accordance with generally accepted auditing standards; and now, in the beginning of the 80's, the auditor has the responsibility *to search* for fraud which may have a material effect on the financial statements. Not quite a 360 degree closing of the "loop", but about as near to it as possible in today's environment.

To sum up, I believe that auditors' won and loss records are not really relevant; that the record of the profession's attention to the subject of management fraud shows that it is keenly aware of and interested in, and has been responsive to, the needs of users of financial statements; and, finally, that much helpful, needed information could be furnished to auditors if only those who possess it would share it with the rest of us.

Discussant's Response to A Look at the Record on Auditor Detection of Management Fraud

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I am pleased to review Donald Ziegler's paper on "A Look at the Record on Auditor Detection of Management Fraud." As chairman of The Standing Subcommittee on Methods of Perpetration and Detection of Fraud, Ziegler speaks from a position of considerable knowledge, and his paper reflects the significant work of that subcommittee. Because I challenge only a point or two in the paper, I have chosen to emphasize and expand several of the points raised. Hence, I would like my remarks to be viewed as complementary to those of Mr. Ziegler.

The matters I have selected for emphasis are the following:

1. My understanding of the meaning of "management fraud."
2. The materiality threshhold for fraud.
3. The relationship of internal control to management fraud.
4. Ziegler's four-point program for fraud detection.
5. Management fraud and implications for research.

The Meaning of Management Fraud

Because "management fraud" contains the adjective "management," the term is meant to be distinguished from fraud in general. While all fraud involves deceit, trickery, or cheating, management fraud connotes special characteristics. In my judgment, management fraud contains three special characteristics as follows:

1. The fraud is perpetrated at levels of management above those to which internal control systems generally relate.
2. The fraud frequently involves using the financial statements to create an illusion that an entity is more healthy and prosperous than it actually is.
3. If the fraud involves the misappropriation of assets, it frequently is shrouded in a maze of complex transactions often involving related third parties.

ASB (Auditing Standards Board), in its discussion of limitations on the effectiveness of internal control, makes the point that controls can be overriden by certain levels of management. In SAS Section 320.34, ASB states as follows: ". . . procedures designed to assure the execution and recording of transactions may be ineffective against either errors or irregularities perpetrated by management with respect to transactions or to the estimates and judgments required in the preparation of financial statements." ASB reaffirms the point in SAS Section 327.09 in which it states: ". . . management can perpetrate irregularities by overriding controls that would prevent similar irregularities by other employees." The implications for auditing appear clear. Whenever the auditor sets about to test for management fraud, little, if any, reliance can be placed on internal control.

When financial statements are used to create an illusion, the input data usually is manipulated to include false or questionable transactions or to include false or questionable judgments with respect to expense allocations or revenue recognition. The incentive for such deceit may be (1) to stave off creditors, (2) to raise investment capital at a cheaper cost than justified, or (3) to provide for subtle misappropriation of assets. With respect to the latter point, the financial statements may be manipulated to increase EPS for the purpose of enhancing the value of share options or management bonuses.

If management fraud involves the misappropriation of assets, it frequently is the case that the fraud is covered by overstated assets just like McKesson-Robbins and its fictitious receivables and inventory. Almost, but not quite. Today the McKesson-Robbins type coverup would be caught by the auditor through accounts receivable confirmation or inventory observation. Hence, the coverup frequently involves complex transactions often involving related third parties. This has made it possible either to confound the auditor or to provide some evidence of *bona fides.*

Hopefully, consideration of the characteristics of management fraud will help place in perspective the audit risks involved.

Materiality Threshhold for Fraud

Ziegler's point is well taken with respect to differing perceptions of the auditor's responsibility for fraud detection. Although the SEC may not believe that the auditor should be held responsible for ALL management fraud, it certainly appears that the materiality threshhold is lower than for other types of errors. For example, the Commission's final rules on application of the Foreign Corrupt Practices Act have been criticized for omitting materiality standards. Perhaps some small comfort can be taken from the following quote in the release (Section 34-15570—February, 1979):

> The SEC believes that the concern expressed with respect to inadvertent and inconsequential errors is unwarranted. The statute does not require perfection, but only that the books, records, and accounts "*in reasonable detail,* accurately and fairly reflect transactions and dispositions of the assets of the issuer."

I say *small* comfort when I read Commissioner John Evans' response to criticism for omission of the materiality standard (*The Week in Review,* Delotte Haskins & Sells, November 30, 1979):

> I do *not* expect to see a positive response in any Commission action at this time. Congress determined not to include the materiality concept in the Foreign Corrupt Practices Act, and for the Commission to engraft it now through a management report requirement could obfuscate that point. Moreover, it might lessen the sensitivity of all of us to what the Act requires.

Although I completely agree with Ziegler that the appropriate degree of audit responsibility for fraud detection should be limited to those frauds having a material impact on financial statements, and although ASB (SAS Section 327.05), clearly makes this point (clarifying ambiguities contained in SAS #1 Section 110.05 08), it now appears that public expectations may have overridden the profession's attempt to establish clear and reasonable limits of responsibility. Hence, I am considerably less optimistic than is Mr. Ziegler that a GAAS audit will be sufficient defense with respect to undetected management fraud. In fact, I believe the profession must face the necessity (1) of distinguishing between financial statement errors involving *bona fides* of transactions or account balances and (2) those involving unintentional mistakes or poor judgment and for developing auditing standards applicable to each type of error. Perhaps reasonable standards would call for auditing in a fraud mode[1] only if indicated by appropriate warning signals. Several lists of such signals exist, but I would commend the listing prepared by the Ziegler subcommittee and published in *The CPA Letter* (AICPA, March 12, 1974, P 4).

The Relationship of Internal Control to Management Fraud

For purposes of discussion, I have assumed that management frauds are perpetrated at levels of management above those for which internal controls systems generally are designed to be effective. Thus, if as a consequence of warning flags, the auditor chooses to test for management fraud, all tests must be substantive and no reliance can be placed on the system of internal control.

In preparing my remarks, I reviewed a number of the SEC's Accounting Series Releases (ASR's) in which the Commission has chosen to spell out the details of cases purported to involve auditing deficiencies.[2] A number of these cases indicated that the auditor placed inappropriate reliance on the client's internal controls. However, inappropriateness was often related to weak controls. This criticism is unfortunate. It misses the point that, with respect to management fraud, control systems are irrelevant. In my judgment, the criticisms should have taken the form that the circumstances called for auditing in the fraud mode and, hence, no reliance should have been placed on the control system. The point is illustrated by ASR #209, in which the Commission states in its conclusion the following:

> When confronted with evidence that an audit client's internal accounting controls are unreliable, independent auditors should employ detailed expanded procedures and insist upon obtaining evidential matter from external sources. In this instance, (the auditor) . . . improperly relied upon the accounting data developed by Tidal. . . .

In my judgment, the conclusion may lead to the unwarranted implication that, had the controls been strong, the auditor could more properly have relied on the accounting data developed by management. The fact is that the frauds were perpetrated by levels of management high enough to override even a strong control system.

Nevertheless, while it currently is inappropriate to rely on internal control when auditing in a fraud mode, because of severe responsibilities imposed on auditors for the detection of management fraud, consideration should be given to whether control standards can effectively be imposed on higher levels of management than are currently contemplated. It may be feasible, for example, to carry the concept of "separation of duties" to higher levels. Thus, the generally recognized functions of general auditor, operations, treasurer, and controller might remain separated and independent to a level even as high as the board of directors.

The feasibility of the foregoing suggestion is at least indicated by data gathered for as yet unpublished research. Among a sample of the companies in the Fortune 500, 17% of the general auditors reported to a member of the board of directors in 1980 as compared to 9% in 1976. Whether raising reporting levels would be effective in deterring management fraud is a question best left to either experience or research. In any event, in my judgment, the matter deserves serious consideration.

Ziegler's Four-Point Program For Fraud Detection

In this section, I am going to challenge another of Mr. Ziegler's conclusions. He lists a four-point program for which he sort of apologizes for whether it is too simple and not sufficiently enlightening. In my judgment, that program is quite enlightening and is made elegant by its simplicity. In order to add emphasis to the points made, I have taken the liberty of repeating the list:

1. Watch out for overstated assets and understated liabilities.
2. Be wary of related party transactions.
3. Pay particular attention to large complex transactions.
4. Get to know your client, his business and his industry before you report on his financial statements.

I would like to address these items in more detail and I will begin with the last one.

Every treatise on epistomology contains the admonition that the conduct of inquiry requires thorough knowledge by the investigator of the matter under investigation. Kerlinger states as follows:

> If one wants to solve a problem one must generally know what the problem is. It can be said that a large part of the solution lies in knowing what it is one is trying to do.[3]

Cohen and Nagel make the point when they discuss the relevance of hypotheses:

> In the absence of knowledge concerning a subject matter, we can make no well-founded judgment of relevance. It follows that valuable suggestions for solving a problem can be made only by those who are familiar with the kinds of connections which the subject matter under investigation is capable of exhibiting.[4]

I assert that the prior knowledge required of the auditor is, at the absolute minimum, a thorough knowledge of the client's business and the client's industry. For example, the question of inventory obsolescence and how to test for it would be very different for a retailer as compared to an airplane manufacturer. My ability to design (and, yes, to carry out) the appropriate test would depend on my knowledge of each client and each industry.

Why am I belaboring such an obvious point? In the ASR's I selected for review, over and over again, the point is made by the Commission that the auditor simply did not understand the client's business. Examples are contained in the following quotes:

ASR #173: . . . the auditors accepted assertions by management concerning the special circumstances of the business involved although presentation of the supposed results presented unusual accounting and auditing problems. In considerable measure this occurred because the auditors were not sufficiently familiar with the business context to assess the representations of management.

ASR #227: The Commission has previously addressed the audit considerations inherent in having a thorough familiarity with the transactions being audited.

ASR #241: The senior accountant assigned to the engagement has no prior experience in auditing broker-dealers and was not provided with an audit program containing specific procedures designed for broker-dealers.

In my judgment, prerequisite knowledge of the client's business is so fundamental to audit inquiry that steps should be taken to assure that such knowledge pervades the entire audit team. I wonder how many staff training programs are directed to specific industries and specific clients. I assert that inclusion of such programs in the training budgets of accounting firms would be cost-beneficial.

Consider now the question of related party transactions. These are specifically covered by ASB in SAS #6 issued in July 1975. A number of the audit failures in the SEC-described cases were attributable, at least in part, to insufficient attention given to the propriety of such transactions. I counted six references to related party transaction with the following quote being typical:

ASR #227: When one party to a transaction is able to influence the operating policies of another party, the risk of the transaction lacking a legitimate business purpose rises substantially. In this regard, the auditors should have intimate familiarity with the business of the client in order to understand the opportunities which may exist for such transactions.

Careful application of SAS #6 should materially reduce the likelihood that those frauds involving related party transactions would go undetected.

Many of the SEC described cases involved large complex transactions. These transactions appear to have been conceived either to have created the illusion of legitimacy or simply to confound the auditor. The essence of the SEC criticism in these cases is that the auditor simply accepted management's representations regarding the underlying events rather than to dig down and obtain the necessary confirming evidence. Frankly, I am somewhat sympathetic with the poor auditors on these engagements. For example, Penn Central (ASR #173) involved almost at the same time not one but eight transactions each of which seemed to me to be truly mind-boggling. In one year, Tidal Marine International (ASR 209) involved five equally mind-boggling transactions.

In one of the Tidal Marine transactions, the auditor was attempting to test the collectability of a receivable from a company named Transoceanic for $1,082,058. In order to satisfy the auditor concerning the collectability of this receivable which had been created from a fictitious revenue transaction, Tidal's management furnished to the auditor an agreement and release involving four affiliated companies. The agreement recited that Tidal owed Barclay at least

$1,082,058, that Barclay owed Panocean $1,094,472, that Panocean owed Transoceanic $1,252,058, and Transoceanic owed Tidal $1,082,058. With certain adjusting payments all of the indebtedness was extinguished and the auditor now had evidence of a collectible receivable.

Transactions of comparable complexity were found in five other cases. It also is interesting to note that many of the highly complex transactions used to deceive the auditor also involved related parties. Thus, the combination appears to be quite devastating with respect to the audit risk of undetected management fraud.

It also is interesting to note that virtually every case detailed by the SEC involved financial statements with either overstated assets or understated liabilities.[5] Overstated assets were either fictitious or overvalued. In many cases, the misstatements either were created or shrouded over by complex related-party transactions. Most of the other cases seemed to involve front-ended revenues, capitalized expenses, and unrecognized liabilities. I hope all of this indicates a continuing role for the balance-sheet audit, which I am sometimes led to believe is on the endangered species list. I hope not. Because, given the fact that management fraud is beyond the scope of internal controls as currently conceived, the balance sheet audit should continue to have a significant role in the audit process.

Management Fraud and Implications For Research

I share Don Ziegler's disappointment with the difficulty of obtaining indepth analyses of fraud cases and auditing procedures which have proven effective in either revealing or thwarting fraud. I would guess that the difficulty stems, not only from the concern for the legal implications, but also the reluctance of people to put in the many hours of work required. Any academic in the room can attest to the meticulous planning and arranging that must be made to get adequate responses to a questionnaire of even modest length or to get persons to serve as experimental subjects. In my judgment, the information being sought by the Ziegler subcommittee would have to be packaged up and be presented to and be "blessed" by the executive committee of every participating accounting firm.

Management fraud also should be a fruitful field for academic research. The work of Albrecht and Romney (including their paper to be discussed in the next session) is particularly encouraging in this respect.

I will be so presumptuous as to list two or three other possibilities:

1. Design and test the effectiveness of internal controls directed to top management.
2. Design simulated frauds to test the effectiveness of alternative auditing procedures.
3. Design and conduct staff training programs directed to understanding the business of specific industries and specific companies. The research might include follow-up tests of the effectiveness of such training.

Summary and Conclusions

1. Management fraud suggests three special characteristics—
   (1) The fraud is perpetrated at levels of management above those for which internal controls generally are designed.
   (2) It frequently involves using the financial statements to create an

illusion that an entity is more healthy and prosperous than it actually is.

(3) If misappropriation of assets is involved, it frequently is shrouded in a maze of complex transactions often involving related third parties.

2. I am less optimistic than is Mr. Ziegler that a GAAS audit will be sufficient defense with respect to undetected management fraud. I fear that public expectations already have overriden the profession's attempt to establish reasonable limits of responsibility.
3. Internal controls generally are not designed to control higher levels of management. Consideration should be given to whether controls can be redesigned to be more effectively imposed on higher levels of management.
4. The four points in Mr. Ziegler's program comprise significant audit standards directed to management fraud. They surely contain the essence of the issues contained in the cases found on the public record.
5. Because undetected management fraud impacts so severely on auditors, aspects of management fraud should be fruitful areas of research both for professional accountants and academics.

Footnotes

1. See W. Donald Georgen, ''Management Behavior—an Auditing Horizon,'' *Auditing Symposium III,* University of Kansas School of Business, 1976. Mr. Georgen suggests the term ''fraud mode'' and the circumstances for auditing in such a mode.
2. Accounting Series Releases issued by the SEC reviewed for this paper are the following:

    ASR#173 issued July 2, 1975.
    ASR#196 issued September 1, 1976.
    ASR#209 issued February 16, 1977.
    ASR#210 issued February 25, 1977.
    ASR#227 issued September 21, 1977.
    ASR#238 issued January 16, 1977.
    ASR#241 issued February 10, 1978.

3. Fred N. Kerlinger, *Foundations of Behavioral Research,* Second Edition, Holt, Rinehart and Winston, Inc., 1973, p 17.
4. Morris R. Cohen and Ernest Nagel, ''The Occasion and the Function of Inquiry,'' *Knowledge and Value,* Second Edition, Edited by Elmer Sprague and Paul W. Taylor, Harcourt, Brace & World, Inc., 1967, p 223.
5. This is not meant to ignore the fact that management may be motivated toward the ''flip side,'' i.e., understated assets or overstated liabilities. For example, smaller companies may wish to ''save'' taxes; energy-related companies may wish to reduce reported profits below the ''obscene'' level.

6

Auditing Implications Derived from a Review of Cases and Articles Relating to Fraud

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Marshall B. Romney*
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For the past two years an interdisciplinary team of researchers[1] has been studying the problem of management fraud. The motivation for the study was threefold: a noted increase in the number of management frauds being committed, an increased awareness of auditors' responsibilities for detecting frauds, and a Peat, Marwick, Mitchell & Co. research grant. The objectives of the research were: (1) to conduct an extensive interdisciplinary review of the fraud related literature, (2) to identify individual, organizational, and societal factors that suggest a high probability of fraud, (3) to partially validate these factors by comparing them to past cases of fraud, and (4) to organize these factors into an early warning system that could be used by auditors in detecting and deterring fraud.

In completing the first objective, four data sources were investigated: (1) over 1500 literature references (books, journal and magazine articles, monographs, newspaper citations, and unpublished working papers) were reviewed,[2] (2) fraud perpetrators and victims were interviewed, (3) 65 organizations concerned with the detection, deterrence, prosecution, or punishment of fraud were visited in person or contacted by mail or telephone, and (4) numerous legal and organizational documents (prison and parole records, Donn Parker's extensive files on computer fraud, and corporate records) were examined.

In completing the second objective, a comprehensive list of all variables which appeared to influence or be associated with the perpetration of fraud was compiled as the data sources were examined. The variables identified were classified into three major categories: societal, organizational, and individual factors. During this process, patterns and relationships among the variables emerged and a tentative model explaining fraud was developed.

