

COMMENTARY

Robert K. Elliott

Robert K. Elliott is Partner at KPMG Peat Marwick LLP and Former Chair of the AICPA Special Committee on Assurance Services.

Assurance Service Opportunities: Implications for Academia

The market for audits has been flat for a number of years with no clear prospect of a turnaround. The AICPA's Special Committee on Assurance Services (1997) publicized that fact and responded by identifying new services and recommending processes for the ongoing identification and development of additional services. The premise was always to build on the audit tradition, and steady (though not rising) demand for audits was projected into the future.

The audit tradition is a professional asset of incalculable value. It derives from the marketplace need for high-quality, decision-making information. The financial statement audit provides assurance that an information set presented to investors and creditors is reliable. But the marketplace need for high quality information is far greater than the need for reliable historical-cost-basis financial statements. Thus, assurance services not only respond to the growth problems of the audit industry, they also adjust the audit tradition to the wider marketplace it long ago was destined to serve, or so it seems in retrospect.

The Special Committee on Assurance Services set in train three types of changes, as illustrated by figure 1. The smaller enclosed cube represents the profession's revenue from financial statement audits. The larger cube extends three dimensions of the financial statement audit, which can be abbreviated as the who, the what and the how of the service. The who refers to the CPA's customers (who will expand from investors and creditors to include

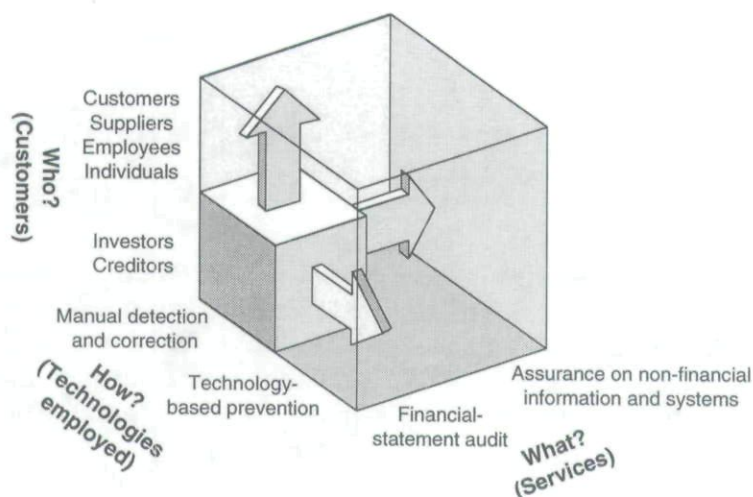
entities' customers, employees, managers, directors, and suppliers of goods and services). The what refers to the service provided (which will embrace assurance on nonfinancial information and systems). The how refers to the service-delivery technologies (which will include real-time audit techniques, as well as evaluation of encryption, firewall strategies and database design).

Services will include providing assurance on nonfinancial information and on all sorts of information systems. The assurances may pertain to the relevance as well as the reliability of the information. Service-delivery technologies will address a broader range of potential defects in information and information systems, because information will be produced and presented in different forms. Instead of evaluating manual detection and correction of errors, for example, assurers will evaluate the design of systems for their preventive controls. Real-time information reports cannot wait for manual detection, so the effectiveness of preventive controls will determine the reliability of the information decision makers receive.

The CPA's customer base can (and should) be all users of decision-making information. They include senior managers or other employees, members of corporate or

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FIGURE 1
Strategic Expansion of "Audit Space"



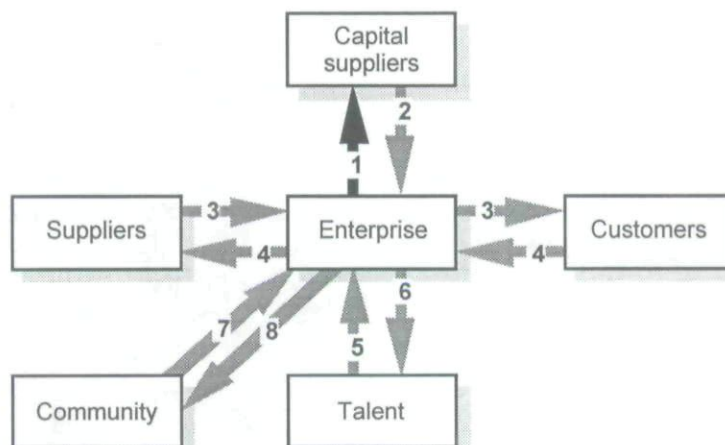
not-for-profit boards, institutional investors, analysts, individual investors and creditors, charitable donors and individuals who are making decisions about other matters, such as selecting personal medical care or arranging care for elderly family members. All these parties are potential customers because they need decision-making information and assurance of its quality.

