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**AMERICAN ACCOUNTING ASSOCIATION
WESTERN REGION**

**36th Annual Meeting
May 3 - May 5, 2001
San Jose, California**

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**AN EMPIRICAL INVESTIGATION OF JOB SATISFACTION
AMONG PROFESSORS OF ACCOUNTING**

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ABSTRACT

This paper reports the results of an exploratory study of job satisfaction among accounting professors. In a mail survey, respondents were asked to rate 63 items in terms of their feelings of satisfaction. ANOVA and regression analysis were employed to relate satisfaction to a number of variables including age and AACSB accreditation status. Factor analysis was employed to distill the items to a smaller number of underlying factors. The results of the study suggest that overall, accounting faculty are most satisfied with their physical work environment and least satisfied with their undergraduate students and the leadership provided by their department chairs, college deans, and upper university administrations.

**ORGANIZATIONAL SUSCEPTIBILITY TO FRAUD:
DOES FRAUD STRIKE RANDOMLY OR ARE THERE ORGANIZATIONAL
FACTORS AFFECTING ITS LIKELIHOOD AND SIZE?**

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ABSTRACT

Very little research has been conducted on the susceptibility of organizations to fraud to such an extent that we may hypothesize that its incidence is random. On the other hand, intuition suggests that it does vary across organizational type and industrial sectors at least. The professional literature also suggests that organizations may defend themselves against it by internal controls and that organizational size affects both the need for them and an organization's ability to construct and operate them.

This paper reports the findings of an empirical study by questionnaire conducted in the UK across organizations and the controls that they have in place to combat fraud. The results confirm intuition: that fraud is not a random event and organizational susceptibility to fraud is determined by factors such as its size and type and the industrial sector in which the organization operates. On the other hand, the distinguishing features of an organization's internal controls are found to be unrelated to its perceived susceptibility.

A second study was performed on the questionnaire data relating to a specific incidence of fraud within the organization and typical of its exposure to fraud. This showed that the monetary size of the fraud was similarly related to size and type but not to internal controls (even though the study considered detailed reasons for their failure) thereby confirming the predictions of the first study. The second study also established a positive relationship between the size of the fraud and both collusion and the seniority level of the perpetrator (if internal). Collusion and seniority levels are necessary components if the internal controls are to be breached.

INTERVIEWING AS A 'FORENSIC-TYPE' PROCEDURE

Thomas Buckhoff

James Hanson

ABSTRACT

In 1998, the chairman of the Securities and Exchange Commission (SEC) instructed the Public Oversight Board to appoint a "Panel on Audit Effectiveness" to review and evaluate the effectiveness of financial statement audits of publicly-traded companies. The Panel listed as the first of eight major recommendations that "auditors should perform some 'forensic-type' procedures on every audit to enhance the prospects of detecting material financial statement fraud" (O'Malley, 2000). One powerful forensic-type procedure available to those responsible for detecting fraudulent activity is interviewing. Effective interviewing is a function of both a well-structured interview and a well-prepared interviewer. Successful interviewers typically excel in interpersonal relations and can accurately identify verbal and nonverbal cues of deception. Those who have the skills to effectively conduct interviews will be more successful in uncovering fraud than those who do not. The purpose of this paper is to explain and illustrate--through actual case studies--the basic principles of effective interviewing.

INFORMATION VALUATION AND OVER-CENTRALIZATION: AN EXPERIMENTAL ANALYSIS

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ABSTRACT

An alleged source of inefficiency in the degree of delegation in organizations arises as a result of superiors' under-estimation of the value of subordinates' information between all levels of the organization. This paper reports results from an experiment designed to explore whether possession of information affects assessments of the value of information. Results indicate that subjects have difficulty assessing the value of information and further analysis demonstrates that subjects are prone to an endowment effect whereby information is systematically more highly valued by subjects when they are initially endowed with it than when they must acquire it.

TEAMS AS A LEARNING FORUM FOR ACCOUNTING PROFESSIONALS: AN ANALYSIS

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ABSTRACT

The pace of organizational and environmental change seems to demand that such professional organizations as CPA firms become learning organizations in order to adequately compete with other firms. The flattening or thinning out of traditional hierarchical structures within organizations argues that traditional mentoring and supervisory structures may be inadequate for fostering needed individual learning about (a) organizational goals and politics, and (b) personal learning about job context and skill development, thus the ability of individuals within CPA firms to master new skills may be impaired. One effect of the lack of such learning may be increased role stress, job burnout, loss of commitment to the organization, intention to leave, and diminished job satisfaction. Using a sample of 440 accounting professionals from major CPA firms in the southeastern, southwestern, and northeastern regions of the United States, this research studies the ability of team social interaction processes within the temporary work teams that are used within CPA firms to foster the requisite personal, organizational, and team-source learning, and also to directly and indirectly influence attitudinal outcomes. We further examine whether the impact of team social interaction process on attitudinal outcomes is mediated by personal, organizational, and team-source learning. A hierarchical regression-based test was used to evaluate our hypotheses. The results supported our expectations that such team social interaction process elements as team spirit were significantly related to attitudinal outcomes, to elements of organizational learning, and to the skill development aspect of personal learning. Elements of organizational socialization, personal learning, and team-source learning were significantly related to attitudinal outcomes as well. A structural equation modeling test of the model showed that organizational and personal learning mediated the relationship between team social interaction processes and the attitudinal outcomes, but team-source learning did not.

AN EMPIRICAL INVESTIGATION OF THE RELATIONSHIP BETWEEN GENDER AND PROBLEM SOLVING STYLES

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ABSTRACT

The cognitive styles literature suggests that there may be a variety of problem solving styles among students. These differences in preferred ways of gathering and processing information may also be related to differences in both learning preferences and decision making. Focusing on one problem solving styles model - Raudsepp - this paper suggests that differences in problem solving styles may also be related to gender. Further, it is logical to assume that educational effectiveness may be improved through enhancing students' awareness of their own problem solving styles. Possible linkages between the Raudsepp problem solving styles quadrants and gender are empirically tested.

INTRODUCTION

As the world has become increasingly defined in recent years by information technology, global interactions and rapidly changing environments, leading employers of accounting majors have been calling for graduates with different skills. They still want students deeply competent in technical accounting subjects. In addition, they also want graduates skilled in research, critical thinking, teamwork and communication, along with having a firm working knowledge of general business practices. Traditional approaches to higher education, which focus on solving routine problems, may not be enough to prepare students for this "brave new world." Yet a further complication is encountered if one considers differences in students' cognitive styles.

At the most fundamental level are differences in the brain functions (often referred to in the popular media as "left" versus "right" brain differences) involved in information gathering and processing. One way to view these items is to think of them as an avocado. Personality, management styles, and attitudes represent the avocado's peel, the layer most evident to us when

we first interact with an individual. These characteristics are relatively changeable, as suggested by the large number of self help books devoted to the subject.

At the deeper level beneath the peel is the flesh of the avocado, in this model representing values, both ethical and cultural as well as gender (the subject of this paper). These are believed by some commentators to be deeply influenced by early family interactions, and thus relatively fixed aspects of our character. We label this layer the "software" of the mind, which is the subtitle used by Hofstede (1991) in his book on Cultural Values. Finally, at the deepest level, is what we have labeled the "hardware of the mind." In the avocado model, this hardware layer is the pit, which represents the highly fixed core of an individual. To precisely describe gender we would technically have to recognize that all three layers of the Avocado are probably involved. Specifically, there are biological differences that would be at the pit level in the Avocado model.

There are also psychological differences, our interest in this paper, which is why we chose to place gender at the secondary, or values level, in the model. Finally, there are obvious differences in personality, attitudes, and management style, which would argue for placement of gender at the surface or skin layer in the Avocado model.

The “hardware of the mind” or pit in the avocado model has been operationalized in a number of cognitive models, including a simplified version of the Myers Briggs Type Indicator (MBTI), Kolb’s Experiential Learning Model (ELM), and the Herrmann Brain Dominance Model (HBDM). Each of these models attempts to characterize brain functions using two dimensions resulting in four different types, styles, or quadrants. These models can be used as a basis for describing four different problem solving patterns based on differences in how individuals gather and process information. The model used in this paper [Raudsepp, 1992] determines preferences in four fundamentally different ways in which individuals gather and process information: A=analytical, B=procedural, C=interpersonal, and D=conceptual.

Research [Hulme, 1999; Baker, et al., 1987] suggests that accounting students may have very diverse problem solving styles, along with various preferred ways of learning inferred from these problem solving preferences. If so, it may be possible to enhance teaching effectiveness by using a wide variety of assignments in order to better match each students’ preferred way of learning, at least a portion of the time [Taschetta, J.J. & Achor, J.R. (1990)]. This approach leads to a broader range of activities than the procedural, preparation activities typical of traditional accounting courses. For example, the more comprehensive approach includes collaborative learning activities, consideration of more complex unstructured problems, as well as development of a meaningful interpretation of accounting information that can be understood by a decision making audience without sophisticated training in accounting.

More importantly, this varied approach to designing coursework may lead to graduates who have developed the enhanced abilities being demanded by employers. Students may develop greater skills in research, critical thinking, teamwork, and communication because they have practiced using these skills in the classroom. Similarly, this more comprehensive teaching approach may lead to graduates with greater working knowledge of general business practices because they need more of that knowledge to deal with less structured assignments.

Although employers may be getting more of what they say they want, accounting students may not be inclined to appreciate a more comprehensive teaching style. Raudsepp data on business majors at the introductory level [Hulme, 1999] indicates that accounting majors may prefer the **procedural** quadrant of the model. Applying this thinking pattern to the best match of teaching with learning styles suggests that accounting majors may prefer assignments in which they are simply required to determine the “right” answer to a highly structured problem albeit following a complex set of rules.