The third objective, validating the fraud-related variables, involved examining 72 past cases of fraud. Twenty of the cases came from Donn Parker's files (Stanford Research Institute) and 52 cases came from published accounts[3] of fraud. Each case was carefully analyzed to determine which of the items on the master list of variables appeared to be present in the case. At the completion of this process, each item on the master list was carefully reviewed and the master list revised.

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In revising the list, only those variables that could be associated with at least one case were kept. This is a very demanding criterion because certainly the authors who wrote about the cases probably had a perspective much different than ours.

After completing the compiling and validation steps, a fraud checklist[4] (objective 4) for use by auditors was developed. This checklist, which includes both questions auditors will ask themselves about the client and the client about themselves, should make auditors more aware of the possibility of fraud and hence increase the probability that fraud will be detected. The checklist includes both factors that could motivate an employee to commit fraud against a company for his own benefit and an executive to commit fraud on behalf of a corporation.

The purpose of this paper is to present some conclusions and implications from the study that should be helpful to auditors. In presenting these implications, two assumptions will be made:

(1) It is assumed that readers are aware of auditors' responsibilities for the detection of fraud as stated in the SAS's, Cohen Commission Report, and various court opinions.
(2) It is assumed that readers agree with our definition of management fraud. The definition used (Improper actions resulting in a material misstatement of financial statements) excludes several types of criminal acts that have been classified as fraud. Some of the more common omissions are consumer fraud, false advertising, embezzlement, bribes, kickbacks, and violations of regulatory agency rules.[5]

The remainder of this paper will be divided into three parts: (1) a description or profile of the typical fraud perpetrator, (2) an explanation of why fraud occurs, and (3) steps that can be taken by auditors to reduce their exposure to management fraud.

The Typical Fraud-Perpetrator

One aspect of the study was an attempt to describe fraud perpetrators as a group and differentiate them from other groups. This task was extremely difficult because there are not many fraud perpetrators available to study. Two reasons accounted for the sparsity of available subjects: our narrow definition of fraud eliminated many potential perpetrators, and most fraud perpetrators are never incarcerated. In trying to compile a sample, we contacted over 400 prisons nationwide as well as every state and federal probation and parole department in the U.S. and Canada. Many of the agencies and prisons responded that they could not comply with our request because of one or more of the following reasons: (1) they had no fraud perpetrators fitting our description, (2) fraud perpetrators could be listed under many different crime categories, (3) they had no computerized files or organized data on fraud perpetrators, (4) our request would take too much time, or (5) responding to our request might violate security or privacy laws. As a result, our definition of fraud had to be expanded to include embezzlers who were in managerial positions. Thus, in describing fraud perpetrators, management fraud perpetrators and managerial embezzlers were compared with prisoners incarcerated for other property offenses (theft, burglary, larceny, bank robbery, etc.), and a sample of college students. The three groups were compared across several demographic, personal, and psychological characteristics.

The results indicated that incarcerated fraud perpetrators were generally different than other incarcerated prisoners and quite similar to the college students. When compared to other property offenders, fraud perpetrators were less likely to be caught, turned in, arrested, convicted, incarcerated, or to serve long sentences. The fraud perpetrators were also considerably older, which might be expected since it usually takes longer to get into managerial positions or other positions of trust. While only two percent of the property offenders were female, 30 percent of the fraud perpetrators were women. The fraud perpetrators tended to have a much more stable family situation; more were married, they had more children, were less likely to be divorced, and more likely to be active church attenders.

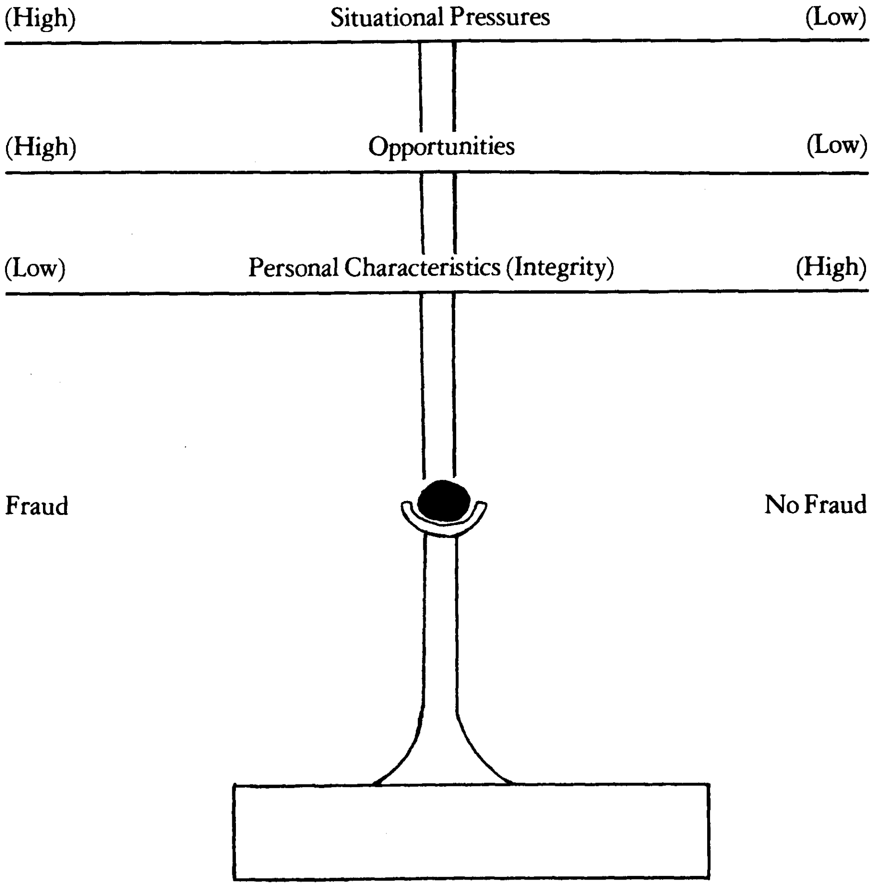
Compared to other property offenders, the fraud perpetrators were better educated, more religious, less likely to have a criminal record or otherwise be criminally inclined, less likely to use alcohol, and considerably less likely to use drugs. Fraud perpetrators were in better psychological health. They enjoyed more optimism, self-esteem, self-sufficiency, achievement, motivation, and family harmony in contrast to the other property offenders who showed more depression, self-degradation, dependence, lack of motivation, and family discord. Fraud perpetrators seemed to have significantly fewer problems; they expressed more social conformity, self-control, kindness, and empathy while other property offenders displayed greater social deviancy, impulsiveness, hostility, and insensitivity to other people.

When compared to college students, the fraud perpetrators differed only slightly. The white-collar criminals suffered more psychic pain, were more dishonest, were more independent, more sexually mature, more socially deviant, and more empathetic. The comparisons showed that fraud perpetrators were much more similar to the students than to other property offenders. In fact, in most cases, they were so different from other criminals, that when incarcerated, they tended to associate more with prison guards and officials than with other prisoners. This part of the study produced one other interesting observation. While most of the fraud perpetrators had virtually no criminal background, there was a small minority that had several previous arrests and convictions. From this observation it might be hypothesized that there are really two types of perpetrators: the typical business person who succumbs to pressures or temptations, and the more criminally-inclined person who would be dishonest in most environments or would commit fraud as just one more in a series of offenses.

An Explanation of Fraud

With all of these positive characteristics, why do these ''non-criminal'' type managers and executives get involved in fraud? Basically, they become involved because: (1) they are placed in situations where they are faced with a high degree of *situational pressure;* (2) they are faced with attractive *opportunities* to commit, conceal, or not be punished for their illegal acts; or (3) they have a low level of *personal integrity* or *honesty.* These three forces interact to determine whether or not a person will commit fraud. A person with a high level of integrity and little opportunity and pressure to commit fraud will most likely behave honestly. But criminal acts become increasingly likely as individuals with lower levels of personal honesty are placed in situations with increased pressure or convenient opportunities to commit a crime. Exhibit A is a graphic description of the interaction of the fraud motivating forces.

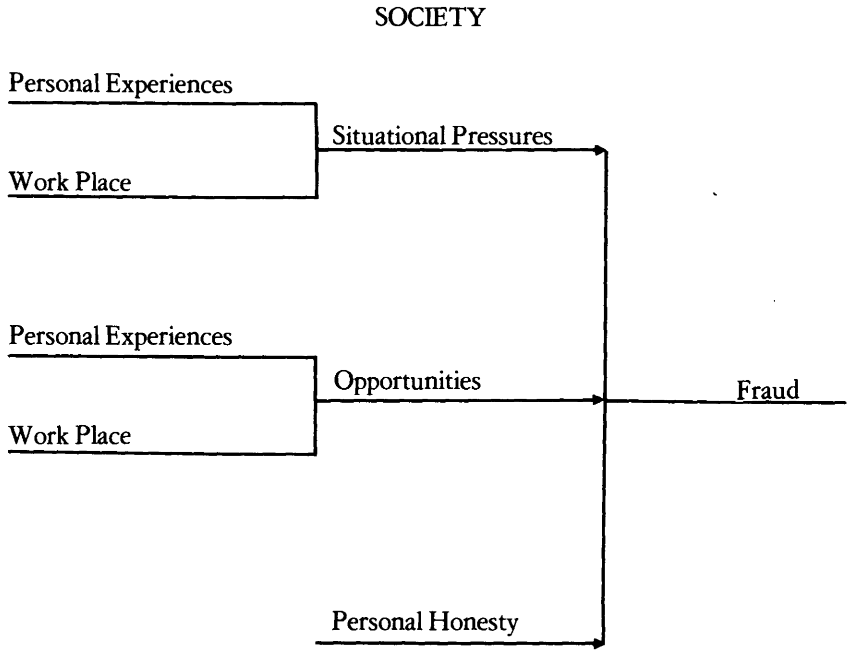
Exhibit A



The forces that contribute to these three motivations are largely determined at three levels: society, the work place, and personal experiences. What is frightening is that the forces causing an increase in fraud are greater than ever today and are increasing on all three levels. The societal factors, which contribute to fraud by either increasing overall opportunities or creating situational pressures, provide a backdrop for the work place and personal factors. Exhibit B depicts this relationship.

There are at least eight societal factors that contribute to lowering the general level of honesty and magnifying the pressures and opportunities experienced by managers at work and in their personal lives. These factors[7] are: (1) failure of businesses to prosecute, (2) problems with our ciminal justice system, (3) ostracism of whistle blowers, (4) a lowered level of personal integrity, (5) inflation, (6)

Exhibit B



increased size of organizational units, (7) increased use of computers, and (8) proliferation of egalitarian ideas.

Certainly, it would be difficult for auditors to change many of these societal factors. Maybe a strong lobbying effort or high placed connections could help, but generally auditors must live with these factors.

The combination of increased responsibilities to detect fraud, increased societal reinforcement for fraud, and the absence of an obvious criminal type profile makes it imperative that auditors make fraud detection an explicit part of their audit. We believe there are two steps auditors must take to reduce their exposure to fraud. First, they must make sure that only ''clean'' firms are accepted as clients. Many well known frauds have involved new clients (e.g., Home-Stake Production, National Student Marketing, Republic National Life, and Stirling Homex). We have previously argued[8] for the use of investigative agencies as a better way to screen potential new clients. A thorough review of prospective clients should help to eliminate exposure to those frauds committed by the criminally-inclined perpetrators.

Secondly, auditors can pay much closer attention to situational pressures and opportunities experienced by managers at both the work place and in their personal lives. One way to focus on these factors would be to include a "red flag" checklist as part of the audit program. Presently, there are several such checklists available.[9] One rather comprehensive checklist that includes situational pressure, opportunity, and personal characteristic red flags is included in Exhibit C.

Exhibit C
Situational Pressure Red Flags

Personal Situational Pressures

1. High personal debts or financial losses
2. Inadequate incomes
3. Living beyond one's means
4. Extensive stock market or other speculation
5. Excessive gambling
6. Involvement with members of the opposite sex
7. Undue family, company, or community expectations
8. Excessive use of alcohol or drugs
9. Perceived inequities in the organization
10. Resentment of superiors
11. Frustration with the job
12. Peer group pressures
13. Greed or desire for self-enrichment and personal gain

Company Situational Pressures

1. Unfavorable economic conditions within the industry
2. Heavy investments or losses
3. Insufficient working capital
4. Dependence on one or two products, customers, or transactions
5. Excess capacity
6. Severe obsolescence
7. High debt
8. Extremely rapid expansion through new business or product lines
9. Reduced ability to acquire credit
10. Profit squeeze (costs and expenses rising higher and faster than sales and revenues)
11. Difficulty in collecting receivables
12. Unusually heavy competition
13. Restrictive loan agreements
14. Progressive deterioration in quality of earnings
15. Significant tax adjustments

16. Urgent need for favorable earnings (to support high price of stock, meat earnings forecast, etc.)
17. Need to gloss over a temporarily bad situation (in order to maintain management position and prestige)
18. Significant litigation (especially between stockholders and management)
19. Unmarketable collateral
20. Significant reduction in sales backlogs indicating future sales decline
21. Long business cycle
22. Existence of revocable and possible imperiled licenses (especially when necessary for the continuation of business)
23. Suspension or delisting from a stock exchange
24. Pressure to merge
25. Sizable inventory increase without comparable sales increases

Opportunity Red Flags

Personal Opportunities

1. Extensive familiarity with operations (including cover-up capabilities) and in a position of trust
2. Close association with cohorts, suppliers, and other key people
3. A firm which does not inform employees about rules and disciplinary actions of fraud perpetrators
4. A firm in which there is rapid turnover (quit or fired) of key employees
5. A firm in which there are no annual vacations or transfers
6. A firm which does not use adequate personnel screening policies when hiring new employees to fill positions of trust
7. A firm in which there is an absence of explicit and uniform personnel policies
8. A firm which does not maintain accurate personnel records of dishonest acts or disciplinary actions for such things as alcoholism and/or drug abuse
9. A firm which does not require executive disclosures and examinations
10. A firm which has a dishonest management and/or environment
11. A firm which has a dominant top management
12. A firm which is always operating on a crisis basis
13. A firm which pays no attention to details
14. A firm in which there is too much trust in key employees
15. A firm in which there are few interpersonal relationships
16. A firm which has unrealistic productivity measurements
17. A firm which has poor compensation practices
18. A firm in which there are no vested employee interests
19. A firm which has inadequate training programs

Company Opportunities

1. A firm which has related party transactions

2. A firm which has a very complex business structure
3. A firm which does not have an effective internal auditing staff
4. A highly computerized firm
5. A firm in atypical or "hot" industries
6. A firm which uses several different auditing firms or changes auditors often
7. A firm which has a reluctance to give auditors needed data
8. A firm which uses a large number of banks none of which can see the entire picture
9. A firm with inadequate internal controls
10. A firm which uses unduly liberal accounting practices
11. A firm which has poor accounting records
12. A firm which has inadequate staffing in the accounting department
13. A firm which inadequately discloses unusual accounting practices

Personal Characteristic Red Flags

1. A person with low moral character (possessing deceptive or dishonest tendencies, for example)
2. A person who rationalizes his contradictory behavior
3. A person without a strong code of personal ethics
4. A person who is a "wheeler dealer" (someone who has a desire for power, influence, or social status)
5. A person who lacks stability (employment history, etc.)
6. A person with a strong desire to beat the system
7. A person with a criminal or questionable background
8. A person with poor credit rating and financial status

The "red flag" list provided in Exhibit C is the one developed by the authors. It is more comprehensive than other available lists and does have the advantage of having been partially validated. To illustrate how relevant these red flags have been to past cases of fraud, we have selected 27 of the 72 cases studied and examined their relevance to these red flags. The 27 cases are listed in Exhibit D.

Exhibit D

Allied Crude Vegetable Oil
Ampex
BarChris
Black Watch Farms
Cenco
CIT Financial
Continental Vending
Equity Funding
Fisco
Four Seasons
Georgia Pacific
Giant Stores
Hochfelder

Home-Stake
McKesson & Robbins
National Student Marketing
Penn Central
Photon
Republic National Life
Stirling Homex
Talley Industries
U.S. vs. Benjamin
Ultramares
Vesco
Westec
Westgate
Yale Express

All the publicly available literature on these cases was reviewed to see if any explicit mention of these factors could be found. While the results that follow (Exhibit E—at end of paper) indicate that almost all of the red flags were mentioned in the writings about many of the 27 cases, the absence of a case from a given red flag does not mean the red flag was not a factor in the case. Certainly, the authors who wrote about the cases had a perspective much different than ours and thus the mention of the variables in the publicly available literature is a very demanding criterion.

It is quite obvious that these "red flags" can be associated with many of the major past cases of fraud. While this association doesn't guarantee that future frauds will also have these relationships, it does seem that auditors should pay some attention to these facts. While auditors have given heed to many of the opportunity factors (through internal control checks) and recently even examined some of the firm pressures, there are many of these factors that have not been explicitly considered.

We realize that it would be difficult to investigate many of these variables. Certainly, most auditors will and probably should be reluctant to probe managers about their personal gambling and sex habits. However, we would argue that the decision of whether or not to use these factors is a cost-benefit question. We are convinced that more frauds could be detected earlier if these red flags were used. We also recognize the costs involved in doing so. Thus, only when the perceived benefits exceed the perceived costs should they be used. Also, the cost of using the various red flags is not equal. Some have relatively low costs while the costs of others may be almost prohibitive. In general, we would argue that auditors should look at each red flag from a cost-benefit perspective.