Defective decision-making information is unfortunately a universal experience for adults. They have encountered well-intentioned overstatements in social situations and misleading information in commercial situations. The ubiquitous jokes about advertising copy in our society are evidence that some wariness of misleading information is typical, and you can go back to a centuries-long history of concern by decision makers that the information they receive is tainted by the interests of those who prepared it. People can take assurance from the credentials of the party supplying information and the circumstances under which it is supplied. One is more likely to believe a scientist presenting a basic concept than a producer touting a film before it opens. When

a decision is important, however, decision makers are likely to be most comfortable with assurance from an independent party qualified to judge the quality of the information.

One way to put in perspective the range of potential new customers and assurance services is to focus on an organization's external relationships and the decision-making needs they present (although organizations also have a great number of internal decisions to make, and organizations' decision makers are also important assurance-service customers). Organizations conduct transactions with: purchasers of their goods and services; suppliers of goods, services and technologies; capital suppliers; and potential employees. Decisions about the transactions (e.g., sales of goods and services, inventory purchases, exchanges of securities for capital, and hiring) are supported by two-way information flows. The arrows in figure 2 illustrate these flows. In addition, the entity has accountability and regulatory relationships as a member of its community. Information flows to and from community agencies are necessary when decisions have to be made about accountability and

FIGURE 2
Enterprise's External Information Flows



Adapted from C. K. Prahalad

regulatory relationships (e.g., compliance with regulations).

CPAs have been most involved with arrow 1 (the black arrow) through audits of financial statements. Obviously, there are many other information flows needed for entity decision making, as the other arrows in the figure demonstrate. However, even the possibilities represented by the black arrow are much greater than services needed to produce periodic financial statements. Today there are many other information flows to investors and creditors. Table 1 illustrates the range of information flows represented by the numbered arrows in figure 1.

Decision makers using these information flows would benefit from assurance services, and the prospect of such benefits would create economic demand for the services. If CPAs do not meet the demand, others will. Outside of the financial-statement audit, there is no statutory franchise. Competitors' responses to the demand for additional assurance services will have a great effect on the CPA's practice environment. The opportunities for CPAs will be enormous, but non-

CPA competition will be an ever-present condition when attempting to take advantage of the opportunities.

DEFINITION OF ASSURANCE SERVICES

The Special Committee's definition of assurance services attempted to capture the centrality of decision makers' needs for quality information and the full breadth of service possibilities that those needs open:

Assurance services are independent professional services that improve the quality of information, or its context, for decision makers.

This definition allows for expansion along each of the dimensions illustrated in figure 1 by serving new customers, providing new services and employing new technologies. New assurance services have already been identified and AICPA processes put in place to identify and develop additional services in the future. The new services, both those in development and those that will be identified, have three implications for academic accounting departments. The new services create training demands; they create new

TABLE 1
Examples of External Information Flows

<u>Arrow</u>	<u>Information</u>
1	Financial statements Press releases Analysts meetings Fact books
2	"Truth in lending" Undertakings in offering Financial capacity
3	Product/service quality (e.g., ISO 9000) Warranties Credit terms
4	Procurement specifications Financial condition (creditworthiness) Customer qualifications
5	Credentials/competencies Employment history References
6	Benefits Employment policies Compensation Job-related information
7	Tax policy/regulations Employment requirements Air/water quality Environmental restrictions
8	Environmental effects (e.g., ISO 14000) Employment effects Tax returns

research opportunities; and they will help redefine what we mean by accountancy as a vocation, and, therefore, as an academic discipline as well. Each of these implications presents the academic branch of the profession with choices, some of them difficult.

The remainder of this article briefly explores these three implications of assurance services. The exploration relies on the findings of the Special Committee on Assurance Services. The Special Committee's report, including its studies, background papers, and descriptions of new services, are available on-line at www.aicpa.org/assurance/scas/index.htm.

MAINTAINING AND INCREASING THE VALUE OF THE AUDIT

The committee foresaw two types of changes in the audit that should affect what is desirable education for practitioners. First, the evolution of information technology will have a number of influences on needed audit capabilities. It is transforming business information systems and facilitating forms of on-line reporting. Auditors will have to upgrade their ability to evaluate systems as the systems themselves become more sophisticated. On-line reporting based on databases updated in real time will be less wedded to current protocols for periodicity, creating a

parallel evolution toward continuous auditing. Continuous auditing may lead to continuous reporting that supplements and eventually replaces the annual audit report. To audit effectively in these environments, auditors will use electronic sensors, software agents and computerized audit programming models.