The remainder of this paper is organized as follows. First is a discussion of the accounting literature focusing on 1) education change and the application of the problem solving styles model to educational design and 2) the effects of gender differences on decision making. Second is a detailed discussion of the problem solving styles model. Finally, we present empirical evidence to begin to examine differences in Raudsepp problem solving styles associated with gender.

LITERATURE REVIEW

Education Change

The purpose of this section is to review the literature dealing with certain accounting education change efforts in the U.S. In 1986, accounting educators, in the Bedford Committee Report [AAA, 1986], recommend that accounting education should change the emphasis in accounting courses to include the interpretation of accounting information as well as the traditional emphasis on the information preparation functions. In discussing pedagogy, the report promotes greater use of active-learning methods because the traditional lecture method coupled with the solving of well-structured problems is “inadequate, primarily because [such methods] are not conducive to creative thinking” [AAA, 1986, p. 177]. Practitioners responded in the "White Paper" [Kullberg, et al., 1989], issued by a consortium of the Big 5 international CPA firms, with similar calls for broadening the skills developed in accounting students.

The Big 5 firms subsequently funded the Accounting Education Change Commission (AECC). Its Statement No. One, *Objectives of Education for Accounting* [AECC, 1990, p. 2], repeated the call for educators to develop students “ability to identify and solve unstructured problems in unfamiliar settings” mentioned in the White Paper and further states that the “focus should be on developing analytical and conceptual thinking not on memorizing professional standards.”

Despite these calls for reform, the emphasis in many accounting courses may still be too much on the procedural aspects of accounting for economic transactions [Pincus, K.V. (1995)]. Many students in this environment may not comprehend the basic structure of business transactions. A consequence of this emphasis is that the typical traditional course becomes very procedural and rule based with an undue emphasis on calculating the right answer [Wolcott, S.K. & Lynch, C.L. (1997)]. This traditional educational approach was reasonably well suited to the pre-1980s accounting work environment where the accountants' job was to record accounting transactions by hand and success was measured by getting the numbers right. But with the widespread use of computers in business the procedural aspects of accounting have been automated. Pincus [1995, p. 91] addresses these changes and points out that future "accountants [will be] valued more for their ability to create new kinds of information and to interpret information for use by nonaccountants than for their ability to 'crunch the numbers'."

One study [Hulme, 1998] describes a course design that addresses many of the U.S. accounting education change concerns in terms of a whole brain model. Recall that Raudsepp's Problem Solving Styles model determines preferences in four different ways of gathering and processing information: A=analytical, B=procedural, C=interpersonal, and D=conceptual. His study proposes that students with different problem solving styles can be better taught by expanding the activities used in accounting classes. For example, writing and computer activities may be preferred by students with a Quadrant A preference. The lecture/problem solving activities typical of most traditional accounting classes might have greater appeal to Quadrant B students. Group discussions and presentations are anticipated to be preferred by Quadrant C students, and case analysis and discussions using the Socratic approach may have greater appeal for Quadrant D students. Such a broadened group of activities also may lead to students trained to interpret the meaning of accounting information as opposed to just preparing the numbers that go into financial statements. It is felt that such students are better able to deal with

unstructured problems, incomplete information, and an uncertain ill-defined business environment.

Gender Differences in Decision Making

Not only must students be trained to interpret the meaning of accounting information (as opposed to just preparing the numbers that go into financial statements) and be able to deal with unstructured problems, they must also develop an understanding of ethical decision making. Although the evidence concerning this issue is mixed, many studies have demonstrated that women may process information differently than men leading them to make different decisions in many settings including ethical evaluations.

One specific interest in the broad area of ethics has been differences in ethical judgments between men and women. Radtke [2000] reviews multiple empirical studies, most asking student subjects to address hypothetical ethical dilemmas or vignettes, showing mixed results on this question. She found significant differences in ethical judgments of men and women business students in nine studies. But she also reports finding no significant difference in five studies. Cohen, Pant and Sharp [1998] reported a significant gender effect in seven out of eight vignettes with the women respondents consistently indicating a stronger belief than did men that the decisions were unethical. Using the five moral constructs mentioned earlier, Cohen, Pant and Sharp [1998, p. 261] report that "the strongest gender effect occurs for the deontology construct, which emphasizes duties and obligations." This finding is consistent with Gilligan [1982] who argues that women's moral reasoning is driven by relationships and obligations to others.

In addition to the differences in processing ethical information, outlined above, gender differences can also be ignored in other decision making arenas. For example, consider decision-support system design as one, of many, possible other cases. Powell and Johnson [1995] observe that DSS are designed assuming no gender differences. But men and women do have different information processing preferences. They provide an extensive review of recent literature suggesting that gender differences are associated with abilities and motivation, risk attitude and confidence, as well as decision style. For example, concerning decision style, gender may determine the types of goal set (interpersonal or financial), The type of information collected (qualitative or quantitative) and strategy selection methods (autocratic or participative).

There also appears to be gender differences involving progression within the hierarchy of accounting firms. Schloemer and Schloemer [1997] found evidence that a greater percentage of partners prefer iNtuition (within the Myers-Briggs framework discussed later) compared with professionals at lower levels. In earlier work, Bouwman [1984] found a difference between the processing styles of **novices**, who were primarily analytic (linear and sequential processors in an orderly, systematic manner) and **experts**, who were more intuitive (holistic relational thought processing in which judgments are made and different issues are synthesized) decision makers.

Finally, literature on the Myers-Briggs Type Indicator [Myers and McCaulley, 1985] suggests that the Thinking and Feeling differences in that model is the most important in terms of the use and development of accounting information while the Sensing and iNtuition preferences will have the most influence on occupational choice. The precise work with numbers and organization procedures in accounting and auditing makes them particularly appropriate for S types. ST types show up disproportionately in accounting when compared to other occupations [Pliener, 1998].

THE RAUDSEPP MODEL

Most cognitive models, such as Kolb's Learning Style Inventory, the simplified version of Myers-Briggs Type Indicator (involving only the Sensation/Intuition information gathering and Thinking/Feeling information processing types), and the Herrmann Brain Dominance Model, prove expensive to administer, and often require specialized training to interpret. A cognitive model that can provide an inexpensive and readily accessible basis for accounting education research is the Raudsepp Problem Solving Styles Inventory [Raudsepp, 1992]. The Raudsepp instrument can be viewed at www.csupomona.edu/~jekarayan/brain/brain.

The Raudsepp model begins with the now popular notion of complementary brain hemispheres, where the left hemisphere is characterized by a tendency to concentrate on facts and details and the right hemisphere seeks and constructs patterns and uses a "big picture" or holistic information gathering style. In addition to this left-right dichotomy, individuals are modeled as processing information using either a "new brain" thinking mode, by applying logic and a step-by-step approach, or a "mature brain" experiential (experimental) mode, which is a more active approach, where individuals attempt to solve problems using instinctual methods or prior experience.

The foundation for this second processing dimension is found in MacLean's Triune Brain model [MacLean, 1990], which shows that the neocortex (the uniquely human brain) evolved on top of a more primitive mammalian brain that still exists in humans today. Words describing the new brain's activities are: logic, objectivity, precision, analysis, and technology. This is in contrast with mature brain activities that rely on skills such as motivation, dealing with people, innovation, memory, and understanding the big picture. The new brain works much like a computer and is able to solve very complex problems, but, like a computer, it must be programmed to understand all of the steps necessary to get to the solution. Unfortunately, when something sidetracks the new brain, such as conflicting factors (or, more generally, the need to look at problems in new innovative ways), one must be able to tap into the mature brain to access these skills. The Raudsepp Problem Solving Styles Model [Raudsepp, 1992] combines these left/right and new/mature brain dimensions into one model which is graphically illustrated below:

Raudsepp Problem Solving Styles Model

New (Thinking It Through)

In the Raudsepp model the preferred quadrant indicates a propensity to use a certain pattern in preference to others. In this regard the preference is something like handedness. Data from the whole-brain model can be used by students to obtain insights into their preferences. This can help them understand in what learning situations they will be the most comfortable. Beyond that, such information can be used to point to where students and faculty need to devote attention if the objective is to develop a more balanced profile.

Each of the four quadrants of the Raudsepp problem solving styles model is thought to have a related preference for specific learning activities. At the simplest level,

is left-brained learning, taught through lectures and textbooks. Contrasted to this is right-brained learning, which allows time for reflection, idea synthesis, visualization, and insight. Expanding the four quadrants of the model produces the preferred learning activities shown below.

Whether or not one chooses to use the Raudsepp model in designing classes, the use of a broader variety of activities may very well lead to greater learning and understanding. There are several other advantages that can be derived from the educational psychology underlying the Raudsepp model. First, providing a range of activities allows each student to feel comfortable with some of what is happening in the course. Second, students are using and developing *all quadrants*. In fact, one educational goal in using the model is to work toward a balanced pattern rather than to concentrate on a single dominant quadrant. Third, greater use of group discussion makes students more sensitive to others' points of view and their own uniqueness, leading to a more diversified learning environment. Fourth, if one believes that the typical college student can focus on a task for only about 30 minutes before losing concentration, by altering the class activities an instructor is helping the students to maintain their interest. Finally, allowing instructors to experiment with teaching methods outside of their own comfort zone may make them more effective teachers. To summarize the educational implications of the Raudsepp model, one may be able to more effectively teach students with different whole brain preferences if a more balanced group of activities is included in coursework.