We also realize that even if used, the presence of one or even all of these red flags doesn't necessarily guarantee the existence of fraud. We would argue that as the number of red flags increases, the probability of fraud increases. At best, however, the red flags can only be viewed as a risk-evaluation tool. Also, the relevance and fraud predictability of the red flags haven't yet been assessed. Certainly, some are "better" than others. We are presently working on a discriminant approach that should provide insight into which "red flags" are the best fraud predictors.

Concluding Comments

Management fraud is a major problem that concerns auditors. The auditing literature, standards, and court cases expect auditors to assume more responsibility for its detection. Management fraud will continue to increase because society reinforces those factors which contribute to fraud. Fraud perpetrators generally have personal characteristics that are typical to those of college students, and most likely, the general population. They have personal characteristics much different than other property offenders. There are three factors that contribute to fraud: (1) situational pressures, (2) opportunities, and (3) personal honesty. Because of the combination of more responsibility for fraud detection, increasing reinforcement for fraud, and the absence of a ''criminal type'' profile, it is critical that auditors become better fraud detectives. Two ways to be better detectives are: (1) to better screen potential new clients, and (2) to look for situational pressure, opportunity, and personal characteristic red flags both in organizations and in managers' and executives' personal lives.

Exhibit E
Situational Pressure Red Flags

Personal Situational Factors

1. *High Personal Debts or Financial Losses*
   Allied Crude Vegetable Oil
   Black Watch Farms
   Continental Vending
   Four Seasons
   Hochfelder
   Stirling Homex
   Vesco
2. *Inadequate Incomes*
   Vesco
3. *Living Beyond One's Means*
   Allied Crude Vegetable Oil
   Black Watch Farms
   Equity Funding
   Four Seasons
   Home-Stake
   McKesson & Robbins
   National Student Marketing
   Penn Central
   Stirling Homex
4. *Extensive Stock Market Speculation*
   Allied Crude Vegetable Oil
   Black Watch Farms
   Continental Vending
   Four Seasons
   Georgia Pacific
   McKesson & Robbins
   Penn Central
   Vesco
5. *Excessive Gambling*
   Four Seasons
   Penn Central
   Vesco
6. *Involvement with Members of Opposite Sex*
   Allied Crude Vegetable Oil
   Equity Funding
   McKesson & Robbins
   Penn Central
7. *Undue Family, Company, or Community Expectations*
   Ampex
   Black Watch
   CIT Financial
   Equity Funding
   Stirling Homex
   Talley Industries
   Yale Express
8. *Excessive Usage of Alcohol or Drugs*
   Equity Funding

9. *Perceived Inequities in Organization*
   Allied Crude Vegetable Oil
   Equity Funding
   McKesson & Robbins
   Vesco
10. *Resentment of Superiors*
   Vesco
11. *Frustration with Job*
   None of the 27 major cases
12. *Peer Group Pressures*
   Equity Funding
   Stirling Homex
13. *Greed or Desire for Self Enrichment or Gain*
   Allied Crude Vegetable Oil
   Continental Vending
   Equity Funding
   Four Seasons
   Hochfelder
   Home-Stake
   McKesson & Robbins
   Penn Central
   Stirling Homex
   Talley Industries
   Vesco
   Westec
   Westgate

Company Situational Pressures

1. *Unfavorable Economic Conditions in Industry*
   Allied Crude Vegetable Oil
   Ampex
   BarChris
   U.S. vs. Benjamin
   Equity Funding
   Four Seasons
   Giant Stores
   McKesson & Robbins
   Penn Central
   Republic National Life
   Stirling Homex
   Westec
   Yale Express
2. *Heavy Investments or Losses*
   Allied Crude Vegetable Oil
   Ampex
   BarChris
   Continental Vending
   Equity Funding
   Fisco
   Four Seasons
   Georgia Pacific
   Giant Stores
   Home-Stake
   McKesson & Robbins
   National Student Marketing
   Penn Central
   Photon
   Republic National Life
   Stirling Homex
   Talley Industries
   Westgate
   Yale Express
3. *Insufficient Working Capital*
   Allied Crude Vegetable Oil
   Ampex
   BarChris
   U.S. vs. Benjamin
   Black Watch Farms
   Cenco
   CIT Financial
   Continental Vending
   Equity Funding
   Four Seasons
   Giant Stores
   Hochfelder
   Home-Stake
   McKesson & Robbins
   National Student Marketing
   Penn Central
   Stirling Homex
   Yale Express
4. *Dependence on Single Products, Customers, or Transactions*
   Allied Crude Vegetable
   BarChris
   Black Watch Farms
   CIT Financial
   Four Seasons
   Georgia Pacific
   McKesson & Robbins
   Republic National Life
   Stirling Homex
   Talley Industries

Westgate

5. *Excess Capacity*
   Allied Crude Vegetable Oil
   McKesson & Robbins
   Penn Central
   Yale Express
6. *Severe Obsolescence*
   Ampex
   McKesson & Robbins
   Penn Central
   Photon
   Stirling Homex
7. *High Debt*
   Allied Crude Vegetable Oil
   Ampex
   BarChris
   Black Watch Farms
   Cenco
   CIT Financial
   Continental Vending
   Equity Funding
   Four Seasons
   Giant Stores
   Hochfelder
   Penn Central
   Photon
   Republic National Life
   Stirling Homex
   Ultramares
   Westec
   Westgate
   Yale Express
8. *Extremely Rapid Expansion*
   Allied Crude Vegetable Oil
   Ampex
   BarChris
   U.S. vs. Benjamin
   Black Watch Farms
   Cenco
   Equity Funding
   Fisco
   Four Seasons
   Georgia Pacific
   Giant Stores
   Home-Stake
   McKesson & Robbins
   National Student Marketing
   Penn Central
   Photon
   Republic National Life
   Stirling Homex
   Talley Industries
   Vesco
   Westec
   Westgate
   Yale Express
9. *Reduced Ability to Acquire Credit*
   Ampex
   BarChris
   Black Watch Farms
   CIT Financial
   Continental Vending
   Four Seasons
   Giant Stores
   McKesson & Robbins
   Penn Central
   Photon
   Westec
   Yale Express
10. *Profit Squeeze*
    Ampex
    Four Seasons
    Home-Stake
    National Student Marketing
    Penn Central
    Stirling Homex
    Talley Industries
    Yale Express
11. *Difficulty Collecting Receivables*
    Ampex
    BarChris
    CIT Financial
    Continental Vending
    Equity Funding
    Four Seasons
    Giant Stores
    National Student Marketing
    Penn Central
    Stirling Homex
    Yale Express
12. *Unusually Heavy Competition*
    Allied Crude Vegetable Oil
    Ampex
    BarChris
    Four Seasons
    Giant Stores

Yale Express

13. *Restrictive Loan Agreements*
    Ampex
    McKesson & Robbins
    Republic National Life
    Stirling Homex
14. *Deterioration in Quality of Earnings*
    Allied Crude Vegetable Oil
    Ampex
    BarChris
    CIT Financial
    Equity Funding
    Giant Stores
    Home-Stake
    National Student Marketing
    Penn Central
    Stirling Homex
    Westec
15. *Significant Tax Adjustments*
    Allied Crude Vegetable Oil
    Continental Vending
    Four Seasons
    Home-Stake
16. *Urgent Need for Favorable Earnings*
    Ampex
    BarChris
    U.S. vs. Benjamin
    Black Watch Farms
    Cenco
    Continental Vending
    Equity Funding
    Four Seasons
    Giant Stores
    McKesson & Robbins
    National Student Marketing
    Penn Central
    Photon
    Republic National Life
    Stirling Homex
    Talley Industries
    Westec
    Westgate
    Yale Express
17. *Need to Gloss Over Temporarily Bad Situation*
    Ampex
    BarChris
    Cenco
    CIT Financial
    Equity Funding
    Giant Stores
    Home-Stake
    National Student Marketing
    Penn Central
    Republic National Life
    Stirling Homex
    Westgate
    Yale Express
18. *Significant Litigation*
    Allied Crude Vegetable Oil
    Equity Funding
    Four Seasons
    Georgia Pacific
    Home-Stake
    Penn Central
    Republic National Life
    Talley Industries
19. *Unmarketable Collateral*
    Allied Crude Vegetable Oil
    U.S. vs. Benjamin
    CIT Financial
    Continental Vending
    Republic National Life
20. *Significant Reduction in Sales Backlog*
    BarChris
    Stirling Homex
    Talley Industries
21. *Long Business Cycle*
    Ampex
    BarChris
    CIT Financial
    Stirling Homex
22. *Existence of Imperiled Licenses*
    Allied Crude Vegetable Oil
    Four Seasons
    Republic National Life
23. *Suspension From Stock Exchange*
    Allied Crude Vegetable Oil
    Black Watch Farms
    Cenco
    Continental Vending

Equity Funding
Four Seasons
Home-Stake
Photon
Republic National Life
Stirling Homex
Talley Industries
Vesco
Westec
Westgate

24. *Pressure to Merge*
    Georgia Pacific
    Giant Stores
    National Student Marketing
    Penn Central
    Talley Industries
    Westec
25. *Sizable Inventory Increase*
    No major cases

Opportunity Red Flags

Personal Opportunities

1. *Familiarity With Operations (Cover Up Ability)*
   Allied Crude Vegetable Oil
   Ampex
   BarChris
   U.S. vs. Benjamin
   Black Watch Farms
   Cenco
   CIT Financial
   Continental Vending
   Equity Funding
   Four Seasons
   Georgia Pacific
   Giant Stores
   Hochfelder
   Home-Stake
   McKesson & Robbins
   National Student Marketing
   Penn Central
   Photon
   Republic National Life
   Stirling Homex
   Ultramares
   Westec
   Westgate
   Yale Express
2. *Close Association With Cohorts*
   Allied Crude Vegetable Oil
   BarChris
   U.S. vs. Benjamin
   Black Watch Farms
   Continental Vending
   Equity Funding
   Four Seasons
   Giant Stores
   Hochfelder
   Home-Stake
   McKesson & Robbins
   National Student Marketing
   Penn Central
   Photon
   Republic National Life
   Stirling Homex
   Vesco
   Westec
   Westgate
   Yale Express
3. *Doesn't Inform About Rules For Fraud*
   Equity Funding
4. *Rapid Turnover of Key People*
   Allied Crude Vegetable Oil
   Continental Vending
   Equity Funding
   Four Seasons
   Giant Stores
   Home-Stake
   McKesson & Robbins
   National Student Marketing
   Penn Central
   Photon
   Stirling Homex
   Vesco
5. *No Mandatory Vacations or Transfers*
   Allied Crude Vegetable Oil
   BarChris

Cenco
Continental Vending
Equity Funding
Four Seasons
Giant Stores
Hochfelder
McKesson & Robbins
National Student Marketing

6. *No Adequate Screening Policies*
   Equity Funding
   Giant Stores
   McKesson & Robbins
7. *Absence of Explicit Personnel Policies*
   Equity Funding
8. *Doesn't Maintain Adequate Personnel Records*
   Equity Funding
   McKesson & Robbins
9. *No Executive Disclosure Requirements*
   Continental Vending
   Four Seasons
   Home-Stake
   Hochfelder
   McKesson & Robbins
   Penn Central
   Westec
   Westgate
10. *Unethical Management*
   Allied Crude Vegetable Oil
   Ampex
   BarChris
   U.S. vs. Benjamin
   Black Watch Farms
   Cenco
   Continental Vending
   Equity Funding
   Fisco
   Four Seasons
   Georgia Pacific
   Giant Stores
   Home-Stake
   McKesson & Robbins
   National Student Marketing
   Penn Central
   Republic National Life
   Stirling Homex
   Talley
   Ultramares
   Westec
   Westgate
   Yale Express
11. *Dominant Top Management*
   Allied Crude Vegetable Oil
   Ampex
   BarChris
   Black Watch Farms
   Cenco
   Continental Vending
   Equity Funding
   Four Seasons
   Georgia Pacific
   Giant Stores
   Hochfelder
   Home-Stake
   McKesson & Robbins
   National Student Marketing
   Penn Central
   Republic National Life
   Stirling Homex
   Talley Industries
   Vesco
   Westec
   Westgate
   Yale Express
12. *Operates on a Crisis Basis*
   Allied Crude Vegetable Oil
   BarChris
   CIT Financial
   Equity Funding
   Giant Stores
   Republic National Life
   Stirling Homex
13. *Pays No Attention to Details*
   Allied Crude Vegetable Oil
   National Student Marketing
   Penn Central
   Ultramares
14. *Too Much Trust in Key Employees*
   Allied Crude Vegetable Oil
   Ampex
   BarChris
   Continental Vending

Equity Funding
Georgia Pacific
Giant Stores
Hochfelder
McKesson & Robbins
Penn Central
Stirling Homex
Westec
Westgate
Yale Express

15. *Low Interpersonal Relationships*
    Ampex
    Equity Funding
    Penn Central
    Yale Express
16. *Unrealistic Productivity Measurements*
    Allied Crude Vegetable Oil
    Ampex
    Four Seasons
    Talley Industries
17. *Poor Compensation Practices*
    Allied Crude Vegetable Oil
    Home-Stake
18. *Lack of Internal Security*
    Allied Crude Vegetable Oil
19. *Inadequate Training Programs*
    Equity Funding
    Giant Stores
    Yale Express

Company Opportunities

1. *Related Party Transactions*
   Allied Crude Vegetable Oil
   BarChris
   Cenco
   CIT Financial
   Continental Vending
   Equity Funding
   Four Seasons
   Home-Stake
   McKesson & Robbins
   Penn Central
   Republic National Life
   Stirling Homex
   Talley Industries
   Vesco
   Westec
   Westgate
2. *Complex Business Structure*
   Allied Crude Vegetable Oil
   Ampex
   BarChris
   Cenco
   Equity Funding
   Four Seasons
   Georgia Pacific
   Home-Stake
   McKesson & Robbins
   National Student Marketing
   Penn Central
   Republic National Life
   Stirling Homex
   Talley Industries
   Vesco
   Westec
   Westgate
3. *No Effective Internal Auditors*
   Allied Crude Vegetable Oil
   Ampex
   Cenco
   Continental Vending
   Equity Funding
   Fisco
   Four Seasons
   Giant Stores
   Home-Stake
   McKesson & Robbins
   Penn Central
   Westec
   Westgate
   Yale Express
4. *Highly Computerized Firm*
   Cenco
   Equity Funding
   Four Seasons
   Georgia Pacific
   Penn Central
   Stirling Homex
   Westgate
   Yale Express
5. *Atypical or "Hot" Industries*
   Ampex
   BarChris
   U.S. vs. Benjamin
   Black Watch Farms

Equity Funding
Four Seasons
Georgia Pacific
Giant Stores
Home-Stake
National Student Marketing
Stirling Homex

6. *Different Auditors or Change of Auditors Often*
Black Watch Farms
Continental Vending
Equity Funding
Home-Stake
National Student Marketing
Republic National Life
Westgate

7. *Reluctance to Give Auditors Needed Data*
Allied Crude Vegetable Oil
BarChris
U.S. vs. Benjamin
Black Watch Farms
Continental Vending
Equity Funding
Four Seasons
Georgia Pacific
Republic National Life
Stirling Homex
Talley Industries
Ultramares
Westec
Westgate
Yale

8. *Large Number of Banks*
Allied Crude Vegetable Oil
BarChris
CIT Financial
Continental Vending
Equity Funding
Four Seasons
Georgia Pacific
McKesson & Robbins
Penn Central
Republic National Life
Stirling Homex
Ultramares
Westec

9. *Inadequate Internal Controls*
Allied Crude Vegetable Oil
Ampex
Black Watch Farms
Equity Funding
Hochfelder
Fisco
Four Seasons
Giant Stores
Home-Stake
McKesson & Robbins
National Student Marketing
Penn Central
Photon
Stirling Homex
Talley Industries
Ultramares
Westec
Westgate
Yale Express

10. *Unduly Liberal Accounting Practices*
Allied Crude Vegetable Oil
Ampex
BarChris
U.S. vs. Benjamin
Black Watch Farms
CIT Financial
Continental Vending
Equity Funding
Fisco
Four Seasons
National Student Marketing
Penn Central
Photon
Republic National Life
Stirling Homex
Talley Industries
Ultramares
Westec
Westgate
Yale Express

11. *Poor Accounting Records*
Allied Crude Vegetable Oil
Ampex
BarChris
U.S. vs. Benjamin
Continental Vending
Equity Funding

Four Seasons
Home-Stake
National Student Marketing
Photon
Republic National Life
Stirling Homex
Talley Industries
Ultramares
Yale Express

12. *Inadequate Staffing in Accounting Department*
    Allied Crude Vegetable Oil
    U.S. vs. Benjamin
    Cenco
    National Student Marketing

13. *Inadequate Disclosure of Unusual Accounting Practices*
    Allied Crude Vegetable Oil
    Ampex
    BarChris
    U.S. vs. Benjamin
    Black Watch Farms
    CIT Financial
    Continental Vending
    Equity Funding
    Four Seasons
    Georgia Pacific
    Giant Stores
    Home-Stake
    National Student Marketing
    Penn Central
    Republic National Life
    Stirling Homex
    Talley Industries
    Ultramares
    Westec
    Westgate

Personal Characteristics Red Flags

1. *Low Moral Character*
   Allied Crude Vegetable Oil
   Ampex
   BarChris
   U.S. vs. Benjamin
   Black Watch Farms
   Continental Vending
   Equity Funding
   Four Seasons
   Hochfelder
   Home-Stake
   McKesson & Robbins
   National Student Marketing
   Stirling Homex
   Ultramares
   Vesco
   Westgate
   Yale Express

2. *Rationalizer*
   Equity Funding
   Westgate

3. *No Strong Code of Personal Ethics*
   Allied Crude Vegetable Oil
   U.S. vs. Benjamin
   Black Watch Farms
   Equity Funding
   Home-Stake
   McKesson & Robbins
   Vesco
   Westgate
   Yale Express