Information technology is also the leading edge of a mix of interrelated forces changing the way business is conducted. Auditors must understand the effects of these changes if they are to continue to understand their clients' businesses and transactions. Meanwhile, the public's expectations of auditors, together with pressures for greater accountability, will increase demands for auditors to detect fraud and illegal acts, and provide early warning of financial distress and going concern problems.

How auditors respond to these changes will greatly determine the value of the audit in the coming decade. But the response will not alone determine the audit's value. The value of effective auditing depends on the usefulness of the business reports that are audited. Business reporting that is increasingly useful to inves-

tors and creditors increases the value of the effective audit. Figure 3 shows that raising the quality of auditing or accounting alone helps increase the value of the audit, but raising them both helps even more. So the profession has a great deal at stake in the future of business reporting through the work of the FASB.

However, the value of the audit will also be influenced by how auditors respond to demands for additional deliverables based on the client-specific knowledge gained during the audit and on the industry and economic knowledge brought to the audit. For example, the auditor could deliver observations to clients on risks and opportunities and strengths and weaknesses. The sometimes tired notions carried forward from the traditional management letter could be replaced by far more useful observations from the auditors. They would result in net increases in the value of the audit even if the quality of the business reporting was steady.

Table 2 shows the capabilities needed to maintain and increase the value of the traditional audit function.

FIGURE 3
Assurance vs. Disclosure Policy

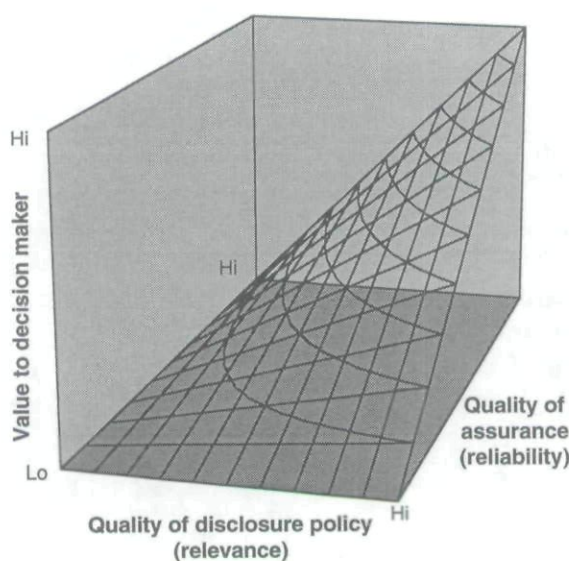


TABLE 2
Capabilities Needed to Maintain and Enhance the Traditional Audit Function

- Knowledge of information technology in order to:
 - Upgrade capabilities to evaluate clients' systems
 - Understand how IT affects the client's business, specifically, how IT affects operations, risks, opportunities and desirable strategic direction
 - An understanding of how economic forces (including IT) are changing the auditee's risks and opportunities, i.e., the capacity to analyze the auditee's operational effectiveness and industry standing, what forces are affecting it and could affect it, and how it is being and could be changed
 - New techniques to plan the audit (computerized programming models) and gather audit evidence (e.g., use of electronic sensors, software agents)
 - Strengthened capabilities to detect fraud and illegal acts
 - Strengthened capabilities to evaluate financial distress and going-concern problems
 - Ability to deliver observations on risk and opportunities and on strengths and weaknesses, based on knowledge gained during the audit and on the industry and economic knowledge brought to the audit
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Some of the table's entries are versions of what is provided by current curricula, but should be adapted to the changing audit environment. For example, training to understand the client's business is hardly a new curricular demand, but what is needed is rapidly evolving.

Other items in the table overlap with the training traditionally provided by accounting firms to their practitioners. Techniques to plan the audit is perhaps the best example. In all such cases, students should have enough mastery of the issue to upgrade the skills and use the specific tools that their practice demands. It is a simple example of how a curriculum not devoted to learning how to learn will fail to meet student needs.

The table has research implications. The academic community can help to improve techniques to detect fraud and illegal acts. It can help improve techniques to evaluate financial distress and going-concern problems. These research topics have been on the agenda for years, and some progress has been made, but more can be done.