Preferred Learning Activities for Problem Solving Style Quadrants

<p>A Collecting data Reading textbooks and solutions Writing a critical review</p>	<p>Organizing information Studying problems and solutions</p>	<p>D Looking for the big picture Asking "what-if" questions Doing problems with many answers Leading brainstorming sessions Thinking about hidden possibilities</p>
<p>Making lists Following directions Learning and applying algorithms Writing a "how-to" manual</p>	<p>B Doing detailed homework Listening to detailed lectures</p>	<p>C Listening to and sharing ideas Experiencing sensory input Participating in group study and case discussions Keeping a journal Tutoring other students</p>

Source: Taschetta & Achor (1990)

T-TESTS OF PROBLEM SOLVING AND GENDER

In order to develop expectations related to expected gender differences, it is necessary to return to the general literature on expected differences related to the more widely known cognitive models mentioned earlier. The Herrmann Brain Dominance Model (Herrmann, 1996) is structurally very similar to the Raudsepp Model in that it has four quadrants A, B, C, and D describing people who prefer to Analyze, Organize, Personalize, and Strategize. In describing gender patterns of individuals using this model Herrmann [1996, p. 52, 53] states “the most preferred quadrant for the males was the A quadrant and the most preferred quadrant for females was the C quadrant.” He further describes these differences as follows:

“In terms of work that turns people on, there is a pretty even distribution across the occupational options, with the exception of those jobs that require strong competencies in technical, numerical, logical, analytical, diagnostic work. The majority of women find this work boring or just to nitpicky, analytical, or technical. In contrast the kind of work with a heavy C-quadrant orientation is primarily relationship-based, involving people as individuals or teams or communities. This is work that requires competency in understanding feelings and interpersonal transactions. Men are often turned off by the sensitivity and patience required in these kinds of jobs or are actually incompetent in performing them.”

Because of the similarities between the Herrmann Brain Dominance Model and the Raudsepp Problem Solving Styles Model, it is my belief that these same preferences would show up in the empirical analysis in this study. Specifically, the anticipated brain-dominance profiles of Men would likely be 1222 compared to Women whose profile is likely to be 2212. There were no statistically significant gender differences in quadrant B. The analysis testing for gender differences in T-Tests of Raudsepp Problem Solving Quadrant is presented below:

Quadrant A by Gender:		Quadrant C by Gender:		Quadrant D by Gender:	
Gender	Mean	Gender	Mean	Gender	Mean
Male	67.5	Male	60.6	Male	56.4
Female	65.7	Female	65.7	Female	54.1
p=.0039		p=.0000		p=.0002	

Cases Included - 618

Missing Cases - 33

As hypothesized men do have a statistically significant preference for quadrant A, the analytical quadrant, while women have a statistically significant preference for quadrant C, the interpersonal quadrant. Also note that both men and women have their lowest preference for quadrant D, the conceptual quadrant. In fact the average score for women of 54.1 places them in the avoid category for this problem solving style.

For accounting education this last finding is of particular interest because many of the forces at work in the profession, particularly automation of accounting record keeping, will eventually lead to more value being placed on conceptual problem solving (quadrant D) as opposed to its polar opposite procedural problem solving (quadrant B). As was pointed out earlier by Pincus [1995, p. 91] in the future "accountants [will be] valued more for their ability to create new kinds of information and to interpret information for use by nonaccountants [quadrant D skills] than for their ability to 'crunch the numbers' [a quadrant B skill]." Data presented by Hulme [1999] indicates the following Raudsepp quadrant preferences for Accounting majors: A=67.4; B=67.1; C=62.3; and D=53.3, and as with the data presented earlier for the women in the present study the D score of 53.3, in the earlier study, indicates avoidance of these problem solving skills. Hulme [1999, p. 68] concludes "this evidence is particularly troubling for accounting educators attempting to develop creativity and critical thinking in accounting students." This same comment applies to the female students in the present study.

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AUDITORS' USE OF BASE RATE EVIDENCE: INSIGHTS FROM COGNITIVE STYLES MODELS

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ABSTRACT

Good auditors sometimes draw different conclusions from quite similar audit evidence. This may result from differences in auditors' information gathering and processing styles. In particular, differences in auditors' cognitive styles preferences may lead to differential reliance on base rate evidence. This paper presents the results of an empirical investigation of framing effects in evidence use and provides support for the proposition that framing may be an important factor. In addition, the use of cognitive styles models is proposed as a possible basis for explaining individual differences in base rate and sample evidence use.

INTRODUCTION

Base rate evidence, such as information from auditors' past judgments, is important in auditing because it is both relevant and inexpensive. This paper presents the results of an empirical investigation of framing effects in auditors' use of base rate evidence in the opinion formulation process. A whole-brain thinking model is proposed as a possible basis for explaining individual differences in base rate and sample evidence use. That is, one of the reasons why different accountants may derive different conclusions from the same audit evidence may be differences in auditors' thinking preferences. Specifically, differences in thinking preferences may lead to differential reliance on base rate evidence. In order to test for these framing effects, an empirical study was performed. The study provides some support for the relevance of sample evidence representation -- framing -- as a factor in base rate use. These results may derive from differences in the subjects' cognitive styles, that is, preferences in gathering and processing information resulting from genetic, cultural, and educational sources.

"BASE RATE" INFORMATION: IMPORTANCE AND RELEVANCE

Using base rate evidence is important to auditors. Auditing is a process of obtaining and evaluating evidence in order to form a judgment [American Accounting Association ("AAA"), 1973, p. 2]. Because the evidence obtained is often imperfect, the nature of the judgment is probabilistic at best [Mautz & Sharaf, 1961, p. 3] and sometimes plainly heuristic. Furthermore, because evidence is obtained from many sources at different times, judgments often depend on the sequence in which the evidence is obtained and on how the evidence is integrated. Thus, understanding probabilistic judgment and the factors that influence evidence integration is an important component of auditing research [Felix & Kinney, 1982].

Two types of evidence are potentially relevant in decision making under uncertainty as well as in a specific task setting, such as the assessment of fraudulent financial reporting

["FFR"]. The first type of evidence is base rates such as information about a given client (e.g., from prior period working papers) or relevant population statistics (e.g., industry norms). The second type of evidence is sample evidence obtained during the audit about a specific client, or information about the resolution of specific issues in other audits. For example, sample information relevant to the question of FFR would be a client's management and engagement characteristics.

BASE RATE EVIDENCE USE FROM A BAYESIAN PERSPECTIVE

Many audit judgment tasks can be characterized as a two-event prediction problem [Johnson, 1983]. The auditor must determine the probability that the sample evidence, D, originates from one state, H, as opposed to its complement, H'. For example, as part of internal control evaluation auditors must determine from compliance test results whether there is compliance with a particular control. Furthermore, in analytical review auditors must determine from various statistical procedures whether an account balance is consistent with expected values. Likewise, in the detection of fraudulent financial reporting auditors must determine if client management and engagement characteristics observed during the audit indicate fraud.

In light of this, a Bayesian perspective sheds light on the use of base rate evidence by auditors. Bayes' theorem can be intuitively described in the following terms [Ashton, 1982, pp. 94-96]. Assume that an auditor currently assigns a subjective probability, P(H), to the truth of a particular hypothesis, H, such as the possibility of an inventory overstatement. If the auditor obtains evidence, D, that is conditionally related to H, such as the existence of a product obsolescence problem, then the auditor's confidence in H should increase. In Bayes' theorem, the relationship between D and H is expressed formally as P(D|H). This is the conditional probability of observing the evidence D, given the truth of hypothesis H.

Bayes' theorem can be expressed in the odds form as shown below:

where	$P(H D)/P(H' D) = [P(D H)/P(D H')] * P(H)/ P(H') \quad \text{Posterior Odds}$ $= \text{Likelihood Ratio} * \text{Prior Odds}$
	<p>P = Probability H = Outcome, i.e., Inventory Overstated D = Data, i.e., Unusual Transactions</p>

In the above equation, P(H) is the prior probability. This is the base rate, that is, the degree of belief before evidence is obtained. P(H|D) is the posterior probability of H considering both the base rate and the sample evidence, D. P(D|H) is the conditional probability of observing the sample evidence, D, when the hypothesis, H, is true.

The following normative expectations regarding the use of base rate and sample evidence follow directly from the above equation. First, the base rate will have a relatively greater impact when P(H) is close to zero or unity. In these cases the prior odds ratio dominates in determining the posterior odds. FFR is a situation where the prior probability is normally low. Second, the likelihood ratio will have a relatively greater impact when P(D|H) is much larger than P(D|H'). If either the prior odds or the likelihood ratio is close to one, that factor is unimportant in determining the posterior odds.

CONFLICTS IN THE LITERATURE

Despite the normative appeal of the Bayesian model, most of the auditing studies of base rate use have demonstrated an apparent under-weighting of base rates by practicing auditors responding to case studies in a laboratory setting. Typical of these studies is Joyce and Biddle [1981], which examined fraudulent financial reporting. The experimental design was a 2x2 factorial with base rates of management fraud of 1% and 19% and false positive (test procedures signal fraud when none is present) rates of 4% and 20%. The positive hit rate (test procedures correctly signal fraud) was held constant at 80%. The results showed that although subjects systematically responded to the base rates, these responses were not nearly as extensive as required by Bayes' theorem.

The authors concluded that the performance of auditor subjects was better than that of students in psychology experiments and cautioned against applying the results of psychology experiments of base rate use to phenomenon such as fraud. However, Holt [1987] concluded that the differences between the Joyce and Biddle [1981] results and the earlier results of Kahneman and Tversky [1972] were due entirely to subtle differences in the framing of the Joyce and Biddle experimental problems and was not due to the audit context of the decision task or the use of auditors as subjects. An exhaustive analysis of the conflicts in the literature can be found in Hulme [1991].