4. *Wheeler-Dealer*
   Allied Crude Vegetable Oil
   Ampex
   U.S. vs. Benjamin
   Black Watch Farms
   Continental Vending
   Equity Funding
   Four Seasons
   Georgia Pacific
   Home-Stake
   McKesson & Robbins
   National Student Marketing
   Republic National Life
   Stirling Homex
   Talley Industries
   Vesco
   Westec
   Westgate
   Yale Express

5. *Lacks Stability*
   Equity Funding

McKesson & Robbins
Stirling Homex

6. *Strong Desire to Beat System*
McKesson & Robbins

7. *Criminal or Questionable Background*
Allied Crude Vegetable Oil
U.S. vs. Benjamin
Black Watch Farms
Continental Vending
Home-Stake
McKesson & Robbins
Penn Central
Stirling Homex
Westgate

8. *Poor Credit Rating or Financial Status*
McKesson & Robbins

Bibliography

1. Albrecht, W. S., Romney, M. B., Cherrington, D., Payne, R., and A. Roe, "A Red Flag Approach to the Detection of Fraud," Monograph, Brigham Young University, 1979 (forthcoming as a book from Prentice-Hall).
2. Albrecht, W. S., "Surprising Profile of the White-Collar Crook," *U.S. News & World Report,* July 23, 1979, p. 61.
3. Albrecht, W. S., and M. B. Romney, "The White-Collar Criminal," *Prosecutors Brief,* September-October, 1979.
4. Albrecht, W. S., and M. B. Romney, "White-Collar Crime in Banks," *The Bankers Magazine,* Nov.-Dec. 1980, pp. 60-64.
5. Albrecht, W. S., Romney, M. B., and D. Cherrington, "How America Fuels White-Collar Crime," Working Paper, Brigham Young University.
6. Albrecht, W. S., Romney, M. B., Cherrington, D., Payne, R., and A. Roe, "Auditor Involvement in the Detection of Fraud," *MANAGEMENT FRAUD,* Edited by Robert K. Elliott and John J. Willingham, Petrocelli Books, Inc., 1980.
7. Cherrington, D., Romney, M. B., and W. S. Albrecht, "The Role of Management in Reducing Fraud," Forthcoming in *Financial Executive.*
8. Romney, M. B., and W. S. Albrecht, "A Checklist for the Detection of Fraud," forthcoming in the *Journal of Accountancy,* May 1980, pp. 63-69.
9. Romney, M. B., and W. S. Albrecht, "Red-Flagging White-Collar Crime," *Management Accounting,* March, 1980, pp. 51-54, and 57.
10. Romney, M. B., and W. S. Albrecht, "The Use of Investigation Agencies by Auditors," *Journal of Accountancy,* October, 1979, pp. 61-67.

Footnotes

1. In addition to the authors of this paper, the research team consisted of David Cherrington (Associate Professor of Organizational Behavior—B.Y.U), Reed Payne (Professor Psychology—B.Y.U.), and Allan Roe (Criminal Psychologist—Utah State Prison).

2. A complete bibliography can be found in Albrecht et. al. [1].

3. A separate case bibliography is included in Albrecht et. al. [1].

4. This checklist is included in Romney et. al. [8].

5. While the definition of fraud used in this paper includes only improper action resulting in a material misstatement of financial statements, the original research also included a study of major embezzlements and defalcations.

6. Sample sizes were 49 fraud perpetrators, 677 property offenders, and 148 college students.

7. A full description and analysis of these factors is included in Albrecht et. al. [5].

8. See Romney and Albrecht [10].

9. In addition to ours, fraud checklists have been prepared by the AICPA, Coopers and Lybrand, and Touche Ross & Co.

Discussant's Response to Auditing Implications Derived from a Review of Cases and Articles Related to Fraud

Henry J. Murphy
Arthur Andersen & Co.

I appreciate this opportunity to participate in the Fifth Annual Auditing Symposium sponsored by The University of Kansas. Not only is it a personal honor but it will also be very helpful to me as a member of the AICPA Standing Committee on Methods of Perpetration and Detection of Fraud.

First of all, I want to compliment the authors on their study. I personally believe it was a study long overdue, and I can share their frustration in trying to "get to the facts and issues," so to speak, because our AICPA Task Force has also been frustrated in trying to obtain similar information from various governmental bodies, accounting firms, etc. The authors properly commented on this fact by stating that "many of the agencies and prisons responded they could not comply with our request" (for information) and went on to state that in their review of the 72 past cases of fraud, they attempted to determine the fraud-related variables which were present in each of the cases in order to establish a "red-flag" checklist which could be helpful to auditors in detecting and deterring management fraud. They further stated that in reviewing various articles, etc., it was most difficult to identify these variables because "certainly the authors who wrote about the cases probably had a perspective much different than ours."

Problems Encountered

I think the two aforementioned problems (or limiting factors, as the case may be) are extremely important for all of us who are interested in the subject to understand and be aware of in reaching any conclusions as to where we go from here, whether in terms of further research, using a "red-flag" approach in our auditing practice, or in the teaching environment. I will come back to these problems later but, in any event, I think the authors have done a good job of compiling some excellent research on a very complex issue.

The authors comment on the fact that they used 72 past cases of fraud to validate the fraud-related variables and go on to compare the typical fraud perpetrator to incarcerated prisoners and to college students. However, I could not determine how the 72 cases were selected, nor did I understand why the comparison was made to college students as a control group. Further, I wasn't sure what college students were included; i.e., from a single university or a cross-section of all universities. I think it would be helpful if these points could be expanded.

Objectives

The authors state that there are four objectives to their interdisciplinary study and these need not be repeated here. I find the concept of an interdisciplinary study quite interesting from a research and teaching perspective, but become a little concerned if this concept were contemplated by the authors to establish a similar team approach for conducting audits in the normal ongoing business environment. My reservation does not relate to the current practice of using or relying on other experts, which is covered under the existing auditing literature; rather, it deals with the authors' concept of developing "an early warning system that could be *used by auditors in* detecting and *deterring fraud*" which is the fourth objective spelled out by the authors.

I believe that the existing literature (and court cases) now makes it clear that the external auditor has the responsibility to search for fraud which has a material impact on the financial statements presented. However, the authors' stated objective of developing a method (early warning system) which can be used by external auditors to *deter* fraud (material?/immaterial?) concerns me because I firmly believe that the responsibility for the deterrence of fraud rests clearly with management and the board of directors through the company's system of internal control. It is not practicable or cost efficient for the external auditors to be charged with this responsibility. However, an interdisciplinary approach by management in establishing the appropriate control environment and internal control systems, in the broadest sense of the word, is very helpful and is used by many companies in assessing hiring policies, establishing job criteria, selecting key personnel, etc.

Conclusions and Implications

The authors go on to state that they want to present some conclusions and implications from the study and that two assumptions will be made (by the authors). First, they assume that the reader is familiar with auditors' responsibilities under existing SAS's and, second, that readers agree with their definition of management fraud; i.e., improper actions resulting in a material misstatement of financial statements.

Accordingly, the authors then state that "the remainder of the paper will be divided into three parts:

1. A description or profile of the typical fraud perpetrator;
2. An explanation of why fraud occurs; and
3. Steps that can be taken by auditors to reduce their exposure to *management* fraud." (See definition above.)

In dealing with "The Typical Fraud Perpetrator," the authors have provided us with an extremely valuable insight but the problem is one which I previously mentioned; i.e., that they had to include embezzlers and (I believe) immaterial fraud perpetrators, and, accordingly, the characteristics of those who commit management fraud (by the authors' definition) could actually produce a different profile. This "identity problem" (of which ones committed management fraud vs. an embezzlement) could not, in my opinion, have been avoided for reasons upon which both the authors and I agree, and my comments are not meant as a criticism; rather, I mention it only to reinforce the fact that the problem does exist, and that as the accounting profession goes forward, we should do everything possible to correct the situation by making available the necessary information to researchers on actual management fraud cases.

Observations Concerning Cited Cases

At this time, I would like to go back to the point I made previously about the 72 cases reviewed by the authors and their comments as they relate to the *perspective* of other authors on whose material they relied. The biggest surprises I had in reviewing the material presented (including the more extensive material to be published in book form which was made available to me by Dr. Albrecht) were: (1) there was no direct mention of the problem of collusion between employees against the company or between employees on behalf of the company, and (2) there was no reference to the accounting principles or reporting disclosures involved in the "fraud" which have since been strengthened by new accounting pronouncements (such as profit recognition guidelines involving the sale of real estate) or by disclosure requirements (such as those involving related party transactions).

In other words, in many of these cases there was more than one person involved but there was no mention of the interaction, of how this interaction was addressed, or how it possibly impacted the "profile" of a specific case or individual involved.

Further, if the case involved a related party transaction (or a series of such transactions) including, say, the apparent sale of real estate and yet there were no definitive accounting or disclosures required under GAAP at the time, were these factors considered by the authors in reaching their conclusions? In other words, if there were no specific accounting and disclosure requirements and management made a choice (which may have been the wrong one, for whatever reasons), does this constitute management fraud, or is it poor judgment based on hindsight? If, for example, I were to commission a study of a particular case or series of cases and asked for an evaluation of the cases in light of the "state of the art", so to speak, as it relates to "principles" and "disclosures," what might the answer be? I can assure you that I don't know what it would be but I suspect that it might influence my conclusions. Please don't misunderstand my point. I am fully aware of the concept of "fairness" as to principles and disclosures (notwithstanding the state of the art) and if an expanded study were to address the "fairness" issue, then that is perfectly acceptable to me. But let us not assume that because accusations have been made that it is axiomatic that there is guilt, because many of these cases were not tried in court; rather, they were settled via consent decrees.

My recollection of many of the cases reviewed by the authors was that the above-mentioned factors were key elements in many of these cases, and I would suggest that the authors' research be expanded and interrelated to the points I have mentioned.

I have spent 20 years in public accounting and believe that there is no more difficult problem for auditors to deal with than the problem of collusion. All one has to do is consider the magnitude of "sensitive payment disclosures" (over 400 companies), price-fixing cases, and the purchasing agent/kickback scandal of earlier decades. I would think it would be of significant benefit to the profession if the authors could expand on this point as well as the impact of changed accounting principles and disclosure requirements.

In addition, I would like to see additional objective research on which of the 72 cases involving management fraud (by the authors' definition) involved human (audit) failure; that is, if a careful review indicated that 20 of the 72 cases involved audit failure, would the conclusions reached by the authors have been the same or might they have differed?

Deterrence of Fraud

In reviewing the paper as it relates to "An Explanation of Fraud," I found it quite helpful and observed that it reinforced my earlier comment regarding who has the responsibility to *deter* fraud to note that the authors point out the social factors that contribute to the incidence of fraud, stating:

> Certainly it would be difficult for auditors to change many of these societal factors. Maybe a strong lobbying effort or high-placed connections would help but, generally, auditors must live with those factors.

The Authors' Conclusions

In summary, based on their research, the authors reached two conclusions. First, that it is imperative that auditors make fraud prevention an explicit part of their audit and, second, that they should take two steps to "reduce their exposure to fraud." The two steps which they suggest for auditors to take to reduce their exposure are to: (1) make sure they accept only "clean" clients, and (2) consider adopting a "red-flag" checklist as part of their audit program.

As to their first suggestion, I believe existing literature (SAS No. 16) clearly states that it is the responsibility of the auditor to plan and execute the audit in a manner which will uncover material irregularities or errors and, accordingly, I concur with the authors' conclusion if they are talking about *material* fraud. I might add that I believe it has always been an explicit part of the audit process via the use of audit programs, physical observations, counts, confirmations, etc.

As to their second suggestion, I don't know of anyone who knowingly accepted a "dirty" client, and the professional literature has been expanded to cover this point (SAS No. 7). However, in a more serious vein, their point is valid and really relates to the individual firm's quality control program and the monitoring thereof which lays down specific guidelines on the acceptance of new clients, including the assignment of personnel who have the necessary industry knowledge. Our firm has had such criteria for many years and I'm sure that other firms have similar programs.

However, their second suggestion causes me real concern for a couple of reasons. First, there is the implication that by coming up with a master checklist, it will solve the problem. I, and other members of the AICPA Task Force, am constantly being asked (in substance) at various speaking engagements, "When are you going to give us a program or checklist which we can incorporate in our workpapers that will uncover fraud?" (and I might add they mean *all* fraud). My response is that there will be no such program or checklist because there is no program or checklist that could ever be developed to cover all situations. For example, how would you apply a checklist to a multinational conglomerate with, say, 25 operating subsidiaries around the world and having 200 or more operating plants or offices *versus* a local gas station under audit? The point is that the scope of an audit is based on the auditor's knowledge of the risk involved, the adequacy of internal control, his knowledge of the industry, and his prior involvement with the clients in terms of results of prior years' audits.

Furthermore, what if you couldn't get (for whatever reasons) objective answers to the questions involving the personal character issues concerning key management personnel? How many unanswered questions do you need before you must have a scope exception in your opinion or cite them in a "no material inadequacies" letter to regulatory authorities? Or, conversely, let's take a situation where a check on one of the key employees uncovers the fact that he is lacking in certain moral standards (of your choice). The auditor has no power to hire or fire. (As an aside, let me assure you that, in practice, when a serious problem does exist, we have a way of communicating this information to the appropriate level of management in the company and have been doing this for years.) Furthermore, the implications of an auditor collecting personal information on management have serious legal considerations which would need to be examined carefully and which could create serious auditor/client relationship problems that could have a direct bearing on completion of the audit and, accordingly, the cost thereof.

The Red-Flag Checklist

In summary, the incorporation of a standard "red-flag" checklist in the standard audit process, in my opinion, has a number of serious limitations which have to be reviewed carefully as to their long-term implications before any such checklist is adopted as a "standard" audit procedure.

Does this mean that the proposed checklist is without merit? No, it does not. Rather, I think it should be directed at the training effort of the individual firms and made part of either basic or advanced accounting curriculum at the university level. I think back to my early days with Arthur Andersen & Co. and the content of our training, both in a formal classroom sense and the informal "on-the-job" training. This training covered not only general audit principles but also included a great deal of emphasis on specific industries (i.e., banking, brokerage, real estate, etc.). The training was aimed at dealing with "risk", not only "risk" as it relates to general audit problems but also in "people" auditing. The problem of "high-flying" management, "personal situation pressures", and other pressures mentioned by the authors is something that I believe is currently being discussed but the importance of which needs to be reconfirmed constantly not only via increased training but also through additional research in the entire area of fraud and fraud detection and deterrence.

In fact, the idea of a "red-flag" checklist was so attractive as a training tool that, as you are aware, the AICPA Task Force, on which I serve, published such a list in 1979 because we believed it would be helpful to the accounting profession in the context discussed in the previous paragraph, so I am totally in support of the authors' approach.

Another concept I would like to see addressed is the concept of "greed." Webster's definition follows:

> Excessive desire for getting or having, especially wealth; desire for more than one needs or deserves; avarice; cupidity.

I believe that this concept should be incorporated into a research study dealing with the many issues raised by the authors. "Greed" is a dirty word, so to speak, but it also seems that it is an attribute applicable to a segment of our population. The authors' concept of what constitutes "management fraud" could be a very interesting study. Consider the possibilities. Let's assume Mr. or Ms. X is highly motivated and ambitious and that he/she is in a position of power. Further, assume that our business person comes from an overachieving background, has access to competent professional advice of all kinds and wants to "get ahead" as fast as possible. Further, assume that this person is very persuasive with a positive outlook as to the outcome of current developments, contracts, the economy, etc.

This description of an individual and the situation is quite common in our free enterprise system and rightfully so. The manager is trying to put his/her best foot forward but, if there is a certain change in circumstances, he/she could be accused of being "greedy" or committing "management fraud" because the decision path he/she followed was aggressive, positive, and to his/her best interest because of compensation agreements; or, on the other hand, was he/she just being an aggressive manager? Conversely, another individual will sometimes construct the worst possible scenario in the worst possible situation and try to convert it into a "positive growth" situation. This to me creates the real difference as to what is reasonable versus what is unrealistic. This is what the auditor has to learn to contend with and dissect and where he must use judgment and experience to reach his conclusions.

Other Comments

There are two other points which I feel should be made. The first deals with the number of audits which are done each year and the incidence of management fraud therein. The second is the composition of the audit team.

I do not know how many audit reports are issued each year but the number has to be in the hundreds of thousands, and while even one case of management fraud would be a sad commentary, I think we have to accept the fact that there are people who, for the reasons suggested by the authors, will commit fraud (of all types). But it seems to me that the incidence of management fraud is relatively small and, in fact, could be infinitesimally small in relation to the number of audits involved. Obviously, the problem of irregularities, embezzlements, etc., is a much larger problem from the standpoint of incidence and must not be ignored. Accordingly, as the teaching profession and we in public practice constantly emphasize the importance of the adequacy of internal controls, I pray that we not develop a generation of professionals who conceive that "everyone is a crook until proven otherwise." Rather, we must develop a generation who will maintain an attitude of "professional skepticism." We must remember that the majority of clients we represent (both in the public and private sector) are seeking the same goals we are and operate totally within the existing legal and moral framework throughout their business careers.

My final point. In general, each audit team is made up of people at various experience levels, starting with the partner who has the most experience. Most audit partners whom I have talked to (and not just from my own firm) have the healthy skepticism I referred to. They may call it "a gut feeling" based on their experience and industry expertise, but the fact is that they maintain an alertness to the "red flags" identified by the authors and they do not hesitate to expand the audit scope as the situation requires. This, I recognize, is a very subjective area but I think we must acknowledge that auditing is a combination of art and sciences. While there may be cases of human audit failure, I think it would be misleading to assume that management fraud hasn't been detected and stopped in its infancy on many occasions. The problem is that the "success stories" never make the newspapers or the courts, while the "bad news" makes the headlines.