More forward-looking research is implied by the entry "Upgrade capabilities to evaluate clients' systems." As already noted, the audit will eventually move into the era

of real-time access to corporate databases, presenting the opportunity for continuous auditing and continuous assurance, with its attendant problems. Data access will replace periodic reporting by those we now refer to as preparers. Research on new tools for gathering audit evidence (e.g., electronic sensors and software agents) would be very helpful. Research on effective preventive controls—what might be called "reliability by design"—would benefit managements as well as auditors.

Maintaining and strengthening the audit is a forward-looking task. I am not talking about scraping the rust off an old hull to get a few more voyages out of it. I am talking about a service that will continue to have market demand and be useful. However, the stakes are even higher than that. Increasing the value of the audit is a key to market permissions for new assurance services. Practitioners are not going to be given market permissions if the public has a declining impression of the effectiveness and value of audits. The halo effect from independent, objective audit work demanding a high level of expertise degrades as the public impression of the effectiveness and value of audits degrades. On the other hand, if we strengthen the audit in

all the ways mentioned above, we should simultaneously strengthen the market permissions it provides to new assurance services.

NEW SERVICES

New assurance services are coming to the marketplace. The Special Committee identified some; the AICPA's new Assurance Services Executive Committee is developing them and will be identifying and developing others on into the future. To this will be added the current and future work in service identification and service development performed by individual firms.

What does all this mean for the curriculum? New services cannot be provided without sufficient competencies. In some cases, existing competencies can be applied to new services without any sacrifice in needed proficiency. In other cases, some mix of training by firms and the AICPA and perhaps new hiring will be necessary. In still other cases, it will be extraordinarily difficult to train people to perform the services unless they have the background that permits them to benefit from training in a nontraditional service—background they can obtain most efficiently in their higher education. Once again it's the story of the paramountcy of learning to learn in the curriculum.

The following six services were the subject of business plans prepared by the Special Committee on Assurance Services (the website reference to the business plan follows the abbreviated description of the service).

- Provide assurance to concerned parties as to whether care delivery goals for elderly individuals are being met (ElderCare Plus). (www.aicpa.org/assurance/scas/newsvs/elderpl/index.htm)
- Assess health care providers' performance for the decision-making benefit of care recipients and their representatives (e.g., employers and unions). (www.aicpa.org/assurance/scas/newsvs/health/index.htm)
- Provide assurance that systems are designed and operate in a manner that provides reliable information or operate according to accepted criteria.

(www.aicpa.org/assurance/scas/newsvs/reliab/index.htm)

- Assess whether informational features of electronic commerce function in accordance with accepted criteria. The service would provide assurance with respect to the integrity, security and privacy of electronic transactions, electronic documents and the supporting systems. (www.aicpa.org/assurance/scas/newsvs/elec/index.htm)
- Improve the quality of risk information through independent assessments of the likelihood of significant, adverse events and quantify the possible magnitudes of the effects. (www.aicpa.org/assurance/scas/newsvs/risk/index.htm)
- Assess the relevance and reliability of an entity's performance measures. Potential engagements include assessing the reliability of the information reported from an organization's performance measurement system, assessing the relevance of the organization's performance measures, identifying relevant performance measures for organizations that need them, and helping to design and implement a performance measurement system. (www.aicpa.org/assurance/scas/newsvs/perf/index.htm)

Practitioners performing these services must be able to apply measurement criteria other than financial accounting principles and to measure in nonfinancial units. Neither task is novel in the accounting profession, but neither seems to be given a great deal of attention in traditional accounting and auditing courses.

Many of the new services will be attest services. A solid background in attestation would therefore be fundamental to preparing to perform them.

Systems assurance and electronic-commerce assurance show again the usefulness of improving the treatment of information technology in the curriculum. Assurers providing electronic-commerce assurance services need to understand the risks of electronic commerce (e.g., intentional attacks, transmission

failures, lack of authentication, lack of trust, theft of identity), the role of preventive controls in reducing these risks, and how design can establish reliability. The services cannot be performed without such knowledge even when the needed measurement criteria become available, which will not be too long after this writing.

Assurance services will be necessary to maximize the growth of the electronic-commerce marketplace, and non-CPAs are capable of gearing up to provide the services. Consumers will not participate in electronic commerce unless they have confidence that they have reached a properly identified website, that their personal data will be kept confidential, and that the transaction data will be processed reliably. Many know, some from bitter experience, how information representing their own identity (e.g., credit card numbers) can be stolen and used to drain their assets. Even CPAs who do not provide electronic-commerce assurance services must understand electronic-commerce information systems and information flows, because in time they will be entwined with all sorts of business activities.