THE RESEARCH HYPOTHESIS

The importance of the proper use of base rate evidence, combined with the need to resolve the apparent conflict in the literature, motivated the study underlying this paper. This study was an empirical investigation of framing effects in evidence use in order to test the proposition that framing may be an important factor. In the study, cases were designed to test a hypothesis concerning base rate use in a setting involving audit tasks and experienced decision makers. The task was a two-event prediction problem. Responding to base rate and sample evidence, subjects were asked to predict the posterior probability of an outcome, H. For this experiment, the audit issue could be either present, D, or absent, D'. There were two possible outcomes, representing the presence of an overstatement, H, or an absence of overstatement, H'. The base rate was the prior probability of observing the outcome, P(H). The sample evidence was a pair of conditional probabilities indicating the relationship between the issue, D or D', and the outcomes, H or H'. The values of these probabilities were selected to produce a mixed evidence model. Specifically, the base rate values were chosen to produce an odds ratio less than one, and the sample evidence values were chosen to produce a likelihood ratio greater than one. These values should result in the base rate being viewed as negative evidence for H, an overstatement, and the sample evidence being viewed as positive.

Most studies of base rate use in the literature have concentrated on the properties of the base rate evidence. In this experiment, the focus was shifted to the properties of the other information input to a Bayesian decision tasks: the sample evidence. The pairings resulting from combining the two possible observed conditions, D and D', and the two possible outcomes, H and H', yield four conditional probabilities which are shown in the 2x2 table below:

	Overstatement		
	Present (H)	Absent (H')	
Issue	Present (D)	P(D H)	P(D H')
	Absent (D')	P(D' H)	P(D' H')

The conditional probabilities on one diagonal, $P(D|H)$ and $P(D'|H')$, are confirming cases or positive signals for H and H' respectively, while the conditional probabilities on the other diagonal, $P(D|H')$ and $P(D'|H)$, are disconfirming cases.

The theoretical and empirical results of prior research support an expectation that the confirming sample evidence representation in the current study [conditional probabilities provided for confirming instances, that is, $P(D|H)$ and $P(D'|H')$] may result in greater sample evidence use. Because there is a trade-off between sample evidence use and base rate use, as discussed earlier, if sample evidence use is greater for the confirming representation, base rate use may be lower.

An opposite prediction can be derived from the Hogarth and Einhorn [1990] belief adjustment model. If the confirming sample evidence representation or framing leads to greater sample evidence use, as discussed above, the belief adjustment model would predict a stronger contrast effect. The confirming sample evidence representation would thus lead to greater base rate use than the disconfirming sample evidence representation.

It is also possible that the response to sample evidence represented as disconfirming could result in negative rather than positive adjustment of the probability of an account balance overstatement. This would lead to a consistent rather than a mixed evidence setting, possibly resulting in no order effect for the disconfirming sample evidence representation. The normative prediction is that representation will have no impact on sample evidence use, since the likelihood ratio is the same under either sample evidence representation. Thus, the normative expectation would be that sample evidence representation would have no impact on base rate use.

There is no empirical evidence to indicate whether alternative sample evidence representations will lead to differential sample evidence use, or if there will be an impact on base rate use. Thus the research hypothesis is that, in a mixed evidence setting, there will be no difference in base rate use by subjects receiving sample evidence represented as confirming and by subjects receiving sample evidence represented as disconfirming.

METHODOLOGY

The research design was a 2 X 2 factorial, with two issues (inventory obsolescence and collection of a delinquent accounts receivable) and two sample evidence representations (confirming and disconfirming). Because each subject was exposed to both issues, "issue" was a "within subject" factor. Sample evidence representation was manipulated between subjects. The instrument was patterned after the case used by Boritz, Gaber, and Lemon [1987]. Fifty practicing auditors from a national CPA firm participated in the experiment. The instrument was administered as part of a firm-sponsored training program. All the subjects were at the rank of supervising senior, and all had three years of experience.

The case began with background information describing a successful retail computer company. The background information was designed to provide a reasonably complete description of the audit client and to add realism to the case. The background information established that the client was low risk.

The first issue assessed the probability that the inventory account balance was materially overstated as a result of the forthcoming introduction of a new computer model that would compete with existing models in a retail computer firm's inventory. The second issue assessed the probability that the firm's account receivable balance was materially overstated considering a large six-month delinquent account receivable. Different values were used in each issue to determine if the results would be affected by differences in the level of diagnosticity. For the inventory and accounts receivable issues, the likelihood ratios were 5/6 and 8/2, respectively.

The experimental task consisted of four components: general instructions and background information, the inventory issue, the accounts receivable issue, and a post test questionnaire. The subjects first read the general instructions and background information. The subjects then read a description of the inventory issue and assessed the "probability that the inventory account of [the client] is materially overstated." This and all subsequent assessments were made using a 100 point probability response scale ranging from 0 to 100.

The two items of evidence were then presented. The sample evidence indicated: (1) the conditional probability that there was a new product introduction given an overstatement of inventory, $P(D|H)$, and (2) the conditional probability that there was a new product introduction given an overstatement of inventory, $P(D'|H')$. This data was described as coming from "an extensive on-line data base containing the results of all audits conducted by your [the subject's] firm in the United States over the last ten years."

The base rate evidence, derived from the same data base, was the rate of material overstatements of inventory for all clients similar to the experimental client. After each item of evidence, subjects again assessed the probability of a material misstatement in the inventory account. The sample evidence conditional probabilities were either the confirming cases described above or the disconfirming conditional probabilities [$P(D'|H)$ and $P(D|H')$] to achieve the sample evidence representation manipulation.

The same process was followed for the accounts receivable issue. The first of the two items of evidence was the sample evidence. This provided the confirming conditional probabilities relating delinquent accounts and the overstatement of accounts receivable. The second item of evidence was the base rate of material overstatements of the accounts receivable account in all previous audits. As before, the order of the evidence items and the representation of the sample evidence were each manipulated at two levels.

RESULTS

An ANCOVA was employed to test the hypothesis, with the subjects' final beliefs as the dependent variable, sample evidence representation as the independent variable, and initial belief as a covariate. This is illustrated by Table 1. The ANCOVA results presented there show no main effect for sample evidence representation in the inventory issue. However, for the accounts receivable issue, there was a moderately significant main effect for representation.

The F-values (probabilities) for representation are .21 ($p=.6508$) for the inventory issue and 2.82 ($p=.1000$) for the accounts receivable issue. The adjusted means (standard error of

the mean) are essentially the same for the confirm and disconfirm representations in the inventory issue, with an adjusted mean of 49.321 (2.729) for the confirming sample evidence representation compared to 46.079 (2.729) for the disconfirming representation. For the accounts receivable issue, the adjusted means (standard error of the mean) is significantly lower for the disconfirm representation in the accounts receivable issue, with an adjusted mean of 37.234 (3.064) compared to 44.566 (3.064) for the confirming representation. This result suggests that base rate use is greater when the sample evidence representation is disconfirming.

Table 1 ANCOVA: Dependent Variable = Final Belief				
<u>Issue: Inventory</u> <u>Source</u>	<u>SS</u>	<u>DF</u>	<u>F Value</u>	<u>Prob.</u>
Covariate: Initial Belief	8268	1 1 1	4.40 .20	.0001
Realism Representation Error	1713	46	.21	.0040
	39			.6508
	8567			
<u>Issue: Accounts Receivable</u> <u>Source</u>	<u>SS</u>	<u>DF</u>	<u>F Value</u>	<u>Prob.</u>
Covariate: Initial Belief	21427	1 1	9.86 .82	.0001
Representation Error	650	47		.1000
	10845			

In sum, representation produces mixed results for the two issues in the ANCOVA tests. For the accounts receivable issue, with initial beliefs as a covariate in the ANCOVA, there is a moderately significant main effect for sample evidence representation. For the inventory issue there is no representation effect.

CONCLUSIONS

One of the most researched phenomena within the probabilistic judgment paradigm in behavioral auditing is base rate use. This research has consistently demonstrated under-utilization of base rates relative to sample evidence. The empirical component of the present research examined base rate use within the framework of audit cases using a step-by-step sequential belief revision methodology. The base rate and sample evidence values were selected to produce a mixed evidence setting. Subjects' initial beliefs or practice priors were incorporated into the analysis.

The results of the present study provide mixed support for a link between sample evidence representation and base rate use. There was no sample evidence representation effect for the inventory issue. However, for the account receivable issue, sample evidence representation had a moderately significant effect on base rate use. Specifically, base rate use, as measured by final beliefs, was greater for the disconfirming sample evidence representation. This result is consistent with the trade-off predicted by Bayes' theorem, which is that more (less) sample evidence use would result in less (more) base rate use for the confirming (disconfirming) sample evidence representation.

There are several possible reasons for the weak representation effects observed in the present study. Specifically, the small sample size combined with large individual differences in prior beliefs, the extensive background information provided in the case

and/or the subjects' prior experience with the issues seem to have produced very strong anchoring. This is supported by the significance of initial beliefs in the ANCOVA models.

A more important issue is the difference in representation effects observed in the two issues. There were two differences between the issues: the issues themselves, and the base rate and sample evidence values used in the issues. Since these differences are confounded, it is not possible to positively rule out one. Even though there were differences between the initial beliefs for the two issues, several other factors suggest that the different evidence values is the most likely explanation for the different results obtained in the two issues. The structure of the two issues was the same: in each issue the auditor has become aware of an issue that may have an impact on an account balance. The nature of the evidence available in both issues is the same and the source of that information is the same. Finally, when issue was included as a factor in an ANCOVA, there was no difference in final beliefs caused by issue. Thus, it appears reasonable that the difference in results stems from the differences in the base rate and sample evidence values in the two issues.