To illustrate this point, I would like to relate a true story involving an audit I was involved in as a young staffman in the early '60s. As you will recall, there were at that time very few authoritative pronouncements on accounting principles and fewer on disclosure. In fact, it was considered unique if there were footnotes to the financials. In any event, the problem we faced was disclosure to owners and creditors of a number of significant changes in this situation which had occurred in the company during the year. The changes included (among other things) a change in top management, a change in marketing strategy and financing of customers, a change in production arrangements for their only product line which resulted in decreasing profit margins on production, a change in banking relationships, a turnover of key personnel, a change of law firms, and a proposed change of manufacturing locations. In substance, the company had radically changed although they were still selling the same product, in the same market, with the same labor force, and in the same economy.

It was our opinion that the facts had to be clearly spelled out in the proxy statement, as well as in footnotes to the financial statements, including the fact that there were related party transactions involving the new management who had introduced other related party transactions which, I might add, made some business sense. All of these changes resulted in a series of meetings which culminated in a heated discussion over the phone between a partner from our firm (who is long since retired) and counsel for the company. I was fortunate to be included in the discussion via a conference call as an observer, so to speak. After much bickering, I recall, as if it were yesterday, the partner asking counsel if they were aware of the implications of Rule 10 b.5 of the SEC and that he didn't care if there wasn't a specific requirement to disclose certain transactions or accounting practices; rather, he was interested in a fair presentation and fair disclosure. As a result, the accounting policies which we felt necessary were disclosed.

You may ask what is the point of this story. My response is that an auditor can't rely on a checklist approach because circumstances differ; rather, he must also exercise judgment which is a far more critical attribute in any audit.

An Educational Plea

I would also like to make a plea to the colleges and universities who are offering degrees in accounting. I recommend that material such as that developed by the authors, as well as other recently-published material, such as *Management Fraud* by Robert Elliott and John Willingham, be incorporated into existing or newly-created auditing courses. I believe the public accounting profession has become much more cognizant of the problem of management fraud and has made internal changes in various degrees to deal with the problem. Hopefully, your profession can say the same and lead all of us in doing the necessary research to help solve the problem.

7

Unique Audit Problems of Small Businesses that Operate under Managerial Dominance

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Many practitioners with small business clients believe that pronouncements of the Auditing Standards Board (ASB) are not responsive to their needs. Typically, the criticisms pertain to implementation problems stemming from existing statements on auditing standards. Commentators usually are not advocating that the profession should have two sets of generally accepted auditing standards (GAAS)—one set for public companies and another set for nonpublic companies. Rather, they ask questions like, how do you apply the guidance in SAS No. 12, Inquiry of a Client's Lawyer Concerning Litigation, Claims, and Assessments, if your client does not retain an attorney?

The purpose of this paper is to:

- Identify the characteristics of small businesses that generate unique audit problems.
- Briefly describe how the ASB is responding to the problem.
- Review existing AICPA and international guidance that addresses unique audit problems of small businesses.
- Review guidance contained in other published literature.
- Identify some of the implementation problems and possible solutions.

Characteristics of Small Business

The term "small business" as used in this paper is best described as an entity with some or all of the following characteristics:

1. Concentration of ownership or operational control in the hands of one or a few individuals.
2. Management personnel that have limited accounting experience and capability combined with an attitude that is not conducive to hiring employees having accounting expertise.
3. Internal accounting control weaknesses resulting from:
   - limited segregation of functions within the accounting system because of the small number of employees.

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- easy access of clerical and administrative personnel to physical assets.
- informally designed procedures (planning, budgeting, accounting, reporting) dependent upon managerial style.
- high potential for management override.

4. No independent policy-making board.

These characteristics encompass both public and private businesses. Of particular interest is the characteristic of weaknesses in internal accounting control. Even in a small business having some of the above characteristics there may be selected areas where an auditor can place reliance on internal control. For example, controls over disbursement and receipt of cash and physical inventory counts may be of sufficient quality to enable audit reliance to be placed thereon. Also, as discussed later, there are practitioners who believe that if management of the small business exercises proper "executive" control, other areas of internal control may be relied upon to limit substantive testing.

Problem Background

The Cohen Commission publicly stated that the Auditing Standards Executive Committee (predecessor to the ASB) pronouncements were not responsive to small business clientele. The Commission said:[1]

> . . . variations in the size and nature of an entity will dictate variations in specific audit practices and procedures, *as contrasted to auditing standards* [emphasis added]. Present guidance on the application of auditing standards to audits of different size entities is inadequate. More attention should be accorded to the possible effect of variations in audit clients on the nature and extent of audit procedures; additional guidance specifically applicable to audits of smaller entities should be given.

The commission considered the proposition that there are significant differences between audits of public and nonpublic entities and concluded that criticism of authoritative auditing pronouncements for a failure to differentiate standards based on whether the client is public or nonpublic is misdirected. According to the commission, the problem relates to small entities, whether public or private.

In response to the Cohen Commission, the Review of Existing Auditing Standards Task Force was formed by the ASB in 1978. The task force was charged:

> To review existing auditing standards (a) to determine whether they are responsive to the needs of auditors of smaller companies, whether changes are needed because of changed conditions, and whether there are inconsistencies in existing literature; and (b) to develop necessary guidance as a result of such review or to recommend how and by whom such guidance should be developed.

In May 1978, the AICPA's Council adopted the recommendations of the Oliphant Committee on the structure of Aud SEC.[2] The committee stated that the ASB should provide ". . . auditors with all possible guidance in the implementation of its pronouncements, by means of interpretation of its statements, by issuance of guidelines, and by any other means available to it."[3] The Oliphant Committee also recommended that auditing standards and procedures should

". . . make special provisions, where appropriate, to meet the needs of small enterprise."[4] Consistent with this directive, the ASB, starting with the exposure of SAS No. 26, Association with Financial Statements, in May 1979, began to specifically request comment on the special needs of small business via the transmittal letter accompanying exposure drafts.

The Review of Existing Auditing Standards Task Force devoted its initial efforts to identifying inconsistencies in existing literature, which resulted in numerous editorial revisions, and to drafting a proposed SAS on "Adequacy of Disclosure in Financial Statements."[5] Then, at its first meeting in 1980, the task force agreed, based on its study of the literature, that existing auditing standards are relevant for businesses of all sizes. However, the task force also agreed that there is a need for more explicit guidance for auditors on the appropriate *implementation* of standards in the audit of small businesses. The form of guidance (SAS, audit guide, etc.) has yet to be decided by the task force.

AICPA Guidance

Four publications of the AICPA present limited guidance on the unique application of auditing standards in the small business audit. Two of these are statements on auditing standards and thus are authoritative; two are nonauthoritative technical practice aids (not governed by rule 202 of the Institute's Code of Ethics).

SAS No. 1, Section 320.35, which presents a conceptually logical approach to internal accounting control evaluation, contains the following:

> Reasonable assurance that the objectives of accounting control are achieved depends on the competence and integrity of personnel, the independence of their assigned functions and their understanding of the prescribed procedures. Although these factors are important, their contribution is to provide an environment conducive to accounting control rather than to provide assurance that it necessarily will be achieved. Accounting control procedures may be performed by personnel in any appropriate organizational position. In smaller organizations, such procedures may be performed by the owner-manager. In these circumstances, however, some of the limitations discussed in paragraph 34 may be particularly applicable.

The reference back to paragraph 34, discussing inherent limitations, cautions the auditor that procedures designed to assure the execution and recording of transactions in accordance with management's authorization may be ineffective against either errors or irregularities perpetrated by management.

Paragraphs 34 and 35 considered together leave the auditor in a quandry. Paragraph 35 appears to implicitly permit reliance on owner/manager internal controls in a small business. However, paragraph 34 warns auditors about management override of controls.

SAS No. 20, Required Communication of Material Weaknesses in Internal Accounting Control, issued in August 1977, specifically addresses material weaknesses in internal accounting control for which management believes corrective action is not practicable. In these situations, the auditor, according to paragraph 9 of SAS No. 20, may summarize the weaknesses and describe the circumstances (e.g., inadequate control over cash transactions because of inadequate segregation of duties due to limited personnel). The summary of material weaknesses may be presented in writing or communicated orally and is to be communicated to senior management and the board of directors.

Interestingly, three members of the board assented with qualification and three members dissented (out of 20 total members) to SAS No. 20. Each dissenter included in his objections a statement expressing concern about the application of SAS No. 20 to smaller or closely held businesses.

Turning next to nonauthoritative AICPA guidance, section 8200 of *Technical Practice Aids* includes an inquiry on the study and evaluation of internal control.

> *Inquiry*—Several small audit clients have weak internal controls. If the auditor elects to not rely on the client's internal control, may he omit his study and evaluation of the internal control system? . . .
> *Reply*—An auditor may not omit his study and evaluation of the client's internal control. The auditor may not have to conduct tests of compliance if he is not relying on the internal control, but the auditor must still study and evaluate the client's system of internal control as required by the second standard of field work. . . .

Implicit in the above commentary is the need for a practitioner to include in his audit work papers a conclusion with respect to the study and evaluation of internal control *even if he does not rely on internal control.* Such a conclusion might state:[6]

> On 12/2/X1, I updated our memoranda concerning the company's accounting and internal control systems, there was no significant change in these systems during the eleven months ended 11/30/X1.
> It is my opinion that the company's controls over the various accounting systems are such that:
> 1. They cannot be relied upon due to a lack of segregation of duties,
> 2. Various controls are not susceptible to testing, or
> 3. It would not be cost/effective for us to test the controls.
>
> Therefore, it is my opinion that our work should consist entirely of substantive procedures.

The above illustrative conclusion that the auditor would not restrict his audit procedures without performing compliance testing conforms with authoritative literature and also satisfies the requirement of SAS No. 1, Section 338.05 (''Working Papers'').

Another nonauthoritative AICPA publication is the recently published *Audit and Accounting Manual.*[7] The manual is intended to be responsive to local practitioner needs; therefore, one might assume that audit problems of small businesses would be extensively addressed. However, only two sections of the manual address unique small business audit problems. An illustrative internal control questionnaire (AAM 4300) and a flowchart illustration (AAM 4500) depict a small business.

The *Audit and Accounting Manual* questionnaire presents a list of questions an auditor might raise concerning a small manufacturing operation owned by one person who also serves as the general manager and has only a *few* employees involved in the accounting function. The questionnaire stresses the need for owner/manager (''executive'') controls. For example:

- Does the owner use operating budgets and cash projections?
- Are journal entries understood and authorized by the owner?
- Is the owner satisfied that all employees are competent and honest?
- Are write-offs and other adjustments to customers' accounts authorized by the owner?
- Does the owner verify that the trial balance of accounts payable agrees with the general ledger control account?
- Are vendors' statements checked by the owner periodically for overdue items?
- Are all checks signed by the owner?

The section on flowcharting in the *Audit and Accounting Manual* illustrates the purchases, receipt of stock, and cash disbursements for purchases, of the Kilroy Wholesale Grocery. John Kilroy, according to the scenario, owns and operates the business with two employees. One employee serves as both the stock clerk and truck driver. The other employee is the bookkeeper.

Absent guidance provided by the *Audit and Accounting Manual,* and especially considering the questionable usefulness of internal control flowcharts in the small business environment, one has to conclude that *authoritative* auditing literature and *nonauthoritative* practice aids promulgated by the AICPA do not extensively address unique problems encountered in the small business audit.

International Guidance

The Canadian Institute of Chartered Accountants (CICA), the Institute of Chartered Accountants in England and Wales (English Institute), and the Auditing Practices Committee of the Consultative Committee of Accountancy Bodies (APC)[8] have published documents pertaining to small business audits. As discussed below, the CICA study refers to a negative assurance audit report which has not become an acceptable reporting practice. The English Institute pronouncements also deal with audit reporting. The APC discussion paper sets out arguments for and against audit requirements for certain small companies.

Canadian Institute

In 1967 the CICA published an audit technique study entitled *Internal Control in the Small Business.* The study dealt with the audit problem of reporting on a small business having limited internal control. The study group suggested the use of a negative assurance report in situations where the auditors have done an audit and have found nothing materially misstated, but the internal control is dominated by the owner/manager of the small business. The suggestions made in the study have *not* been accepted.

According to the study group, the first paragraph of the negative assurance report would contain wording similar to that contained in the scope paragraph of the standard auditor's report in order to indicate that the auditor has done all that in his professional opinion could be done. However, the scope paragraph would end with an exception which sets out the reason why an expression of opinion is not possible; for example, ". . . except that, in common with many businesses of a similar size and organization, internal check on management is limited and there were no practicable audit procedures to determine the effect of this limitation."

The second paragraph of the report would state that because of the limitation referred to in the preceding paragraph, the auditor is not in a position to express an opinion on the financial statements. It would then go on to set out the negative assurance, that is, to the effect that nothing had come to the auditor's attention during the examination which would indicate that the financials do not present fairly.

Although the study has been available since 1967, it was not, as mentioned, accepted in practice or included in the CICA *Handbook.* In fact, the study has been withdrawn. According to a January 1979 research proposal, the CICA has initiated a new audit technique study on internal control in the small business. In 1977 the CICA also published a CPE course, "Audit Problems of Manager Dominance."

English Institute

In 1972, the English Institute published a statement for guidance entitled *Audit Problems of the Smaller Company.* The statement indicates that the duties and responsibilities of a small company auditor are the same as in a large company audit. The small company audit engagement requires the skillful adaptation and application of auditing procedures to the individual small client situation.

Problems arise in the application of auditing procedures to a company employing a small number of administrative staff and controlled and managed by a single proprietor (or a small number of managers). According to the English Institute, these problems mainly derive from:

1. Substantial domination of the accounting and financial management functions by one person, and
2. Limitations in the effectiveness of the system of internal accounting control made inevitable by the small number of employees.

The statement concludes that in the audits of many smaller companies it becomes necessary, despite an extension of audit procedures, to rely to a more significant extent than with larger companies on the representations of management. In such circumstances, the auditor is justified in rendering an unqualified opinion if the evidence available and auditor's knowledge of the company are consistent with and supported by the representations of management. In other words, the auditor's use of representations of management will not of itself require a qualified opinion provided such representations are compared critically against all other available evidence.

The English Institute has expanded its position from *Audit Problems of the Smaller Company* as evidenced by publication (April 1, 1980) of *Auditing Standards and Guidelines.* The new United Kingdom standards present small business reports for a disclaimer (inability to substantiate cash transactions) and a qualified audit report (heavy reliance on management assurance).

Auditing Practices Committee

The relevancy of audits for small companies in the United Kingdom, over recent years, has been a hot topic for debate within the accounting profession. The United Kingdom has over 700,000 registered companies, the vast majority of them private companies, but all with the same audit obligation. That is, many private companies have to be audited solely because they are registered under the Companies Act.

In response to a European Economic Community directive, which would allow legislation to be drafted exempting certain small private companies from a statutory audit, the APC in 1979 published a discussion paper, *Small Companies—the Need for Audit?* The Companies Act at present does not differentiate in any way between the audit requirements of large and small companies, of public and private companies, nor of limited and unlimited companies. One of the primary alternatives being considered in *Small Companies—the Need for Audit?* is a statutory review of financial statements instead of a mandated audit. The review, as presented in the discussion paper, is equivalent in many respects to the review of nonpublic unaudited financial statements in the United States as delineated in Statement on Standards for Accounting and Review Services No. 1, Compilation and Review of Financial Statements.

Other Published Literature

Unique audit problems of small businesses have been addressed in published journal articles and occasionally in auditing textbooks and reference books (e.g., *Montgomery's Auditing,*[9] Anderson's *External Audit*[10]). Appendix A presents a selected bibliography of journal articles.

The thesis of an article by Grollman and Colby is that many of the limitations of a system of internal control for the small business can be offset by owner/manager controls and that the auditor should be able to place greater reliance on the system of accounting controls if these controls are strong and well placed.[11] According to Grollman and Colby, owner/manager controls are most effective when the executive:[12]

Effectively uses accounting information in both budgeting/planning and day-to-day managing of the business.
Seeks explanations for discrepancies between the accounting information with which he is provided and his expectations based on his knowledge of the business.
Is aware of the potential meaning of unusual items, customers' complaints, etc., which come to his attention.
Enlists non-accounting employees (e.g., receptionists, secretaries) to perform certain accounting control functions on a part-time basis where the segregation of duties is important.
Required prior authorization of certain transactions or payments.

The article, however, points out the problem of a concentration of power and notes that the auditor should be concerned about relying too strongly on owner/manager controls in a small business. Consequently, the auditor should recognize the need for applying other audit procedures to compensate for the dominance of the executive.

Stelzer,[13] in agreement with Grollman and Colby, advocates reliance on owner/manager internal controls. According to him, the scope of the examination should be broadened to cover not only the accounting functions but also administrative functions (i.e., budgets, cash projections, standard cost estimates, periodic operating reports and quality control).[14] Both articles also say that auditors of small business need a special internal control questionnaire with questions emphasizing owner/manager controls.

Cottle,[15] in addressing special problems in auditing a small client, explains what additional audit procedures are used to compensate for internal control deficiencies common to small organizations. He does not advocate reliance on owner/manager internal controls. However, he does believe that the basic audit procedures applied in a small business audit are the same regardless of client size. He stresses the need to increase the *extent* of testing in the small business audit. Some of his examples, however, suggest that the *nature* of testing should also be altered (e.g., compare details of deposit slips, remittance advice and accounts receivable postings; confirm accounts payable).