Risk assessment assurance services require the assurer to understand the risks affecting an organization. To gain such an understanding, the assurer will have to have a deep knowledge of client operations and strategies, the industry and the economy and their interrelationships, as well as organizational behavior and relationships. These are not new curricular demands, but training in risk analysis, which would be either new or much less common, would obviously be very helpful.

Performance measurement services, in all their variety, would take the practitioner directly into the uncharted waters of relevance enhancement assurance services: The assurer could evaluate the relevance or reliability of performance measures, could identify relevant performance measures, and could design systems that produce relevant performance measurement data. These services have implications for the curriculum.

In a general sense, information is relevant if it can help a decision maker achieve an ob-

jective. An assurer could enhance the relevance of decision-making information by services at each component process of the decision-making activity. This means that, first, practitioners who are to provide relevance enhancement services need to understand how organizations arrive at valid objectives and to understand objectives that have already been defined. Second, they need to understand decision-making processes. Their scope is illustrated in the figure 4.

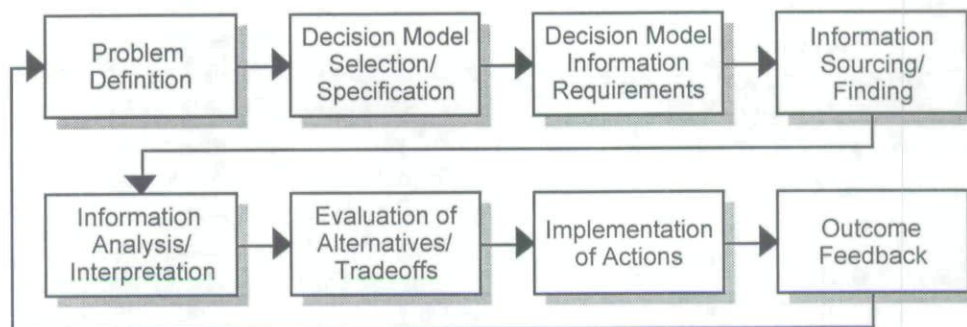
The figure shows that relevance enhancement services encompass several processes and can therefore be a substantial source of new assurance services. It brings home sharply the degree to which assurance services as a group are far broader than attest services, although that is not the sole way in which assurance services are broader than attest services.

The Special Committee made an initial analysis of the types of competencies new assurance services demand (see www.aicpa.org/assurance/scas/comstud/compfut/index.htm). But it is up to academic members of the profession to analyze them further, to judge whether their respective curriculum should be modified in response, and, if so, to devise how to go about it. The process of evaluating how the profession's changing portfolio of assurance services should affect the curriculum should be ongoing.

RESEARCH IMPLICATIONS

Research on how to perform new assurance services would always be helpful, even though the firms and the AICPA Assurance Services Executive Committee will be providing guidance on how to perform identified services suitable for the marketplace. Relevance enhancement—a broad family of assurance services—is a topic ripe for research. We need to know more about the scope of the services and about user decision processes and the types of information that support those processes. It would also be helpful for researchers to identify prototype decision models used by decision makers and the relevant information that supports the use of

FIGURE 4
User Decision-Making Processes



the models. The research should not be confined to financial decisions and financial information.

Several of the new services depend on new measurement criteria, and each need is a research opportunity. The following business-plan assurance services cannot be performed without new measurement criteria:

Information systems reliability—Criteria for assessing the reliability of all major internal information systems.

Electronic commerce—Criteria for assessing the integrity and security of electronic commerce.

Health care performance measurement—Criteria for assessing the quality of service provided by care givers.

In addition, criteria would be helpful for two other business-plan assurance services:

Risk assessments—Criteria for identifying risks and assessing their likelihoods and consequences.

Business performance measurement—Criteria for assessing the performance of the major value-creating activities within an enterprise.

Research on concepts and methods for conducting new types of assurance services and for reporting results would contribute to the development of assurance services. For example, a clearly articulated concept of “assur-

ance risk” would provide a framework for determining the amount of assurance effort required on particular engagements. We also need to know what new concepts of reporting are needed to communicate the nature and extent of the assurance effort and assurance findings.

CUSTOMER FOCUS

The Special Committee identified over 200 assurance services through a survey of services performed by 21 medium and larger CPA firms (see www.aicpa.org/assurance/scas/news/sv/addlposs/index.htm). The findings are ample evidence that CPAs are now identifying and providing new assurance services and have been for some time. In the future they will be aided by a report on how to identify new assurance services prepared by the committee (www.aicpa.org/assurance/scas/comstud/amodel/index.htm).