Thus, sample evidence representation appears to have a moderate effect on base rate use under certain conditions. But the exact mechanism producing this result is not clear. Possible explanations include the impact of differences in numerical values presented in the two sample evidence representations and the process used to integrate initial beliefs and case specified base rates and sample evidence.

A DIFFERENT DIRECTION: COGNITIVE STYLES AS AN EXPLANATORY FACTOR

Another approach to explain these individual differences may be found by applying Cognitive Styles theory, which deals with the possibility of patterns in individuals' information gathering and processing [Kitchener, 1983]. The theory is rooted in neurological research suggesting that humans have complementary brain hemispheres, where the left hemisphere is characterized by a tendency to concentrate on details and the right hemisphere by a search for patterns [Taggart & Robey, 1981]. A second processing dimension is based on notions of the neocortex -- a uniquely human portion of the brain -- having evolved on top of a more primitive mammalian brain that still exists in humans [MacLean, 1990]. The "new brain" thinking mode seeks and processes information by applying deductive logic and a step-by-step approach. This is in contrast to the "mature brain" experiential (experiential) mode, which relies on instinct and prior experience along with motivation, dealing with people, innovation, memory, and understanding the big picture.

In addition to the influences from brain structure "hardware", some argue that "software" can be overlaid by cultural values and education [Hofstede, 1991], and that this can have an impact on what accountants do and why they do it [*e.g.*, Gray, 1988; Chow, Shields, & Chan 1991; and Harrison; 1993]. Research [*e.g.*, Hulme, 1999; Baker, Simon, & Bazeli, 1987] has indicated that accounting students can have very diverse problem solving styles, suggesting that patterns in base rate evidence use may be influenced by individual auditors' cognitive styles.

Thus, although cognitive styles models may oversimplify influences on auditors' decision processes -- *see, e.g.*, the literature cited in Dye & Carland [1995] - the theory nevertheless may serve as a useful descriptive model for research on auditors' use of base rate evidence. Cognitive Styles theory has been operationalized in a number of models,

such as the Myers Briggs Type Indicator, Kolb's Experiential Learning Model, and Herrmann's Brain Dominance Model [Lumsdaine & Lumsdaine, 1995]. However, the instruments devised under almost all such models to measure individuals' cognitive styles require specialized training to interpret [Stout & Ruble, 1994] and have proven expensive to administer. An instrument which may provide a readily accessible basis for auditing research is the Raudsepp Problem Solving Styles Inventory [Raudsepp, 1992]. (A Raudsepp instrument can be viewed at: www.csupomona.edu/~jekarayan/brain/brain.)

Relating this model to evidence use, individuals with preferences in quadrant A would be likely to exhibit evidence use behaviors consistent with the belief adjustment model, while individuals with quadrant C preferences would be more likely to discount evidence of any kind and exhibit an information underweighting pattern. Individuals with quadrant B or D patterns should follow Bayes' Theorem. To determine this, an experiment should be designed to determine if such differences in thinking preferences may help explain the individual differences in base rate and sample evidence use. This appears to be the most promising line of future research resulting from the empirical study presented in this paper.

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[Due to page limits, references have not been included here but are available from the authors at jekarayan@csupomona.edu.]

401(k) PLAN UTILIZATION BY SMALL BUSINESSES

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ABSTRACT

Retirement planning is receiving a great deal of attention as more and more individuals near retirement age. U.S. tax laws offer incentives for establishing and contributing to tax deferred retirement plans to ease the burden of saving for retirement. However, current tax policy is centered more on increasing retirement savings by individuals who are already saving for retirement, rather than encouraging employee and employers, especially those operating a small business, to start saving for retirement. Cash or Deferred Arrangements (CODAs), commonly known as §401(k) plans, are one popular option to save for retirement using the benefits of a tax-deferred savings plan.

The purpose of this study is to determine the extent that small businesses (firms with less than 100 employees) offer retirement benefits. This study uses a sample of small businesses in Colorado. Colorado was chosen because of the state's healthy economy and the fact that the information technology segment of the economy has seen a dramatic increase in the number of small businesses that have been started in the past ten years. Since these types of businesses usually employ a well-educated and well-trained workforce, it makes sense for firms in Colorado to offer retirement benefits in order to attract and retain workers. Specifically, this study addresses the following questions: Are Colorado small businesses following the national trend in offering §401(k) plans or are other retirement plans more popular? What are the reasons for offering, or not offering, retirement benefits option to employees?

To answer these questions, a survey was sent to a sample of 500 Colorado small businesses. The survey asked about the kinds of retirement benefits currently being offered to their employees, if any. The focus of the questionnaire was to investigate the reasons for participation, or lack thereof, in a §401(k) plan. It also investigates whether recent changes in tax law and economic environments have increased the rate of adoption of §401(k) plans.

The results reveal data useful to understand the motivations and fears associated with retirement funding. In fact, many respondents were eager to learn more about CODAs, so that they could help their employees save for their retirement. In addition, our results are useful to tax policy makers since we identify reasons why some employers are choosing not to offer any retirement benefits and suggest some additional tax incentives that might address the reasons given for not offering retirement benefits.

**A WEB-BASED APPROACH TO TEACHING
TAX RESEARCH FUNDAMENTALS**

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ABSTRACT

The paper explores the rationale for developing a web-based course and the steps necessary to create and maintain it. A review of relevant literature follows. The author describes studies of the educational effectiveness of a conventional lecture approach and alternatives such as video, audio and computers, and then looks at Yancey & Klem's model for implementing electronic tax research in the classroom. One key feature of this model is to evaluate course effectiveness. The paper discusses in detail the design of an evaluation instrument and provides a summary of the survey results. The study concludes with some suggestions for other possible uses of web-based instruction in accounting education.

INTERNATIONAL TAX REFORM: A 15-YEAR RETROSPECTIVE

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ABSTRACT

This paper builds on Tanzi's (1987) research in which he studies international tax initiatives in 14 industrially developed countries (the "Tanzi 14") during the mid-1980s. He concludes that (1) tax reform in other countries was concurrent with, and not a response to, the U.S. Tax Reform Act of 1986 (TRA'86), (2) the international tax reform in the mid-1980s was, in general, characterized by a reduction in income tax rates and a broadening of the tax base, and (3) a movement existed toward a greater reliance on indirect taxes.

This research extends the research period significantly. It presents and discusses the trend in international tax reform over the 1985-99 period in three groups of countries: the "Tanzi 14," the 15 European Union (EU) countries, and the nine participating Association of Southeast Asian Nation (ASEAN) countries. Since considerable overlap exists between the "Tanzi 14" and the EU countries, the focus of this abstract is the comparison of 1985-99 corporate income tax (CIT) reform in the EU and ASEAN countries. The longitudinal comparison below shows that the mean CIT rate in the EU decreased 11 percentage points during the research period, while the ASEAN CIT rate decreased nine percentage points. ASEAN CIT rates were relatively lower and more stable (per country) than the EU rates during the 1985-99 period.

Year	EU Average	ASEAN Average	Between-Sample Difference
1985	45.0	39.0	6.0
1999	34.0	30.0	3.0
Decline	11.0	09.0	3.0

A full set of 1985-99 CIT rates for each country in each group and a list of references appear in the full paper, which will be distributed at the conference session.

STUDENT OPINIONS ON THE USEFULNESS OF ELABORATIONS FOR COMPLEX TAX TOPICS

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ABSTRACT

This study utilizes two elaboration techniques. The first technique involved a self-generated elaboration that required the students to actively participate in the learning process by obtaining and organizing information on two complex tax topics [(1) business and travel expenses and (2) property basis and gain or loss recognition for property transactions]. The second technique encompassed instructor-generated elaborations on tax depreciation deductions. After taking an exam on the topics, the students completed a survey to obtain their opinions on the usefulness of both the self-generated elaborations and the instructor-generated elaborations. Generally, the students preferred the self-generated elaborations to reading the textbook in understanding the topics. Also, they generally preferred using the instructor-generated elaboration (Flowchart) to reading the textbook or studying the textbook examples.

INTERNATIONAL TAX PLANNING AND TRANSFER PRICING

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ABSTRACT

Significant differences in the tax burdens imposed in different countries can encourage multinational firms to shift profits and assets across borders in order to reduce taxes. This can be done legitimately, for example by locating operations in low tax jurisdictions. Although legitimate shifting is rewarded, tax differences also can tempt businesses to attempt to shift amounts being taxed through artificial schemes. This paper outlines the fundamentals of international tax planning through transfer pricing, and explores developments intended to reduce the benefits of artificial transfer pricing schemes along with the costs of monitoring multinational organizations to prevent perceived abuses.

INTRODUCTION

Significant differences in the tax burdens imposed in different countries can encourage multinational firms to shift profits and assets across borders in order to reduce taxes. This can be done legitimately, for example by locating operations in low tax jurisdictions. Indeed, advances in telecommunications, capital mobility, and distribution channels may have made this easier by reducing the costs of relocation when shopping for the most tax-favored jurisdictions.

Although legitimate shifting is rewarded, tax differentials can tempt businesses to attempt to shift amounts being taxed through artificial schemes. And more so when one part of an organization, located one country, sells goods and services to another part, located in a different country. This is because the price charged - *i.e.*, the transfer price -- is controlled by the organization, and not by the disinterested forces which make up the invisible hand of the market. An organization's total income tax burden would be reduced were, *e.g.*, a selling division in a low tax country to be able to charge an artificially higher price (or *vice versa*) to a buying division located in a high tax country. Taxes would be reduced because the transfer pricing scheme would shift revenue to a lower taxed country along with shifting expenses to a higher taxed one. This paper outlines the fundamentals of international tax planning through transfer pricing, and explores developments intended to reduce the benefits of artificial transfer pricing along with the costs of monitoring multinational organizations to prevent perceived abuses.