Some of the published journal articles identify differences inherent in the auditor-client relationship when auditing a small company. For example, the relationship between the CPA firm and the client is more intimate, less formal and sometimes characterized by more frequent client contact; the auditor's report is frequently the initial source of hard information on which management bases its decisions and planning; and the auditor frequently is not only examining, but has often prepared from the trial balance, the financial statements on which he is expressing an opinion.

Audit problems of smaller businesses are not extensively discussed in auditing textbooks or reference books. When the subject is discussed, the presentation rarely exceeds two pages. One exception to this is Anderson's *External Audit* which contains an entire chapter devoted to small partnerships and proprietorships. Salient points made in textbook/reference sources are presented below:

Alvin A. Arens and James K. Loebbecke, *Auditing: An Integrated Approach,* Prentice-Hall, 1976, pp. 178-179.

> Due to the frequent lack of sufficient segregation of duties and other important controls, the auditor must recognize that usually less reliance can be placed on controls in a small company. This generally results in more extensive direct tests of dollar balances and less emphasis on tests of the effectiveness of the system. Even though the lack of controls may dictate more testing for small companies than for large ones, certain other considerations often reduce the amount of testing needed. First, the auditor is likely to have a better understanding of the business and the individuals operating the business for a smaller client. Second, the overall level of assurance needed in the audit is usually less for a smaller client because non-involvement with the SEC and other variables significantly reduce the auditor's risk. Smaller population sizes also frequently reduce the testing needed.

Philip L. Defliese, Kenneth P. Johnson, and Roderick K. Macleod, *Montgomery's Auditing,* 9th edition The Ronald Press Company, 1975, pp. 132-133.

> Small companies and some that have not been previously audited often have rudimentary controls. Auditors of those companies must consider whether there is need for functional tests if they already know that controls are weak or nonexistent.
> . . . At a minimum there must be accounts to audit. The underlying system has to be understood and the understanding confirmed. Thus,

a transaction review, at least, is called for in every company being audited. . . .
Functional tests may or may not be needed, depending on the results of the transaction review. Even in a one bookkeeper operation, the accounting system can be well organized, the attitudes toward order, discipline, and accuracy exemplary, and the competence of the bookkeeper outstanding. If so, functional tests may provide evidence that those conditions are present, and the auditor may be able to complete his examination with little extension of tests. Because internal check is lacking, particularly the discipline of segregation of duties, he is likely to decide to perform validation tests at year end instead of at an interim date. But he may not need more extensive validation procedures if the functional tests reveal no significant exceptions or problems. He may decide to rely more than otherwise on comparison and analyses of the interrelationships among accounts to identify misclassifications or unusual conditions—again because inability to segregate duties makes control over that type of error difficult. But, under the favorable conditions cited, extensive verification of transactions or similar vouching is not required.

Unique Implementation Problems

Based on published materials and letters received from practitioners and state societies of CPAs, six implementation problems associated with existing SASs are discussed in this section. Although not pertaining to an existing SAS, a small business audit practice problem relating to engagement letters is also discussed. For some of the unique implementation problems presented, possible solutions are also discussed.

Owner/Manager Internal Controls

One of the most pervasive implementation problems in the small business audit area is the question: Can the independent auditor rely on owner/manager internal accounting controls to establish a basis for restricting audit procedures? In spite of suggestions in current literature suggesting otherwise, it is risky to rely on owner/manager controls to limit substantive testing. Where there are controls by management but not on management, the auditor should design audit procedures with this in mind and absent other factors, little reliance should be placed on internal control. Of course, the auditor may use a small business internal control questionnaire to enhance understanding of the accounting system so that an appropriate substantive-oriented audit program can be designed. The questionnaire also is useful as a client service, e.g., to identify owner/manager controls that can help to reduce the risk of employee errors and irregularities.

Special Audit Procedures

Although SASs typically do not discuss detailed audit procedures, practitioners auditing small businesses need and want guidance on special audit procedures—with "special audit procedures" defined as substantive procedures that are applied to offset internal accounting control weaknesses resulting from limited segregation of duties. Examples of these procedures are: proof of cash, accounts payable confirmations, and observation of property, plant and equipment. Comparisons of substantive audit programs with compliance/substantive audit programs should be helpful in identifying relevant special audit procedures.

Letters to Management

According to SAS No. 20, if the auditor is aware of a material weakness, it should be communicated to management, whether or not corrective action is practicable. Although SAS No. 20 does not require a written report (letter to management), many practitioners have firm policies that mandate written reports.

Practitioners performing small business audits sometimes have difficulty in writing a letter to management (senior management and the board of directors) that is responsive to SAS No. 20. As previously discussed, SAS No. 20 specifically states that internal accounting control weaknesses for which management believes corrective action is not practicable may be presented in summarized form. However, SAS No. 20 does not discuss or illustrate how to present material weaknesses in summary form.

Concerns about the application of SAS No. 20 to small businesses may be alleviated by publishing guidance illustrating letters to management used in small business audits. Appendix B presents one such example.

Engagement Letters

As Benis has noted, engagement letters are not required by GAAS.[16] However, they are widely used today because of the auditor's increased awareness of litigation problems.

Engagement letters are especially helpful in small business audits in explaining to the client that management has primary responsibility for the financial statements. Often the client believes that the auditor has primary responsibility because the auditor prepares the financial statements and drafts the related notes. In an attempt to clarify the auditor/client responsibility, a small business engagement letter might include the following paragraph:[17]

> Although we may prepare or help prepare the financial statements of XYZ Corporation, these financial statements are solely the representations of management. Although we may advise as to which accounting principles should be applied to financial statements and the method of application, the selection and method of application is a determination made solely by management.

The AICPA's *Sample Engagement Letters for an Accounting Practice* (1978) does not present engagement letters that include materials explaining client responsibility for financial statements.

Lawyers' Letters

SAS No. 12 assumes that the audit client has retained an outside attorney to advise on litigation, claims, and assessments. No guidance is provided in SAS No. 12 to cover a situation encountered in a small business audit where an attorney has not been consulted. Logic would suggest that the client representation letter be modified to obtain written assurance that the client has not consulted an attorney and there are no pending litigation or unasserted claims. In some cases, other corroborating information simply may not be available.

Another problem practitioners have pertains to the illustrative audit inquiry letter to legal counsel presented in the appendix to SAS No. 12. The illustrative letter presumes the client will be able to detail each pending or threatened litigation as to: (1) the nature of the litigation, (2) the progress of the case, (3) how management is responding, and (4) an evaluation of the likelihood of an unfavorable outcome and an estimate of the amount or range of potential loss. Similar details are also expected for unasserted claims that are probable of assertion and have at least a reasonable possibility of an unfavorable outcome.

An alternative to the SAS No. 12 appended letter, which is sometimes preferred in small business audits, is a ''short-form'' lawyer's letter that requests the responding attorney to provide the aforementioned details for asserted claims. An example of a short-form lawyer's letter is presented in Appendix C of this paper.

Client Representation Letters

Some practitioners are critical of the illustrative representation letter presented in the appendix to SAS No. 19, Client Representations. The letter covers only the ordinary representations that are generally appropriate for a manufacturing client. The appendix to SAS No. 19 clearly states that the illustrative letter is only one example and thus should be adapted to client circumstances.[18]

When the SAS No. 19 illustrative letter is considered from a small business audit perspective, two immediate problems surface. First, although the letter is not extremely technical, it does include several terms that may not be familiar to a small business client. Second, the letter probably should be tailored to fit the special circumstances of the small business client.

Terms included in the SAS No. 19 letter that perhaps might be defined for the client include the following: irregularities, unasserted claims, and related party transactions. Since these terms have specific meaning in accounting and auditing, it may be beneficial to present definitions within the client representation letter.

Other modifications may be beneficial to the small business client. For example, it may be desirable to have management acknowledge the auditor's recommended adjusting journal entries and indicate whether they have been posted to the accounts. Likewise, if internal accounting control weaknesses are orally reported to management, it may be desirable to ask management to acknowledge this communication. Representations as to the proper segregation of business and personal items and as to capital account transactions may also be needed, especially if the small business entity is a partnership, sole proprietorship, or other unincorporated business.

Audit Reports

A problem peculiar to reporting on a small unincorporated business arises when the owner has other business interests in addition to the entity being audited. In these situations, the audit report should clearly identify the business entity that is being examined. Consideration might be given to recommending that the scope paragraph be modified and a middle explanatory paragraph might be added to clearly identify the business examined. The middle paragraph might appear as follows:

As indicated in Note X to the financial statements, the financial statements referred to above do not include William J. Clip's personal assets, liabilities, revenues, and expenses which are not included in the accounting records of XYZ Proprietorship.

Conclusion

Enough evidence exists to support the assertion that existing SASs are generating implementation problems in the audits of small businesses. The most significant problem pertains to the application of SAS No. 1, Section 320. Practice today appears to condone some reliance on owner/manager internal controls without giving adequate consideration to the risk of management override. Audit attempts to rely on owner/manager controls may result in either overauditing or underauditing, depending on the audit approach used in a given CPA firm.

Additional guidance in auditing small businesses should be developed in the areas of special audit procedures, letters to management, engagement letters, lawyers' letters, client representations, and audit reports. Other areas, not discussed herein, also appear to represent areas where guidance may be needed. Some of these are: related party transactions, statistical sampling and EDP auditing.

The Review of Existing Auditing Standards Task Force is currently working on identifying implementation problems associated with existing SASs. The Task Force has also arranged for a doctoral student to provide additional research input to help identify other unique audit problems, measure the impact of the unique problems on audit efficiency, and suggest solutions to the problems.

Footnotes

1. The Commission on Auditors' Responsibilities, *Report, Conclusions, and Recommendations,* AICPA, 1978, p. 133.

2. AICPA, *Report of Special Committee of the AICPA to Study the Structure of the Auditing Standards Executive Committee,* 1978.

3. *Ibid.,* p. 21.

4. *Ibid.*

5. February 29, 1980.

6. Fox & Company, *ABC Company,* illustrative work papers.

7. AICPA, *Audit and Accounting Manual,* Commerce Clearing House, Inc., 1979.

8. The Auditing Practices Committee of the Consultative Committee of Accountancy Bodies consist of:

—The Institute of Chartered Accountants in England and Wales.
—The Institute of Chartered Accountants of Scotland.
—The Institute of Chartered Accountants in Ireland.
—The Association of Certified Accountants.
—The Institute of Cost and Management Accountants.
—The Chartered Institute of Public Finance and Accountancy.

9. Philip L. Defliese, et al., *Montgomery's Auditing,* 9th ed., The Ronald Press Company, 1975.

10. R. J. Anderson, *The External Audit,* Vol. 2, Pitman Publishing, 1977.

11. William K. Grollman and Robert W. Colby, "Internal Control for Small Businesses," *Journal of Accountancy,* December 1978, p. 65.

12. Ibid.

13. Herbert J. Stelzer, "Evaluating Internal Control in a Small Business," *The Practical Accountant,* September/October 1971, pp. 22-27.

14. Ibid.

15. David W. Cottle, ''How to Handle the Special Problems in Auditing a Small Client,'' *The Practical Accountant,* January/February, 1976, pp. 42-47.

16. Martin Benis, ''The Small Client and Representation Letters,'' *Journal of Accountancy,* September 1978, p. 81.

17. Ibid, p. 82.

18. Brian Zell and Douglas R. Carmichael, ''Management Representation Letters—Adapting Them to the Circumstances,'' *Journal of Accountancy,* March 1979, p. 87.

Appendix A
Selected Bibliography of Journal Articles

''Auditing the Smaller Company,'' *The Accountant,* Editorial, November 16, 1972.

Benis, Martin, ''The Small Client and Representation Letters,'' *The Journal of Accountancy,* September 1978, pp. 78-84.

Cottle, David W., ''How to Handle the Special Problems in Auditing a Small Client,'' *The Practical Accountant,* January/February 1976, pp. 42-47.

Grollman, William K., and Colby, Robert W., ''Internal Control for Small Businesses,'' *The Journal of Accountancy,* December 1978, pp. 64-67.

Largin, Alan, E., ''Internal Control for the Really Small Company,'' *NAA Bulletin,* March 1964, pp. 49-57.

Morgan, W. H., ''Internal Control for the Small Business,'' *The Accountants Journal,* April 1966, pp. 328-329 and January 1966, pp. 402-403.

Piaker, Philip M., ''The Distinctive Characteristics of Small Company Auditors,'' *Canadian Chartered Accountant,* May 1972, pp. 50-56.

______ ''The Distinctive Characteristics of Small Company Audits,'' *The CPA Journal,* January 1972, pp. 37-44.

Rutteman, Paul and Brown, John, ''Is Your Audit Really Necessary?'', *The Accountant,* February 3, 1977, pp. 135-137.

Sharp, K. J., ''Smaller Audits-Bigger Problems?'', *The Accountant,* July 16, 1970, pp. 75-81 and July 23, 1970, pp. 111-114.

Smith, ''The Audit Review of Internal Control in Small Business,'' *The Current Asset* (Delaware CPA), Feb-May 1964.

Stelzer, Herbert J., ''Evaluating Internal Control in a Small Business,'' *The Practical Accountant,* September/October 1971, pp. 22-27.

______, ''Practical Evaluation of Internal Control in the Small Audit Engagement,'' *The Michigan CPA,* July/August 1967, pp. 5-18.

______, ''Evaluation of Internal Control in Small Audits,'' *The Journal of Accountancy,* November 1964, pp. 55-61.

______, ''Practical Evaluation of Internal Control in the Small Audit Engagement,'' *The Colorado CPA Report,* July 1964, pp. 6-16.

Appendix B
Illustrative SAS No. 20 Letter for a Small Business

To XYZ Company

As part of our examination of your financial statements for the year ended December 31, 19X1, as described in our engagement letter dated October 1, 19X1, we studied the Company's system of internal accounting control to the extent we considered necessary to evaluate the system as required by generally accepted auditing standards.

Such a study and evaluation does not necessarily cover all aspects of internal accounting control and might not detect all weaknesses in the system. However, it disclosed certain conditions that we believe to be material weaknesses. A material weakness is a condition in which the internal control procedures, or the degree of compliance with them, do not reduce to a relatively low level the risk that material amounts of errors or irregularities may occur and not be detected within a timely period by your employees in the normal course of performing their assigned functions.

[Example of a Material Weakness:]
The bookkeeper is assigned the responsibility of recording all disbursements. However, he/she could intentionally omit the recording of checks. Since he/she also reconciles the bank account a failure to record checks could be concealed through an improper reconciliation.

This weakness could be corrected by having the bank reconciliations prepared by a person who has no other cash duties.

We have discussed the above conditions with Mr. John Jones, who has indicated that due to the limited number of personnel, an adequate segregation of duties is not achievable and that the costs of correcting the weakness would exceed the benefits that would be derived.

This letter should not be distributed outside the Company

[CPA firm, signature and date]

Appendix C
Short Form Lawyer's Letter

To Outside Attorney for XYZ Company

Foot, Tick, & Tie, CPAs, 100 East Broad Street, Lubbock, Texas 43215, are making their usual examination of our financial statements (and the financial statements of our subsidiaries; see attached list). Please furnish to our auditors the information requested below involving matters as to which you have been engaged and to which you have devoted substantive attention on behalf of the Company and/or any of its subsidiaries in the form of legal consultation or representation. Your response should include matters that existed at December 31, 19X1, and for the period from that date to the date of your response.

Pending or Threatened Litigation (excluding Unasserted Claims and Assessments)
Please prepare a description of all material litigation, claims and assessments (excluding unasserted claims and assessments). Materiality for purposes of this letter includes items involving amounts exceeding $25,000 individually or items involving lesser amounts that exceed $50,000 in the aggregate. The description of each case should include:

1 The nature of the litigation.
2 The progress of the case to date.
3. How management is responding or intends to respond to the litigation (e.g., to contest the case vigorously or to seek out-of-court settlement), and
4. An evaluation of the likelihood of an unfavorable outcome and an estimate, if one can be made, of the amount or range of potential loss.

Unasserted Claims and Assessments
We understand that whenever, in the course of performing legal services for us with respect to a matter recognized to involve an unasserted claim or assessment that may call for financial statement disclosure, if you have formed a professional conclusion that we should disclose or consider disclosing such possible claim or assessment, as a matter of professional responsibility to us you will so advise us and will consult with us concerning the question of such disclosure and the applicable requirements of Statement of Financial Accounting Standards No. 5. Please specifically confirm to our auditors that our understanding is correct.

We have assured our auditors that you have not advised us of any unasserted claims or assessments that are probable of assertion and must be disclosed in accordance with Statement of Financial Accounting Standards No. 5.

Other Matters
Please identify the nature and reasons for any limitation on your response. Also, please indicate the

amount we (and our subsidiaries) were indebted to you for services and expenses on December 31, 19X1.

The scheduled completion date of the auditors' examination is such that you should send your letter to Foot, Tick, & Tie, CPAs on or about February 6, 19X2.

[XYZ Company Signature and Date]

Discussant's Response to Unique Audit Problems of Small Businesses that Operate under Managerial Dominance

Albert A. Armstrong, Jr.
Baird, Kurtz, & Dobson

Let me say at the outset that this is a comprehensive and useful piece of research on a subject that is most significant to firms such as my own. I was disappointed that Dan offers no specific solutions to the problems precipitated by Sections 320.35 and 320.34 of SAS No. 1 and apparently endorses the recommendations of the Cohen Commission calling for "additional guidance specifically applicable to audits of smaller entities . . ." by the AICPA. Since I have no quarrel with the basic facts presented in the paper, I shall attempt to address these two areas to which I have referred. Let it be understood that the following opinions are my own and do not necessarily reflect the position of my firm on these matters.