The Special Committee based its identification of new assurance services on customers’ needs—that is, the information needs of decision makers. Its report on how to identify new assurance services takes the same approach. A customer focus is also consistent with logic and recommended business practices. Services not based on customers’ needs are not likely to be purchased.

Should the curriculum teach how to identify customers’ needs, how to translate needs

into services, and how to assess the market for new services? To some extent the answer is clearly yes. At the least, the need to identify and develop new services should appear in the curriculum as one of the professional demands students will one day face. If future accountants think they are entering a static marketplace, they will not be prepared to succeed. And if they think they can consistently deliver value without regard to customers' needs, they are simply mistaken. It may be time for accounting departments to rethink the way they present the world of practice to students. It is unrealistic to omit assurance services.

A key conclusion by the Special Committee on Assurance Services is that customers value most in information services what gives them the most leverage in decision making. Traditional accounting work typified by collecting, classifying and summarizing data on economic events is becoming less valued relative to work on how to use information effectively (e.g., analysis and evaluation). A high proportion of the former type of work can be done by software. Independent accountants are therefore entering a period in which the growth of their practices will depend importantly on changing the proportions of the types of services they deliver. This not only means that competencies must change, but also that accountants must learn from customers what services would help them and offer services customers believe will help them.

The practice demand to learn customers' needs dovetails with the emphasis on communications skills that the Accounting Education Change Commission championed. Students who develop two-way communications skills will be prepared to become practitioners who query clients about their needs and are attentive, interactive and analytical listeners. The scope of such an inquiry is not limited by what is necessary to perform the audit. It includes all information needs for decision making. Nevertheless, the two purposes are complementary. The better the auditor understands the client's business, the better equipped he or she is to audit the financial statements effectively.

Focusing so heavily on the customers' information needs with the intent to satisfy those needs is a new approach for the profession. It's not that the needs of investors and creditors were wholly ignored, but services linked to the needs of specific sets of users, or even individual users, received relatively little attention. The GAAS/GAAP audit is a "general purpose" product. It is designed for the whole class of investors and creditors. The information conveyed by the financial statements and assured by the auditor is intended to meet a common denominator of needs without regard to individuals' particular needs. This allows for comparability of financial statements, a tremendous advantage to users, but does not attempt to satisfy the market created by the fact that different users have different needs.

Research yielding a better understanding of decision makers' needs would be very useful. Although the Special Committees on Financial Reporting and on Assurance Services investigated user needs, their explorations just scratched the surface of this complex subject. Much remains to be discovered—from information needs for specific types of decisions to the need for assurance regarding that information.

WHERE DO WE STAND?

The traditional curriculum for the accounting major with its emphasis on GAAS and GAAP will not prepare students for the new world of assurance services. Yet we do not know how far we have come in transforming the traditional curriculum. If we are to assess it, we need to know how far accounting programs have come in adopting the reforms advocated by the Accounting Education Change Commission that would be needed for students to become effective assurers. I have already noted, for example, that communications skills, emphasized by the Accounting Education Change Commission, would help identify customers' needs. Teaching accounting as an information development and communication process—the concept in the AAA's Bedford Report—would help as well. And so would an emphasis on learning to learn, a theme also given

prominence in the Bedford Committee (1986) Report. Learning skills would help graduates to acquire the additional competencies needed to perform new assurance services.

The assessment should also report the level of attention given to the competencies needed to perform the services about to come to market. Are students taught to measure with criteria other than GAAP? Do they receive any instruction in how to use such criteria to evaluate nonfinancial conditions and assertions? How helpful is their information technology experience in light of the competency needed to evaluate the security and integrity of electronic-commerce information? How helpful is their training in performance measurement in light of the demands on assurers who evaluate the relevance of performance measures, identify relevant measures, and design systems that produce relevant performance data?

We should be able to get some notion of where we stand on these issues by comparing the accounting and auditing course requirements for an undergraduate accounting major to the competencies needed for success in an assurance practice. Ideally, course catalogs should allow a meaningful comparison, because they are supposed to help students plan their programs and select their majors. The catalogs of ten universities were reviewed for a sample comparison.¹ The ten schools all have fine reputations; none is a recipient of an AECC grant.