WHY DO IT IN THE FIRST PLACE?

In order to understand the issues involved in transfer pricing schemes, their place in the constellation of international tax planning strategies should be considered. In addition, a threshold question should be answered, *to wit*: "Why attempt to tax plan in the first place?" *See, generally*, Scholes and Wolfson [1992]. It may seem obvious at first glance, but this is an important question which is answered differently in different organizations [Pfabe,

1995]. This is because tax planning requires changing operations, and doing so is not cost free, nor are the rewards certain [Tanzi and Lee, 2000]. However, optimizing a firm's total tax burden can be important to the success of an international business [Lymer & Hancock, 2000]. *Optimal* rather than *minimal* taxes is the goal of good tax planning because taxes are only one factor, albeit often a major one, in the mix of costs (and supply of the factors of production) which generate profit and wealth [Swenson and Karayan, 2001]. There are many reasons for this. Investments in general are made based on the risk adjusted net present value of expected *after tax* cash flows. In addition, taxes such as national and local income taxes, payroll (*e.g.*, Social Security) taxes, sales (*e.g.*, "value added", "goods and services", or "gross receipts") taxes, and property taxes often total to one of the largest expense items of an organization (*Id.*)

The cost of complying with tax rules (*e.g.*, preparing tax returns and providing details requested by tax auditors) can be significant, too [Tran-Nam, *et al.*, 2000]. Such costs can be particularly high for cross-border activities, which can involve a multitude of different tax jurisdictions imposing different taxes [Anand and Sansing, 2000]. Not only can it be costly to figure out how much to pay, it must also be determined who to pay, and when to pay it. In addition, similar taxes are often imposed by different jurisdictions using similar but different basic definitions [Swenson and Karayan, 2001]. This raises the specter of multiple taxation (*e.g.*, the same income effectively being taxed at rates exceeding 100%), although governments typically try to avoid this through tax treaties and special adjustments, such as the U.S. foreign tax credit [*Id.*]

Another reason that tax planning can be important is that tax payments typically have a high legal priority claim on an organization's cash flow [Scholes and Wolfson, 1992]. That is, not only can taxes be a big expense, but they also must be paid, and often paid quickly. In addition, multinationals publicly traded in U.S. capital markets can be especially sensitive to tax expense. This is because earnings (which usually have a major impact on stock prices) must be reported on an after tax basis [*Id.*]. Indeed, not only must earnings be reduced by taxes expected to be paid in the current year, but earnings also must be reduced by any expected *future* income taxes generated by such earnings.) Because senior managers' compensation often is tied to earnings *via* stock prices (*e.g.*, through stock options), key decision makers in multinational organizations often have a high personal stake in optimizing taxes [Swenson and Karayan, 2001]. All in all, there are many factors which combine to motivate organizations to seek to reduce taxes, provided the cost of doing so is not too high [*Id.*].

THE GOALS OF TAX PLANNING

As noted above, optimizing, rather than minimizing, taxes should be the goal of tax planning. This is because taxes are only one factor, albeit usually a major one, in the mix of costs and other factors which generate the amounts most often taxed: profits and wealth. Put simply, one can avoid many taxes by neither earning a living nor owning property, but most people do not aspire to a life of poverty, however tax free it is.

Furthermore, strategies undertaken to reduce taxes rarely are cost free. If nothing else, when focusing on saving taxes, managers are not focusing on increasing sales, improving product quality, or producing goods and services more efficiently [*Id.*]. Tax strategies also are risky: changing operations to save taxes (*e.g.*, by operating through multiple

corporations) often results in an increase in long term administrative costs, but only generates uncertain returns because tax laws can change (and, as the past 15 years has demonstrated in the U.S., change can occur dramatically, rapidly, and unpredictably), and tax rules themselves all too often are, at best, obscure [*Id.*].

In cross-border transactions, the interactions of multiple taxes imposed by many jurisdictions also must be appreciated [Anand and Sensing, 2000]. Finally, tax savings strategies can be quite intrusive. Why is it, for example, that profitable businesses in the Los Angeles area -- a relatively high tax location -- do not all move to Las Vegas, a very low tax location? One reason is that it is costly to move. Another is that non-tax factors dominate the decision: many business owners simply want to live in Southern California rather than Southern Nevada. Yet another reason is that skilled labor, qualified subcontractors, and competitive suppliers are plentiful in Southern California, as are (perhaps more importantly) customers.

GENERIC TAX PLANNING STRATEGIES

Thus, even though elimination of taxes altogether is not a goal, multinational organizations often invest significant amounts of time and resources to implementing tax reducing strategies. The ultimate goal is to reduce taxes while not excessively intruding on the organizations overall operations. Tax strategies usually are based on either taking advantage of the time value of money (*e.g.*, paying taxes later) or taking advantages of differences in tax rates (*i.e.*, tax rate arbitrage). (Tax arbitrage is astutely discussed in Scholes and Wolfson, [1992]). As noted above, tax arbitrage typically is the purpose behind artificial transfer pricing schemes: using accounting entries to shift profits to the jurisdictions which impose the lowest net taxes [that is, the lowest tax costs relative to the benefits -- *e.g.*, free medical care for all people including a firm's employees -- received by operating in a particular jurisdiction] [Cf. Tretiak, 1993].

These strategies usually fall into one of four families. (For a discussion of various tax strategy taxonomies, see Swenson and Karayan [2001].) The first is *creation*. This family involves plans which take advantage of tax subsidies, such as moving an operation to a jurisdiction which imposes lower taxes. For example, during the past quarter century many engineering firms have fled the City of Los Angeles, which imposes a gross receipts tax, and moved to the relatively tax free city of Pasadena, which is located just a few miles away.

The second family of tax planning techniques is *conversion*. This entails changing operations so that more tax-favored categories of income or assets are produced. For example, advertising in order to sell inventory results in ordinary income, which usually is taxed immediately, and at the highest rates. However, equally successful "image" advertising generates an increase in a firm's goodwill, which is not taxed, if at all, until the goodwill is sold, and then is taxed at lower "capital gains" rates.

The third family involves *shifting*. This involves techniques which move amounts being taxed (also called the tax base) to more favorable tax accounting periods. A good example is accelerated depreciation, which allows more of an asset's cost to be a tax-deductible expense in early years, thus deferring the payment of taxes until later. Another example is contributing to an Individual Retirement Account.

The final family is *splitting*. (Taxes also can be avoided through fraud, which is fairly

widespread throughout the world outside of the U.S., but rather small in amount for non-criminal activities within the U.S. Those favoring fraud as a strategy generally need not read articles like this.) Splitting techniques entail spreading the tax base among multiple taxpayers to take advantage of differing tax rates. For example, the top U.S. income tax rates on individuals is nearly 40%, but the standard tax rate on the first \$50,000 of corporate income is only 15%. Incorporating a sole proprietorship generating \$200,000 in profits, and paying a \$150,000 salary (provided it is reasonable) to the proprietors, is a splitting strategy which saves \$12,500 (*i.e.*, 25% of \$50,000 split off and moved into the corporate tax return) of income taxes each year.

INTERNATIONAL TAX PLANNING VIA TRANSFER PRICING

This last category is where transfer pricing schemes for multinational businesses fall. Essentially, the schemes involve creating deductions in high tax countries with purchases at artificially high prices from related companies located in lower tax countries.

International tax rate arbitrage is a growth industry [Tretiak,1993]. The idea is simple: arrange affairs so that the amounts being taxed (*e.g.*, profits, where an income tax is involved) are located where there is the optimal amount of tax imposed. Large differentials in the actual amount of taxes expected to be paid, net of government benefits received in exchange, thus can generate powerful incentives for organizations to shift the location of labor and capital investments so that the income and wealth generated by them will be taxed at the best rates [*Id.*].

TRANSFER PRICING IN FINANCING TRANSACTIONS

As noted above, tax rate differentials reward legitimate shifting of profits to lower tax jurisdictions. But differentials also reward shifting merely through schemes which exist primarily to "shop" tax rates. International income tax shopping schemes usually are based on planning which takes advantage of definitions of where income is actually earned. For example, consider interest income. Where is it earned? Where the money is lent? Where the cash received is invested? Or where the country in which the entity (*e.g.*, corporation) which borrowed the money is headquartered? To provide clarity, most tax regimes impose a withholding tax on cross-border debt financing. That is, when a company pays interest on a loan to a foreign lender, a flat (*e.g.*, 30%) amount is withheld (and remitted to the government) by the borrower as the total and final amount of tax owed by the lender which has earned the interest income. In order to promote freer trade, and equalize treatment between in-country and cross border financing, most tax treaties provide for reduced (*e.g.*, 5%) withholding between residents of the treaty countries.

The abuse of these rules has plagued tax authorities like the United States Internal Revenue Service ("IRS") ever since the 1960s. The scheme involves the use of back-to-back financing between three or more business entities. Known as a "conduit", the scheme typically works as follows. Debt financing is extended by a foreign entity to a U.S. entity through an intermediate affiliated entity located in a country with which the U.S. has a tax treaty. Payments of interest then flow back from the financed party through the intermediate entity to the financing party. Normally there would be full tax withholding on the interest paid by the U.S. entity. What the companies hope for, however, is that the

income tax treaty between the U.S. and the home country of the intermediate entity will reduce (or eliminate) the withholding tax. Another means is to shop jurisdictions in order to optimally locate operations. The concept is deceptively simple; the devil is in the details.