Unique Problem

In my opinion, the problem of management override or dominance is not "unique" to the small business. Any objective review of major audit failures will reveal that they are primarily the result of management fraud or misrepresentation. Thus the single greatest audit risk, regardless of the size of the entity under review, may well be the integrity of management or, as I prefer to call it, "Management Bias."

The unique aspect of management override in the small business sector, as defined in the paper, is the relative ease with which management can manipulate the accounting records. It is seldom necessary to resort to "policy writing parties," peer group pressure or other elaborate ruses commonly found to be the causative factors in major audit failures. Due to his "limited financial and accounting experience and capability," the manager of the small enterprise is normally limited to simple misstatement of assets and liabilities.

Since the normal bias of the financially healthy small business is toward minimization of income taxes, the most frequent result is understatement of assets and income. Although the auditor should be as concerned with understatement as overstatement, I think it is fair to state that fewer auditors come to grief for the former than the latter.

Don Ziegler, in his paper presented earlier in this symposium, has offered a succinct and highly perceptive description of the audit attitudes necessary to deal with the risk of management override or fraud:

1. Watch out for overstated assets and understated liabilities.
2. Be wary of related party transactions.
3. Pay particular attention to large, complex transactions.

4. Get to know your client, his business and his industry before you report on his financial statements.

With the exception of Item 3, his formula is as applicable to the small entity as the largest. It should be noted that Don has not attempted to specify which auditing procedures are most effective in achieving his stated objectives.

Management bias must be evaluated on each engagement before meaningful final audit planning can take place. The forces tending to encourage "overstatement" have been discussed many times. At the risk of redundancy, the auditor should be alert to:

1. Significant contemplated borrowing or refinancing.
2. Merger and sale negotiations.
3. Management motivational devices such as:
   a. Budgets and quotas
   b. Incentive compensation
   c. Stock option plans
4. General financial health of entity.

There is an old saying in financial circles; "If a statement is good, it's probably better, and if it's bad, it's probably worse."

The interest of the AICPA in the problem of "management bias" as evidenced by official pronouncements is of relatively recent origin. The following statements on auditing standards pertain to one aspect or another of the problem:

SAS 6 (July, 1975) Related Party Transactions
SAS 12 (January, 1976) Inquiry of a Client's Lawyer Concerning Litigation, Claims and Assessments
SAS 16 (January, 1977) The Independent Auditor's Responsibility for the Detection of Errors or Irregularities
SAS 17 (January, 1977) Illegal Acts by Clients
SAS 19 (June, 1977) Client Representations
SAS 20 (August, 1977) Required Communications of Weaknesses in Internal Accounting Control

Reliance on Internal Controls in the Small Business Environment

Dan has correctly identified a major problem faced by the auditor of the small enterprise having limited controls, all of which are readily subject to management override. I am sure that we all accept the premise that audits are socially and economically useful. If we accept the capitalist notion that costs and benefits must be kept in a proper relationship, we must constantly challenge any audit procedural requirement that does not contribute in a meaningful way to the process of reaching an informed opinion as to the fairness of presentation of the financial statements under review.

The reliance on internal controls is, in my opinion, the most talked about and least understood of the audit concepts. Prior to 1972, authoritative literature and pronouncements referred to internal controls and internal check. Internal check was defined as, "Procedures designed to safeguard assets against defalcation or other irregularities."

SAP 54 (1972) represented a major effort to re-define the auditor's evaluation of internal control. Among other things, it:

1. Revised and expanded the definition of internal control and introduced four new terms.
   a. Accounting controls—"The plan of organization and all methods and procedures that are concerned mainly with, and relate directly to, the safeguarding of assets and the reliability of the financial records. They generally include such controls as the systems of authorization and approval, separation of duties concerned with record keeping and accounting reports from those concerned with operations or asset custody, physical controls over assets, and internal auditing."
   b. Administrative controls—"The plan of organization and all methods and procedures that are concerned mainly with operational efficiency and adherence to managerial policies and usually relate only indirectly to the financial records. They generally include such controls as statistical analyses, time and motion studies, performance reports, employee training programs and quality controls."
   c. Tests of compliance—Tests designed to provide reasonable assurance that the accounting control procedures are being applied as prescribed.
   d. Substantive tests—Tests of details of transactions and balances and analytical review of significant ratios and trends and resulting investigation of unusual fluctuations and questionable items.
2. Dropped the concept of separate internal check.
3. Described an inverse relationship between reliance on substantive tests and internal accounting controls.
4. Described management override as one of several limitations on the effectiveness of internal accounting controls.

The second standard of field work states that, "There is to be a proper study and evaluation of the existing internal control as a basis for reliance thereon and for the determination of the resultant extent of the tests to which auditing procedures are to be restricted."

Frankly, I do not feel that the second standard comprehended the expanded definition of internal accounting controls enunciated in SAP 54. I feel that the auditor is required to acquire an understanding of the client's accounting system. A "proper study" of internal accounting controls (as defined in SAP 54) in circumstances in which the auditor realizes intuitively that such controls do not exist is an absurdity.

There is support for this position in authoritative literature. To paraphrase *Montgomery's Auditing,* 9th edition (The Ronald Press Company, 1975), pages 132 and 133:

> The underlying system has to be understood and the understanding confirmed. Thus a transaction review (walk through) at least is called for in every company being audited . . . the conclusion reached may be . . . to proceed directly to substantive tests because there is not sufficient reason to rely on controls . . . It may be unnecessary to complete an internal control questionnaire, or a special "small business questionnaire" may be useful. Clearly if he already knows he cannot rely on some or all controls, functional tests of those controls serve no purpose.

Our own firm distinguishes between *procedures* (the accounting system itself including the activities of the owner/manager) and *controls* (that which we can rely upon to reduce substantive testing).

In most small business audits substantive tests are performed at the balance sheet date and close attention is paid to cutoff procedures. Engagement partners are chosen for their knowledge of the industry and extensive use is made of analytic procedures. We feel that it is our responsibility to assure that the owner/manager is utilizing procedures to protect his company's assets from employee defalcation and irregularities.

I feel that it would be beneficial to the entire profession if the AICPA would clarify the meaning of "Proper Study and Evaluation of Existing Internal Control."

The Need for Additional Guidance in Auditing Small Business

When the CPA assumed his rightful place among the professionals, he accepted certain responsibilities as well as privileges. Traditionally, responsibility begets authority and with them goes the accountability which no professional person can hope to escape. In the observance of generally accepted auditing standards, the independent auditor must exercise his judgment in determining which auditing procedures are necessary in the circumstances to afford a reasonable basis for his opinion. His judgment is required to be the informed judgment of a qualified professional person.

In my opinion, the standard-setting authorities for any profession should limit themselves, wherever possible, to the enunciation of objective type standards similar in nature to what architects refer to as "performance specifications" as opposed to specific procedural type pronouncements. Official pronouncements were never intended to comprehend a step by step "cook book" approach.

Pressure for the "cook book" approach is brought about by several factors. We live in a litigious society. The class action suit coupled with the adoption of "no fault" insurance laws by most states have unleashed upon the accounting and other professions a great deal of unwanted legal attention. Further, governmental agencies are adopting an aggressive consumer-oriented stance in their dealing with the professionals. In such a climate, it is understandable why professionals of all disciplines should be seeking asylum from these forces.

These pressures, however, must be resisted by professionals in policy-making positions. I have attempted, herein, to enumerate a few reasons for this conclusion:

- Many firms, including my own, tend to accept pronouncements like the "Tablets of Moses."
- Specific procedural pronouncements tend to set a ceiling as well as a floor on standards. Innovation is stifled.
- Specific pronouncements tend to be interpreted legalistically and present problems in interpretation. The three statements on auditing standards cited by Dan Guy as causing concern to auditors of small businesses (SAS 12, 19 and 20) are all of a procedural nature.

If one can equate, in his thinking, the collision of two ships at sea with an audit failure, we might learn something from the experience of the maritime profession in rule making. Rule 2b, "The General Prudential Rule" of the International Navigation Rules, reads as follows:

> "In construing and complying with these Rules due regard shall be had to all dangers of navigation and collision and to any special circumstances, including the limitations of the vessels involved, which may make a departure from these Rules necessary to avoid immediate danger."

Guidance in the application of specific audit procedures to particular situations is essentially a function of education and experience and should appropriately come from the schools of accountancy, the writings of learned men of the profession, and symposiums such as that which we are attending. The ad hoc adoption of standards such as SAS 20 in response to pressure from regulatory bodies or congressional committees must be resisted whenever and wherever possible if the profession is to retain its integrity.

8

The Accounting Profession in the 1980's—Some SEC Perspectives

George C. Mead
Securities and Exchange Commission*

I am very pleased to respond to Howard Stettler's invitation to speak on the topic, as Howard put it, "the SEC's position regarding the accounting profession in 1985." Of course, the response cannot be direct. The Commission has no such "master plan," nor does it desire one, nor would such preconception be wise in these fast-evolving times.

However, there are some themes in the actions of the Commission and in the words of Chairman Williams and other SEC spokesmen which are indicative of the Commission's general expectations of and concerns about the profession in the 1980's. There are in my view two underlying themes. The Commission is sincerely committed to the policy of self-regulation by the profession; it is also committed to "active oversight" of the profession. These seemingly contradictory statements will come as no surprise to anyone familiar with the Commission's activities and annual reports to Congress, or who follows its relationships with the ASB, FASB, and the SECPS and its Public Oversight Board.

Unfortunately, to base very specific predictions about the profession in the 80's on these two features of the present climate would be questionable, even if the prevailing economic and social winds hold steady. Nevertheless, I believe we *can* take these two themes—that the profession is and should be and will remain a profession and that the SEC will continue its oversight role in helping interpret that which is reasonable in various public expectations for accounting and for business in general—second, add some observations about the climate in which we all operate, and then add some comments on certain areas where change is now occurring or is perceived as necessary—and from all this gain some feeling for the Commission's hopes for the accounting profession in this new decade.

The Environment—Economic, Social, Legal, Professional

Let me turn now to some comments about the environment in which we find ourselves. First, economic: the combination of inflation, recession, and questionable energy supplies have made the public much more conscious of economic

* The Securities and Exchange Commission, as a matter of policy, disclaims responsibility for any private publications by any of its employees. The views expressed herein are those of the author and do not necessarily reflect the views of the Commission or of the author's colleagues on the staff of the Commission.

matters—and of economic measurements. The amounts, sources, and uses of corporate profits (and losses) are often front-page news, and debate as to the proper measurement thereof is, appropriately, no longer left solely to accountants. Some major unexpected failures, of both corporations and municipalities, have also underscored the importance of accounting and in some cases have led to questioning of the auditors' responsibilities.

Second, the social environment: questions of "to whom and for what ends is the corporation accountable" are heard regularly. Widespread disclosures of questionable payments and illegal acts, and some glaring instances of fraud, have contributed to this, as have increasing concerns for the physical environment and relations with employees, customers, and so forth. Changing views on corporate accountability do—and should—affect the role of the auditor.

Third, the legal environment: this litigious era makes both business and the profession understandably cautious in responding to economic and social changes. Thus, where voluntary efforts such as disclosure of (and the CPA's review of) soft data may seem appropriately responsive, there is timidity—which only augments normal human inertia. Where standards or regulations have been promulgated, too frequently it is their letter rather than their spirit which is heeded. The interest of Congress in accounting, as shown in the oil and gas legislation, the FCPA, and the Metcalf-Moss-Eagleton Committees' scrutiny of the profession, may be flattering in some ways but also invites legalistically defensive attitudes.

Thus the profession, and with it the Commission, finds itself in a climate of conflicting and changing views on corporate accountability and the related roles of accounting data and the audit function. It is also a time of impatience with consensus-building. "Leadership"—usually and often necessarily translated, "rule-writing"—is expected of the profession and/or the Commission. Surely the "pronouncement explosion" of the 1970's will continue in this decade, given the economic, social and legal factors at hand.

One other factor should be noted. Accountants seem to be changing. It is becoming easier for many practitioners to speak of the "accounting industry" or "business" rather than "the profession." Consulting services are often viewed as not only an audit client service but as the major area of real growth opportunity, in a profession obsessed by growth. Clearly, there is business justification—the profession must remain economically and intellectually attractive to retain its talent. Nevertheless, Professor Briloff is not the only party concerned with whether the growth of the aggressive consultant mentality may be affecting the "typical auditor."

So this is the environment and the profession which is our concern tonight. To reiterate my themes, one, the SEC hopes and expects the profession to be just that—a profession—in the 80's and beyond. That is:

- to respond first to the public interest, however that is reasonably interpreted.
- to practice, as firms and as individuals, in the spirit as well as the letter of articulations of the public interest.
- to maintain, as the organized profession, public confidence through credible self-regulation.

At the same time, (theme two) the Commission will continue to play an active and visible oversight role to ensure that the private sector exercises initiative in a timely and effective manner.

Some Developing Areas

I would like to turn now to a few developing areas, which I believe serve to illustrate the profession's changing environment and the present course of private and public standard-setting. These are:

1) ''supplementary data'' and limited reviews thereof;
2) corporate accountability, including governance structure and the specific case of internal accounting control reports;
3) a corollary to items one and two, the ''auditor of record'' or continuous audit concept; and,
4) professional self-regulation.

Supplementary Data/Limited Reviews

The era of ''soft information'' is rather rapidly evolving upon us. Inflation-adjusted numbers, forward-looking data, management's analyses and policy statements—these are ideas whose time, perhaps with a push from our inflationary economy, has come. The profession is facing the additional challenge of increasing expectations regarding its role in the broader area of financial reporting. A significant response has been the AICPA's designation of the FASB as the authoritative source of standards for disclosure of information outside the confines of the financial statements. The Board's Statement of Financial Accounting Concepts No. 1 specifies this broader view; Statement No. 33, ''Financial Reporting and Changing Prices,'' requires supplementary, non-statement disclosures.

The SEC's contributions have included the ASR No. 190 ''replacement cost'' disclosures (now rescinded), RRA (the reporting of valuations of proved oil and gas reserves), and various inducements to disclose forward-looking information. Currently outstanding is a set of proposals—the so-called ''integration project.'' While this project has many facets, a very significant aspect is one portion of the proposed 10-K amendment. This would change the focus of ''management's discussion and analysis'' and certain five-year summary data items to elicit meaningful information on three financial aspects: liquidity, capital resources and results of operations. Narrative discussion of the effects of inflation on the business entity would also be called for—even if the company is not required to present the supplementary information required by FASB Statement No. 33. Not coincidentally, the proposals would provide management with the opportunity to present more forward-looking information.

In general, the primacy of the basic annual financial statements as the focus of reporting activity and thus of auditor attention is being eroded. Disclosures of breakdowns of historical data, such as quarterly and business segment information, have also caused rethinking of the costs and benefits of various levels of audit assurance.

Happily, the Commission has demonstrated faith in the ability of auditors to add credibility to management's disclosures, even if the degree is less than that presumed in the standard audit of historical cost financial statements. It seems beyond question that means will be devised for explicit reporting by auditors on supplementary, nonfinancial statement, disclosures.

There are, of course, many problems (or more positively, challenging matters) to resolve. Many of the disclosure standards are new, some seem vague, many remain to be articulated. The same is true of developing limited review standards. There are obvious costs, unmeasurable benefits, and client opposition. And there are uncharted responsibilities, that is, liabilities.

SAS No. 27 is a positive step (and not the first one). However (to quote Chairman Williams):

> I am concerned that present standards do not require that auditors report on the nature and results of their reviews of supplementary information. Reporting the nature of the auditor's procedures and how they differ from an audit would provide an important communicating channel between the profession and the users of financial statements.[1]

The Auditing Standards Board is understandably quite sensitive to the liability implications of explicit limited assurances. It is probably fair to concede that definitive answers will come only from testing before the courts. Nevertheless, the Commission is aware of the complex issue of auditor liability. It has acted, and is contemplating further action, to defuse some of the more serious liability obstacles (though it does not wish to remove all auditor responsibility).

In June 1979, the Commission adopted a safe harbor rule offering certain protection from liability where forward-looking information, along with related assumptions, is disclosed or reaffirmed in SEC filings (under both the 1933 and 1934 Acts) or annual reports to shareholders. This includes projections of financial items, statements of management plans and objectives, and management discussion and analysis items which concern future economic performance. In addition, the Commission has proposed to extend safe harbor to certain supplementary information dealing with the effects of changing prices and with oil and gas reserve information.

The Commission has also taken action relating specifically to the liability of auditors under Section 11(a) of the 1933 Act for their reports on supplementary information as to changing prices and oil and gas reserves, if such reports are required. As you may be aware, Section 11(a) imposes liability on an accountant for misstatements or omissions of material facts in a registration statement which includes his report, unless he had, after "reasonable investigation," grounds to believe that the information was true. The problem raised by this standard, of course, is that limited reviews contemplated by the Auditing Standards Board do not afford the auditor a sufficient basis to judge the "truth" of the supplemental data reviewed. The proposed rule amendments are similar to the Commission's recent action in ASR No. 274, the effect of which is to exclude reports by auditors on unaudited interim information (which under SAS No. 24 are based on review procedures less than an audit) from potential liability under Sections 7 and 11 of the Securities Act.