A test of the degree to which the curriculum is ready for new assurance services is whether the programs directly treat attestation in its full breadth and whether they teach the Bedford approach to accounting. The AICPA issued the attestation standards in 1986, and the AAA issued the Bedford Committee Report on accounting education in the same year. By formulating the attestation standards, the AICPA recognized both that nonaudit attest practice was underway and that its expansion was desirable. The Bedford Committee Report acknowledged that accounting practice was becoming more diverse and based its recommendations in

part on the continued expansion of accounting services.

None of the ten sampled catalogs indicated that attestation would be taught in its full breadth. Auditing, a form of attestation, was, of course, covered, but nonaudit attestation was never featured as a separate category. This despite the fact that the Bedford Committee Report endorsed such breath a decade ago. Its recommended curriculum would treat auditing *and* attestation, covering their role in assuring the integrity of accounting and other information systems (Bedford Committee 1986, 182).

The Bedford approach to accounting was based on the general notion that accounting should be treated as an information development and distribution function for economic decision making. The recommended curriculum would cover the design and use of information systems, not one exclusive system that produces financial statements. This reflected the future the Bedford Committee foresaw, with "an accounting profession that will provide information for economic and social decisions, using sophisticated measurement and communications technologies applied to a substantially enlarged scope of phenomena" (Bedford Committee 1986, 171, 182).

No course or part of a course in the ten catalogs reviewed took the Bedford approach directly. Although managerial accounting and systems courses might satisfy the concept to some degree, they are not explications of the independent practice of accounting. With respect to accounting for external users, the degree to which the Bedford approach was realized in the ten catalogs reviewed was zero.

If this exercise in reviewing requirements for accounting majors helps frame questions that others will attempt to answer with better sources, it will have served its purpose. We need to know more definitively than we do now

¹ The results of the comparison are not generalizable because the sample size is small, the sample was not randomly selected, and course catalogs may not fairly portray the curricula. Also, the descriptions were generally rather sketchy.

where we are in preparing students for the coming world of new assurance services.

THE PRACTICE OF ACCOUNTANCY

The expansion of assurance services is redefining the vocation of accountancy. The process, which, as I have noted, has been under way for some time, will change the nature of accounting as an academic discipline and should affect the way the profession is presented to students in courses. However, the essential continuities between the past, the present and the future should be fully respected.

Accountancy has always been focused on providing information integrity to our economy. Auditing is one component of this mission, but it has never been the sole component. From the beginning, accountants were experts in the systems that produced the audited information and advised clients on how to improve them. Both roles expanded over time.

Practitioners became expert in electronic information systems and provided advice on how to improve them. This was followed by integrated systems, with the same contribution being made. Sometimes firms helped organizations as an offshoot of the audit, in the tradition of the management letter, and sometimes the engagements were separate, part of what is known as consulting. Meanwhile, accountants provided data processing, compilations, reviews and audits, and by 1986 formally defined the wider practice of attestation, including nonfinancial information within the purview of assurance on reliability. Now assurance services takes the audit-attest component of information-integrity services to a broader level.

Providing information integrity is a great contribution to the economy, with an even greater future as knowledge work becomes a steadily more dominant engine for economic growth. Complete, accurate and relevant information will be the difference between control and chaos, between efficiency and confusion, between the productive allocation of assets and the waste of capital, talent, technology and materials. Secure information will be essen-

tial to electronic commerce, and high-quality information will be essential to sound decisions on economic, social and political issues.

The definition of accountancy as a vocation (or profession) should have a direct influence on how professors present the practice of public accounting to students. There is a more generic way of conceiving of what auditors do than applying principles of financial accounting when verifying financial statement assertions. Practitioners with all their diverse specialties still serve the broader mission of providing information integrity.

The redefinition of accountancy will include a reconsideration of basic concepts. From my own perspective, we should define accounting in a way that reflects a future in which enterprise accounting systems will typically be linked over the web, not isolated. For example: *Accounting is the information infrastructure necessary for an organization to achieve its objectives.* An accountant's role should be defined by the benefit the services bring to the entity receiving them, not by some set of activities. For example: *An accountant enables an entity to achieve its objectives through the strategic use of information and information systems.* Naturally, I recommend defining an assurer in accordance with the Special Committee's definition of assurance services: *An assurer improves the quality of information, or its context, for decision makers.* This set of proposed definitions is consistent with the profession's past and reflects its future.

Assurance services and the notion of providing information integrity will broaden the body of knowledge that defines the academic discipline of accounting. The broader the discipline, the more it is likely to interact at the boundaries with other disciplines. There is nothing new in this kind of interaction and, during it, the academic branch of the profession may find it helpful that their practitioner kin are performing services that correspond to the broader notion of accountancy.