SITING OF OPERATIONS

Other international income tax shopping schemes usually are based on locating operations where there is an optimal mix of costs and supply of the factors of production. The mix includes both government services provided and the lowest effective net tax rates. This trend should continue into the future. If, as seems likely, more of the value of the products traded in the world's economy is focused in intellectual work product and other intangibles, the cost of transferring profits should be reduced: "know-how" is more mobile than buildings. This should enhance tax shopping. Another effect of a greater intangible intensity should be reduced clarity of exactly what activities actually generated the profits, not to mention exactly where those activities were located when they did so [Boldman *et al.*, 1995 (Asia and Latin America); Leavey and Hammer *et al.*, 1994 (Australia); Grouthrière *et al.*, 1995 (Europe); Leavey and Chassaing *et al.*, 1993 (France); Leavey and Oster *et al.*, 1993 (Italy); Yoshimura, 1994 & Leavey and Dilworth *et al.*, 1993 (Japan); Tretiak, 1993 (U.S.); Leavey and Fox *et al.* 1994, (U.K.)]. This, too, should enhance "tax shopping".

THE ARM'S LENGTH STANDARD

Tax rate differentials reward legitimate shifting of profits to lower tax jurisdictions. But differentials also reward shifting merely through artificial intercompany transfer pricing schemes [Franko, Patton, Wheeler, and Triplett, 1994], unless this is prevented by tax authorities. Along this line, in order to prevent cross-border tax rate arbitrage, tax officials typically scrutinize the prices at which companies transfer goods or services to their affiliates across borders. To enforce compliance, tax authorities routinely are empowered to reallocate income to clearly reflect income actually earned in their jurisdiction [Meyer, Webber, and Avi-Yonah, 1995; Sherwood, Hannes, and Goeke *et al.*, 1995]. For example, the IRS is granted such powers under *Internal Revenue Code ("IRC")* § 482.

Opportunities for taxpayers to save a great deal of taxes, or to incur a great deal of tax liability upon audit, exist because the arm's length standard encompasses a wide variety of pricing methods which can lead to radically different results [Leung, 1992]. Indeed, the main reason for tax treaties is to avoid the double taxation which would result were one jurisdiction to reallocate income to it without compensating reductions in income in the other jurisdictions involved. The stakes are high. So are the costs.

In the U.S., for example, international tax audits often are not resolved until a decade after the tax year in question. Furthermore, even if an appropriate methodology is established for one particular year, there is no certainty that the method will be deemed inappropriate in the future. Many transfer pricing disputes result in protracted litigation having high costs for both the taxing authorities and the taxpayers. In addition to high litigation costs, the surprisingly inconsistent and downright unorthodox decisions of the U.S. courts have caused interested parties to rethink the litigation option.

The uncertainty which is generated not only undermines the tax planning process but also can have distorting effects in the capital markets [Pfabe, 1995]. This is because under FASB 109 uncertainties are reflected currently in the provision of income taxes. Thus unexpected taxpayer victories can result in wild impacts on earnings per share as previously expensed "cushion" suddenly is no longer needed. (This, in turn, can motivate forward

income smoothing through sudden discoveries of other potential tax costs in order to absorb the excess provision until true earnings fall below levels promised.) Nor is the army of lawyers, CPAs, and economists necessary to plan, comply, and defend transfer pricing methodologies cheap, either for taxpayers or the government. As the global economy has exploded in the last 15 years, so have levels of uncertainty and compliance costs, thus motivating a search for more cost effective means to deal with transfer pricing [Borkowski, 1993].

A NEWER APPROACH: NEGOTIATED ADVANCE PRICING AGREEMENTS

To avoid the cost, delays, and uncertainty -- both to taxpayers and to governments -- of the traditional adversarial audit and litigate approach of enforcing the arm's length standard, some countries have adopted simplified administrative procedures [Boldman *et al.*, 1995; Grouthrière *et al.*, 1995]. Although some jurisdictions have dealt with the issue through administrative payments (often made directly to government officials), this has not proven acceptable in the world's dominant economies. It has suggested, however, that the use of an advanced pricing agreement ("APA") -- where taxpayers would negotiate acceptable transfer pricing methodologies prior to employing them -- could help reduce the costs to acceptable levels. During the 1980s, the Japanese National Tax Administration experimented with the concept with its "pre-confirmation system". Similarly, the U.K. Inland Revenue Service has begun an informal APA process known as a "transfer pricing inquiry". Although the French tax administration, FISC, has no formal process, its *procedure du rescrit* can be used in limited circumstances. Furthermore, legislation is now pending to promote formal APA procedures. Importantly, the U.S. opened the 1990s by allowing APAs. Nearly 200 have been entered to date between the IRS and large, multinational companies.

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**THE CLINTONS' LEGAL DEFENSE FUND:
INCOME FROM PAYMENT OF LEGAL EXPENSES BY ANOTHER AND
DEDUCTIBILITY OF SUCH EXPENSES**

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ABSTRACT

This article discusses, from a tax standpoint, the Clinton Legal Expense Trust, which was formed in 1998, and had raised \$7.3 million and paid out \$6.8 million by February 2000. The tax returns of Bill and Hillary Clinton for 1998 and 1999 did not report income from the trust when it paid their legal bills nor deducted those legal expenses. Tax issues raised by the trust include income from payment of legal expenses by another, deductibility of such legal expenses, alternative minimum tax problems regarding AMT and deductibility of miscellaneous itemized deductions, and tax penalties for the Clintons and their preparer.

I. INTRODUCTION

Bill Clinton appears to be setting himself up for a tax problem. (Some may ask, How is he going to get out of this one?) The president and Hillary Rodham Clinton set up a first and then second trust to pay their diverse and mounting legal expenses. The second trust, the Clinton Legal Expense Trust, formed in 1998, had raised \$7.3 million and paid out all but \$500,000 by February 2000.

The Clintons' tax returns for 1998 and 1999 have not reported income from the legal defense trust when it paid their legal bills nor deducted those legal expenses. This article will discuss the following. First, whether the Clintons have income from the payment of their legal expenses by the legal defense trust will be scrutinized. Secondly, whether the Clintons, if they have includible income, can deduct the legal expenses paid will be examined. Thirdly, whether the Clintons have an alternative minimum tax (AMT) problem because the legal expenses are not deductible for AMT will be discussed. Fourthly, whether a tax penalty should apply against the Clintons for substantial understatement and against their tax preparer will also be examined.

II. CONCLUSION

>From the discussions in this article, the following conclusions are offered about the tax status of the contributions to Bill and Hillary Clinton's legal defense fund. First, the Clintons likely have income from payment of their legal expenses by third parties. Secondly, the Clintons also could likely deduct those expenses as employee business expenses under miscellaneous itemized deductions on their Schedule A. Thirdly, the Clintons would be subject to the alternative minimum tax since miscellaneous itemized deductions are not allowed for that tax. Fourthly, the Clintons are likely subject to a 20% substantial understatement penalty because, even if their position of not reporting the contributions to their legal defense fund has a reasonable basis, the position was not disclosed on their 1998 and 1999 tax returns. Finally, the Clintons' tax return preparer, however, may be able to avoid preparer penalty and ethical provisions since he only needs a reasonable possibility of success in prevailing upon the merits.

**DETECTING THE EFFECT OF TAXES ON INVESTORS'
PROTFOLIO DECISIONS: EVIDENCE FROM SELLING ACTIVITY
FOLLOWING “BAD NEWS” EARNINGS ANNOUNCEMENTS**

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ABSTRACT

Prior studies that examine the relation between past stock price changes and trading decisions generally do not provide evidence that taxes affect investors' decisions. In fact, the results are directionally opposite tax-based predictions and suggest that non-tax factors dominate tax considerations. This study examines investors' selling activity following 'bad news' earnings releases for evidence that taxes matter. Our results suggest that tax considerations affect selling decisions by both individual and institutional investors but their effect is only detectable when the research design isolates the tax effect from those due to non-tax factors by exploiting a tax-regime change.

INTERNET REPORTING: AVAILABILITY OF FINANCIAL INFORMATION FOR THE ENVIRONMENTALLY RESPONSIBLE INVESTOR

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ABSTRACT

In addition to financial performance, socially responsible investors evaluate a firm's environmental performance. How does one evaluate the performance of a company to determine if it is environmentally responsible, as well as capable of providing an acceptable return on investment? A company's annual financial report is the most important document. The Internet has made an investor's search for information much easier, especially if the company has a Web site. This paper presents a summary and evaluation of the financial and environmental performance information that is available on company Web sites. In particular, we found a company Web site for all of the firms in the oil and gas extraction and production industry (classified by the S&P 500). We found a significant amount of variation in the depth, breadth, timeliness, and frequency of information for both financial and environmental performance, particularly regarding environmental information.

THE IMPACT OF INTERNET-RELATED FRAUD AND CYBER CRIME ON BUSINESS: SURVEY DATA FROM THE U.K.

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Jill Lambell

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ABSTRACT

This reports the findings of a questionnaire survey of British companies' concerns and experiences regarding their internet-related business and e-fraud and cybercrime. Themes of the questionnaire include:

- The involvement in internet-related business
- Losses, security and vulnerability arising from e-business fraud
- The perceived threats
- How they manage e-fraud risk (as part of risk management generally)
- Current and future problems

**EFFECTS OF THE CHANGING AUDIT MODEL ON AUDIT,
FINANCIAL, AND ACCOUNTING INFORMATION SYSTEMS
RESEARCH: OPPORTUNITIES FOR RESEARCH**

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ABSTRACT

The recent report of the Panel on Audit Effectiveness (2000) indicates a need to update the current auditing model. This result is similar to the conclusion reached in a report by the Special Committee on Assurance Services (AICPA, 1996), which claimed a new audit paradigm is emerging. The results of both reports have far-reaching research and practical implications across three different accounting domains - auditing, financial reporting, and accounting information systems. The purposes of this paper are to discuss the implications of both reports and to identify key research opportunities related to these implications.