However appropriate these precedents may be, they still a) represent an item by item approach rather than a general position on soft data and b) do not fully clarify the auditor-reviewer's legal responsibility under the securities acts. To again quote Chairman Williams:

> There are some who assert—and I might add, fairly persuasively—that accountants should not be given a blanket exemption of this sort from liabil-

ity under Section 11(a). Thus, I anticipate that the Commission may, in the near future, request comments on alternative approaches to the issue. The result of that process could be liability for failure to comply with the applicable professional standards.

In any case, I fully expect that the liability question soon will be clarified and that requirements for accountants' reports expressing limited assurances on the basis of reviews of supplementary information will be resolved. This process reflects the Commission's belief—similar to that suggested by the *Hochfelder* decision—that there must be a fair and reasonable balance between, on one side, the need to ensure responsible auditing services, and, on the other, the burdens and liabilities placed on the accounting profession.[2]

The growing importance of non-financial statement disclosures, both "soft" and analytical, and auditor association therewith, provides a clear example of the twin themes of this address—the SEC and the profession in tension—a creative tension. The Commission has provided much of the impetus for interims, forward-looking data, and inflation adjusted data, and is continuing to do so with the proposed expansion of management's discussion and analysis. The profession's standard-setting bodies have contributed significantly in guiding the implementation of these initiatives.

Supplemental data also provides an example of the frustrating problem of compliance with the letter rather than the spirit of standards. The proposed management discussion is a good illustration. The existing guidelines have become laden with all manner of interpretations and materiality policies; too frequently, the discussion is a bare recounting of the most obvious. The proposal attempts to elicit more meaningful disclosure by being purposefully indefinite; at one point it says, in effect, "tell investors about your liquidity and capital structure." However, many commentators have complained about this lack of specificity. For reasons both mean and defensive (legally), there is great reluctance to exercise professional judgment in interpreting and enforcing the spirit or intent of standards and regulations.

This pervasive professional problem is also illustrated by the current reconsideration of the term "fairly presents" in the standard audit report. The Auditing Standards Board is presently considering some significant changes in that report, one of which would substitute "in accordance with GAAP appropriate in the circumstances" for "fair." The Office of the Chief Accountant is not especially supportive of this, despite the Cohen Commission recommendation, though it would feel more comfortable if more discussion of "appropriateness" or "preferability of measurement and disclosure choices" were provided (either by the ASB or FASB). In any event, "fairness"—the judgment of management and the auditor as to overall impressions conveyed—cannot be avoided. The Securities Acts and the courts demand disclosure which is "not misleading."

This "fairness-preferability-spirit of the standard" area is admittedly difficult. And as we move further from the anchor of the financial statements and experience a proliferation of "bottom lines," "fairness" is becoming even more amorphous. Still, the public expects disclosure of substance rather than mere compliance with rules, and one way or another this demand will be served.

Corporate Accountability

Any discussion of the profession in the coming years should pay some heed to changing popular expectations about business corporations and their management. Auditors certainly are affected by what a company "is for" and how it is governed. Clearly, more is being expected of the auditor's role than a blessing of profit measures. That evolving role, only one of several in the broader context of corporate accountability, is not, and cannot, be entirely self-defined by the profession.

There are two related areas here—for what should corporations be accountable and by means of what formal structure (that is, the corporate governance issue).

Corporate Objectives

As to basic corporate objectives beyond creation of value (or cash) for investors, we are all aware of the "social responsibility" school of thought. Where environmental and social concerns have been enacted into law, there are generally avenues of information and enforcement that do not involve the SEC or at present involve auditors. Yet, it is not inconceivable that the independent auditor could become involved in some of these matters, for example, as a result of calls for expanded "social disclosures" for the benefit of those investors who are not totally economically motivated. Even assuming that formal reporting will retain a primarily financial orientation, FAS No. 5 may be more broadly interpreted in disclosures of "social costs." A related example is the Commission's presently required disclosure of contingent future environmental costs including costs of litigation, and its policy, recently clarified in the interpretative release issued concurrently with the settlement of proceedings involving U.S. Steel, which states that disclosure may be necessary ". . . to prevent . . . financial statements [etc.] . . . from being misleading . . . if a corporation has a policy or approach toward compliance with environmental regulations which is reasonably likely to result in substantial fines [or] penalties . . ."[3]

Another "accountable for what" area is that of illegal acts by or on behalf of the corporation. The general, though simplistic, assumption is that companies should operate within the law, and that the corporate governance structure should deter illegal acts. However, many matters of definition and implementation remain unsettled. These include questions of whom should be informed of such acts—top management, the board of directors, the public—and on what basis of evidence and concept of materiality.

Turning to "irregularities," the Cohen Commission Report contained certain "recommendations . . . intended to add to the substance of the standard of care for fraud detection."[4] Some of these recommendations already have been acted upon (note SAS No. 22—"Planning and Supervision," SAS No. 23—"Analytical Review Procedures," and *Statement on Quality Control Standards No. 1).* The continuing and considerable private sector initiatives (as evidenced by three of the papers at this Conference), along with increased involvement by directors, may yet provide realistic and responsive answers to these very difficult questions of disclosure and auditor responsibility regarding irregularities and illegal acts. In any event, neither the Commission nor the profession acts in a vacuum regarding these issues of business philosophy and law.

There is, of course, agreement that management has certain stewardship responsibilities. And the current "big issue" in this area is the report by management on the state of its internal accounting control. As you know, the Commission's proposed rule would have required such a report, accompanied by the auditor's comment thereon. The proposal was recently withdrawn, although "tabled" more accurately describes the Commission's action for it retains a very active interest in the matter.

Such a report is not mandated by the FCPA, nor was the Commission's purpose in its proposal a direct result of the accounting provisions of the Act. Rather, the Commission believes that reports on control systems provide information useful to investors in general but more specifically to the company's present shareholders—information for its own sake as a partial indicator of their management's performance of stewardship responsibilities as well as having implications for the quality of unaudited public information. In addition, it is my personal belief that IAC reports may be related to the same perceptions of public concern for American corporate conduct that underlay the FCPA legislation.

There are, obviously, some very substantive and unresolved questions of definition and liability. It should be emphasized though, that the Commission has not dismissed internal control reports. Chairman Williams' words nicely summarize its position in withdrawing the proposal:

> I am receptive to arguments that private sector initiatives, such as that proposed by the Financial Executives Institute and by various public accounting firms, should be given the opportunity to work. The Commission, of course, is watching developments on this subject with interest, and, where these initiatives conform to the objectives of the new Act, will take them into account in determining its course of action.[5]

It seems obvious that the accounting provisions of the Act have significant implications and that management statements on internal control are becoming a reality, whether in the long run they are molded by individual firms' initiatives, guided by private sector standards, SEC-mandated, or some combination thereof.

Accountability Mechanisms

Let us move now from the "for what" to the "how" of corporate accountability—mechanisms for corporate governance and possible effects on the auditor's role therein.

The modern corporation is an extraordinarily complex system in which, among others, managers, directors, lawyers and auditors (both internal and independent) play important roles. In combination, their often subtle interrelationships determine the quality of corporate accountability. In this system, the audit function, both directly, and indirectly by monitoring other controls, advances the corporate accountability process and influences the corporation's financial discipline.

Both formal corporate structure and shareholder participation are involved here. As to developments in the area of structure:

- Corporate boards which are more independent of management and more involved in the company's affairs.

The SEC supports this movement through moral suasion, through ordered settlements of enforcement actions, and implicitly by inclusion of relevant disclosures in proxy information. As this trend develops, the profession has a significant opportunity in helping to meet corporate directors' information needs. I recommend "The Strategic Audit," a recent *Journal of Accountancy* article, for some interesting observations in this regard.[6]

- Audit committees

There is no need to recount the perceived importance of functional audit committees for auditors, internal and external, and for corporate accountability structure in general. A large majority of public companies have them; they are a New York Stock Exchange listing requirement. Also, certain companies have consented to audit committees, with defined membership and duties, as a feature of their settlements of SEC enforcement proceedings.

- Corporate legal counsel

The American Bar Association is reconsidering the matter of whether "the corporation," its board, its shareholders, or the management is the attorney's client. There is a theory that an attorney, who knows of actions (actual or contemplated) of management which because of their questionable legality could be detrimental to the company, has a duty to demand that management apprise the board, if not "the public" as well. If this view prevails, there could be implications for auditors—for example, attorney-CPA communication may be facilitated.

- Formal Codes of Management Ethics

The Cohen Commission, among others, has advocated that management disclose the existence and monitoring of such a code and that the auditor opine on that assertion. The implementation and publicizing of such reform measures could well improve the public's image of business. The private sector—the profession, but more fundamentally the business community—has an opportunity for initiative.

Turning briefly to shareholder democracy, here the activities range from the fundamental to the more evolutionary. The "Corporate Democracy Act of 1980," recently introduced in the House of Representatives, would require among other things "constituency boards of directors," expanded disclosures, and "community impact analyses" in connection with plant closings. If this, or some of the other more radical of the legislative proposals were to pass, there would surely be major and unpredictable effects on business in general, and on the profession and perhaps the structure of accounting theory, as well. More procedural is the "corporate accountability project" of the SEC's Division of Corporation Finance. While this study could result in proposed proxy rule amendments, it seems doubtful that such proposals will involve extension of the responsibilities of independent auditors.

In summary, the corporate governance area is perhaps a better example of the profession's opportunity for constructive response than for initiative. Accountants are rather ill-positioned to initiate changes, but can, must, and are, adapting to whatever evolves.

> Auditors—both outside auditors and internal auditors—are major contributors to the effective corporate accountability process which is an alternative to further governmental intrusions into the private sector's decision-making process.[7]

"Auditor-of-Record" Concept

> The audit should be considered a function to be performed during a *period of time,* rather than an audit of a *particular set* of financial statements . . . (It) should expand to include all important elements of the financial reporting process.[8]

Thus did the Cohen Commission advocate the continuous auditing or auditor-of-record concept. This was in a context which included regular association with interim reports and evaluation of the full period's internal accounting control. As financial reporting expands and the corporate governance structure evolves—also, as basic audit approaches and techniques become less seasonal—it seems to be a natural development.

This is, it seems to me, the expectation of the Commission. The SEC is interested in and favors the concept. There were, of course, the actions of a few years ago which involved auditors in quarterly data. I believe it is fair to say that at present the staff posture is to encourage continued private sector initiatives regarding quarterly reviews and, by implication, further formalization of the auditor-of-record status.

Professional Self-Regulation

The new SEC Practice Section-Public Oversight Board structure provides the most vivid example of the clash and cooperation between the profession and the public sector in responding to the impetus of public expectations. The structure, still very much in the development and testing stage, is complex and subtle. The chain runs from the firm's own quality control mechanisms, to peer reviews of the firm by the SECPS, to POB monitoring of those reviews, to the SEC—whose oversight activity will be heavily influenced by the Commission's evaluation of the effectiveness of the POB as an overseer of the profession's self-regulatory program.

The peer review program is the centerpiece. If carried out meaningfully and if coupled with effective disciplinary procedures, the profession will have implemented a significant, though expensive and difficult, change. The effectiveness of this new program is understandably not yet resolved. The Commission hopes ultimately to be able to rely heavily on the POB's monitoring. However, it is still felt necessary for the SEC staff to have sufficient access to peer review workpapers to permit an overall evaluation of the reviews themselves and of the Board's supervision, both for the Commission's own satisfaction and so that it may report credibly to Congress.

The difficulty in arriving at a mutually acceptable arrangement here is only in part due to technical or jurisdictional problems. More fundamentally, it reflects the profession's fears on the one hand (for example, that the Commission would use access to detailed documents to institute proceedings against firms) and on the other hand the SEC's need to assure integrity of the process (while not wanting its involvement to include a "blanket pardon"). There is probably no better example of the need for regulator and professional statesmanship than the continuing ''access'' negotiations.

The major issue of disciplinary ''clout'' also is progressing. Last November, the SECPS established a ''Special Investigations Committee'' and set forth *Rules of Procedures for the Imposition of Sanctions.* It remains to be seen whether the Section can complement and perhaps even obviate some of the SEC's enforcement work by invoking discipline which is both constructive and credible—or whether this function de facto will remain primarily with the Commission. Obviously, it is a ''sticky'' matter.

The Public Oversight Board, composed of distinguished members of the public, occupies a unique position as the ''go between'' in the regulatory-professional nexus.

> The POB must be sufficiently detached from the accounting profession to guide the effort objectively and to ensure that the profession does not lose sight of the goals which it must achieve. While the Board's authority is advisory only, it can and should—by virtue of its stature—serve as a conscience, critic and leader. But it is not yet clear whether the POB is prepared to assume this responsibility.[9]

One matter underlying this less than ringing endorsement is the Commission's position on the ''scope of services'' issue, which differs at least in emphasis from that of the POB, and indeed it seems from much of the profession. Audit independence vs. consulting is, of course, an especially vexing matter, for it is intrinsically a question primarily of attitudes rather than hard evidence. ASR Nos. 250 and 264 have been severely criticized as being too threatening and vague in attacking an allegedly non-existent problem. The Commission, as you know, felt the POB and the profession to be ''not adequately sensitized'' to public perceptions. But it is reluctant to go beyond mandating disclosure of fees and directors' approvals at this point—instead, it much prefers that the profession grapple with the ''scope'' issue.

One major feature of ASR No. 264 is the so-called ''global test''—that is, an expression of the Commission's general concern that auditing firms be primarily in the practice of auditing. The philosophy of ASR No. 264 is that while there is generally no current problem, the profession should be alert to the potential, given the increasing importance and scope of consulting services.

ASR No. 264 is indeed vague, but would more detailed rules be more realistic? Let us consider three example situations, the latter two hypothetical:

- the 10% audit, 90% tax-writeup-consulting firm
- a management consulting firm, which forms or acquires an auditing subsidiary
- a CPA firm, where a majority of its billings and executive partners are non-accounting-related

In any of these is actual audit quality necessarily impaired? Is even the probability of impairment higher? How will such firms—and indirectly the whole auditing profession—be perceived? How would the Commission view firms two or three (especially if either has been given a ''clean'' peer review)? It is frustrating that none of these questions have clear answers. However, resort to detailed rules and proscriptions would surely be more form than substance, i.e., give comfort (to firms, to the public, even to the SEC) that could be illusory.

Hopefully, the "veiled threats" of ASR No. 264 (as some characterize them) and "sensitivity" on the part of firms and the SECPS will be sufficient to avoid cases of actual impairment of audit quality, the bottom line, as well as of a firm's professional image.

Conclusion

What generalizations can be made about the SEC's "perspectives" for the '80s, for the profession and itself? What are its hopes and expectations?

As to the profession, the 1980's would appear to be a time of digesting the truly significant developments of the 1970's—soft data, limited reviews, audit committees, peer reviews, internal accounting control, the Cohen Commission Report, as major examples. A great deal of experimentation and definition remain, but the profession has broken ground in several ways to enhance its role in corporate accountability. It must, and I believe it will, now

> . . . guard against the tendency to become complacent, or to develop an attitude that enough, or too much, has already been done—or that much of what is being done is not substantively necessary or cost justifiable, but rather a mandatory tithe to keep powerful but misguided external forces at bay.[10]

The Commission is certainly not eager to formally regulate the profession or to set accounting and auditing standards. Dealing with practical impediments to broader societal purposes, which cannot be brushed aside as mere nuisances, is a clear role for the profession. The private sector will continue to be relied on to develop new ideas regarding disclosure, audit technique, and even audit purpose, and to aid the implementation of those initiatives which the Commission may feel to be necessary—and to take some of the grief that comes with new standards. Further, in Clarence Sampson's words: "It is inherent that professionals are more likely to respond in a professional manner when enforcing their own standards than when complying with rules imposed by government."[11]

Turning to the Commission, it too needs to be sensitive and practicable—and I believe is generally demonstrating these qualities. It will surely continue to occupy a dominant role in interpreting public expectations. This seems inevitable because of the SEC's mandate under the securities laws, its "broader-than- accounting" function in corporate accountability, and, relative to private sector standards bodies, its capacity to act. There is no desire to preempt the FASB, ASB, POB, etc., but rather, as an overseer, to assure that standards adopted fall with a range of acceptable solutions.

The profession has understandable limits on its ability to undertake major initiatives. However, it is in a quasi-public role—not conscripted into involuntary service in a dangerous mission, but it has nevertheless enlisted in a public service, under a franchise based on the securities laws of 1933 and 1934. As such, the profession with the Commission must heed and interpret reasonable public expectations.

If only we could predict those expectations (or even agree on what is reasonable today), we could perhaps venture more definitive predictions for the profession. But that is difficult. All anyone can say about "the Commission's plan for the '80s" is an expectation that in tandem—in constructive tension—the profession and the SEC will enhance the usefulness, and the concomitant responsibilities and prestige, of the accounting and auditing functions.

Footnotes

1. Harold M. Williams, "The First Thousand Days—and Beyond," an address at the Accounting Research Center, Northwestern University, Evanston, Illinois; April 23, 1980.

2. *Ibid.*

3. Securities Act Release No. 6130/September 27, 1979 (Part B3). The Commission, incidentally, "noted the applicability" of FAS No. 5, "Accounting for Contingencies," in this regard.

4. The Commission on Auditors' Responsibilities, *Report, Conclusions, and Recommendation,* AICPA 1978, p. 37.

5. Williams, *op. cit.*

6. Alfred Rappaport, "The Strategic Audit," *Journal of Accountancy,* June 1980, pp. 71-77.

7. Williams, *op. cit.*

8. The Commission on Auditors' Responsibilities, *op. cit.*, p. 60.

9. Williams, *op. cit.*

10. *Ibid.*

11. A. Clarence Sampson, "The Effect of SEC Regulation on the Development of Accounting Theory," an address at the 1979 Accounting Research Convocation, The University of Alabama; November 17, 1979.