THE STAKES

In one sense, what is at stake for the academic branch of the profession in responding

to the findings of the Special Committee on Assurance Services derives directly from the old link between practitioners' economic vitality and the success of accounting programs. If practitioners don't prosper, the demand for accounting majors will drop. If professors don't supply capable new practitioners, the firms can't prosper. The Special Committee found that practitioners' traditional service, the audit of financial statements, is not growing. Revitalization makes undoubted sense for a number of reasons, as we have seen, but it cannot restore the financial statement audit to its old status as a rapid-growth industry segment. Assurance services can supply the growth that mutually benefits both practitioners and accounting programs. Thus, practitioners and the academic branch of the accounting profession have a shared stake in the success of new assurance services.

There is another way to evaluate the stakes for the profession. Accounting firms have other sources of growth, as is well known. For a number of years consulting practices have been growing vigorously and promise to continue to grow vigorously in the future. That is good news for all parties with an interest in auditing, because the economic health of the firms enables them to maintain audit quality, to invest in audit technology, and to adapt the audit to changing economic circumstances. However, it is arguable that the academic branch of the profession has a greater stake in practitioners' growth from new assurance services than their growth from additional consulting services. Accounting programs supply most audit personnel and could be the suppliers of most persons who perform new assurance services. But they are not, and would not be, the sole or major suppliers of accounting firm consultants.

Consider figure 5, which illustrates the likely effects of a failure to expand new assurance services.² It shows a declining proportion of accounting and audit professionals in large accounting firms since 1990, a change caused by the effects of rapid growth of consulting and the progress of audit technology. Figure 5 also

projects to the year 2004, with and without growth in assurance services. As can be seen, the proportion stabilizes assuming growing assurance services. The decline without growth in new assurance services concludes in 2004 with accounting and auditing personnel constituting a relatively small segment of total firm personnel, down from a majority in 1990.

The growth in personnel from growth in assurance services has a basis in estimates of the revenue potential of new assurance services. The estimates were prepared by the Special Committee on Assurance Services. As table 3 shows, the potential revenue from the six new services that were the subject of business plans, and are under development by the AICPA's Assurance Services Executive Committee, is between seven and 20 billion dollars. Potential revenue from other new assurance services would be in addition.

CONCLUSION

The accounting profession is responding to challenges. To use the biological metaphor, it is evolving by adapting to the changes in its environment. But this is not a classic example of Darwinian natural selection, where those with lucky genes survive best and become the new type. We're asking questions about our environment and devising new ways of prospering from the answers. We'll get good answers to those questions faster from cooperation between the academic and practitioner branches of the profession. The same cooperation can help us translate those answers into profitable services and recall the days when accounting firms and departments were enjoying rapid growth together.

² The historical part of the graph is estimated based on publicly available data. The projected part assumes consulting revenues grow at a modest 10 percent per year (the compound annual growth rate for the period 1990 to 1996, even though such growth has recently accelerated) and assurance services grow at 10 percent per year (compared to a 20 percent potential, if all of the identified opportunities in table 3 are realized over the period).

FIGURE 5
Accounting and Auditing Professionals in Large CPA Firms

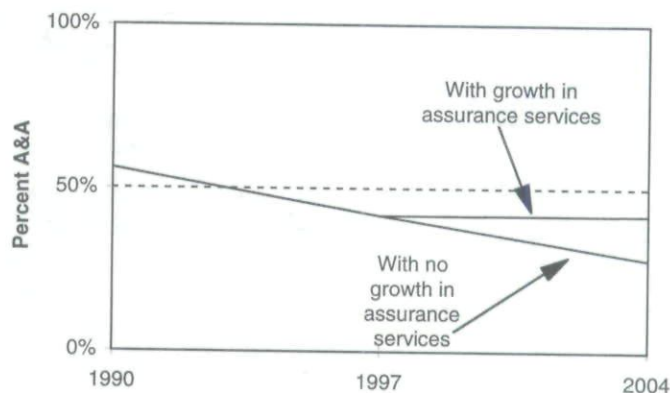


TABLE 3
Potential Revenue from Six New Assurance Services

Service	(\$ billions)	
	High	Low
Risk assessment	1	2
Performance measures	1	3
Systems quality	1	2
ElderCare	2	7
Electronic commerce	1	3
Health care	1	3
Total	7	20

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