THE VALUATION IMPLICATIONS OF THE AUDITOR'S GOING-CONCERN DECISION

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ABSTRACT

This paper provides evidence that for similar firms facing financial distress, the going-concern modification substantially alters the market valuation mechanism. Firms receiving a going-concern modification are valued almost exclusively based on the book value of common stock, whereas matched firms facing similar financial distress, but without a going-concern modification, are valued both on book value and net income. The result holds even after controlling for several common measures of financial distress. Additionally, time series tests indicate that prior to the receipt of the modification, there is little difference in the valuation mechanism between the matched firms.

**THE EFFECTS OF TASK INTERDEPENDENCY
ON COOPERATIVE AND COMPETITIVE GROUP PROCESSES:
AN EXAMPLE OF SCHEDULING AUDIT ENGAGEMENTS**

**Todd L. Sayre
Carol M. Graham
Mark V. Cannice**
University of San Francisco

ABSTRACT

Our study investigates and tests the interaction of cooperative and competitive group processes and high and low task interdependencies on performance in scheduling staff auditors to audit areas. The task examined is the scheduling of staff auditors to audit areas. In one case, we assume managers schedule staff auditors to audit areas and in the other we assume staff auditors schedule themselves to audit areas. We measure performance as the total expected time of those scheduled to complete the audit areas, where less time translates to better performance. Task interdependency varies depending on who performs the task. When managers schedule audit areas task interdependencies arise related to information and scarce human resources. These interdependencies do not exist when staff auditors schedule themselves. Accordingly, because of the difference in task interdependencies, cooperative and competitive group processes result in larger performance differences for managers scheduling staff auditors than for staff auditors scheduling themselves. The results of our laboratory experiment support this conclusion.

**ETHICAL DECISIONS AND THE DILUTION EFFECT:
EVIDENCE OF THE IMPACT OF NONDIAGNOSTIC INFORMATION
ON ETHICAL DECISIONS**

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George R. Young, III

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ABSTRACT

According to prior research, decisions based on a mixture of nondiagnostic (irrelevant) and diagnostic (relevant) information do not fully reflect the impact of diagnostic information. The presence of both nondiagnostic and diagnostic information results in decisions that are less extreme than if only diagnostic information had been present. This "dilution effect" has been demonstrated by researchers in psychology (e.g., Nisbett, Zukier, and Lemley 1981) and in accounting (e.g., Hoffman and Patton 1997). However, the effect, if any, of nondiagnostic information on ethical decisions has not been investigated. The purpose of this paper is to document the dilution effect by using an ethical scenario that involves an auditing independence issue.

Results indicate that decision makers are affected by the presence of nondiagnostic information when they make decisions that involve a violation of independence rules in the Code of Professional Conduct. Subjects' assessments of whether an unethical act had occurred when both diagnostic and nondiagnostic information were presented were less extreme than when only diagnostic information was presented. Likewise, subjects were less likely to recognize that a Code violation was an unethical act when the mixed information was presented. Findings are important for practice given the heightened focus on independence issues and the need for these issues to be objectively understood by the firms' employees. Employees who exhibit the dilution effect when analyzing independence issues may increase the risk that firms do not comply with independence rules.

AUDITOR INDEPENDENCE: AN IMPOSSIBLE DREAM

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ABSTRACT

This paper reviews the ideal of independence and why it cannot be attained. When the fees paid by client management constitute a significant portion of the billings attributable to a partner, that partner feels great pressure to give “good client service.” Because of this pressure, it is argued that perhaps CPAs are less independent than internal auditors. There may also be a psychological “bonding” between the auditor and the client as they work long hours together to meet deadlines. Other indicators of the lack of independence are the rarity of qualified opinions, the rash of lawsuits against auditors, and the nature of Generally Accepted Accounting Principles. It is unlikely that any real improvement in auditor independence will occur until there is a frank recognition of how dependent auditors are on their clients.

**STATISTICAL SAMPLING,
NONSTATISTICAL SAMPLING, AND SAMPLE SIZE SUFFICIENCY:
EMPIRICAL EVIDENCE OF JURORS' NEGLIGENCE JUDGMENTS**

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Terri L. Herron
The University of Montana

ABSTRACT

GAAS permit auditors to apply both statistical and nonstatistical sampling techniques in obtaining sufficient, competent evidential matter. However, a recent survey of audit practitioners showed that only 15 percent had used statistical sampling procedures in the past six months. In this study we investigate the effect of sampling method and sample size sufficiency on jurors' judgments in auditor negligence trials. Consistent with our expectations, we find that the likelihood of a verdict "guilty of negligence" will be higher when sample size is judgmentally calculated using nonstatistical methods than when sample size is miscalculated using statistical methods, *ceteris paribus*.

**VOLUNTARY DISCLOSURES AND AUDITOR SPECIALIZATION:
THE CASE OF COMMODITY DERIVATIVE DISCLOSURES**

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University of Georgia

Lawrence J. Abbott

University of Memphis

Susan Parker

Santa Clara University

ABSTRACT

We investigate the association between auditor specialization and the extent of voluntary disclosures. We find that clients of specialized auditors (under specific measures) issue less disclosure. This result contrasts with prior literature that associates auditor specialization with greater disclosure quality or transparency. This is important because it is not clear whether the results of prior studies are due to specialized auditors proactively affecting disclosure policies or if the presence of specialized auditors lends credibility to observed levels of disclosure. Our evidence supports the view that firms use specialized auditors to reduce information asymmetry by lending credibility to firms' disclosures.

A FIXED-SAMPLE-SIZE WITHOUT-REPLACEMENT PLAN FOR SUBSTANTIVE TESTS

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ABSTRACT

Ideally a monetary-unit sample selected for substantive testing should consist of distinct line items and be of fixed size, but selection methods currently used in practice fail on one or other of these counts; most existing schemes either select line items with replacement or return a variable sample size. There is obviously no advantage in drawing a sample which allows a line item to be selected more than once, while variable sample sizes interfere with optimum planning: too small a sample size reduces credibility and too large is expensive.

The selection method proposed in this paper steers a course between these shoals; it succeeds in selecting a sample of fixed size with no repetitions. The philosophy of the method is that the important large line items are tackled first, selected with probability proportional to size (PPS) and without replacement; then the sample size is adjusted by choosing a simple random sample (without replacement) from what are relatively unimportant (small) line items. Though not strictly PPS, the new method maintains PPS where it matters, in the large line items which have the potential for large overstatement errors.

Empirical investigations carried out on two real accounting populations, with a range of likely error rates and amounts, show that the performance of the new sampling method compares favourably with unrestricted random sampling based on the Stringer, cell and moment bound estimates of the total error amount. It is substantially more precise than unrestricted random sampling in most cases; the greatest improvement in precision occurs in the large line item populations when the sample size is not small. In some cases the design effect is lower than 0.5, implying that with unrestricted random sampling a sample size of nearly double would be required to obtain the same precision as this new procedure.

**THE MANAGEMENT OF EARNINGS AND OTHER
ACCOUNTING INFORMATION:
ECONOMIC INCENTIVES AND ETHICAL LIMITATIONS**

Richard Powell
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ABSTRACT

The purpose of this teaching case is to enhance student understanding of how managers can manage earnings and other accounting information. The case is based on the extensive literature on earnings management.

The students analyze a hypothetical manager who has economic incentives to make several decisions that may affect a firm's earnings and debt ratio. The case challenges the students to describe carefully how each managerial decision may affect the firm's earnings and debt ratio.

Some of these decisions can involve ethical issues because the manager may be considering action that benefits the manager more than the firm. For example, a decision might improve a firm's earnings, trigger a larger bonus for the manager, but cause an insignificant benefit or even a detriment to the firm and its shareholders. In addition, the actions may also unethically mislead some stakeholders about the underlying economic performance of the company. The students can debate whether the manager is considering an ethical or unethical action. Teachers can use the case for class discussion or a written assignment.

MEASURING THE EFFECTS OF POLITICAL COMPROMISE ON ACCOUNTING FOR STOCK OPTIONS AND THEIR TAX CONSEQUENCES

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Paul B. W. Miller
James T. Rothe
University of Colorado at Colorado Springs

ABSTRACT

The deliberations preceding the release of Statement of Financial Accounting Standards No. 123, *Accounting for Stock-Based Compensation* (SFAS 123), were highly controversial. Many opponents of the Financial Accounting Standards Board's (FASB's) initial proposal claimed that mandatory recognition of compensation expense for stock options would dramatically reduce reported net income with consequences for management's access to human and financial capital. FASB's response to these claims was to allow managers to continue accounting for stock options using the extant rules as long as new *pro forma* disclosures are also provided.

This research examines whether these pessimistic forecasts of the earnings impacts are confirmed by the *pro forma* disclosures provided since SFAS 123 was implemented. The results show that the *pro forma* earnings effects are widely dispersed with a median decrease that is not on the order of magnitude that some predicted; however, the effect is more pronounced for firms in high tech industry sectors. The finding is limited by the fact that the SFAS 123 disclosures will be incomplete until the end of the multi-year phase-in period.

In addition, the paper describes two alternative (and currently unacceptable) approaches to accounting for the tax benefits resulting from the exercise of nonqualified stock options. Both alternatives are more consistent with the concepts presented in Statement of Financial Accounting Standards No. 109, *Accounting for Income Taxes* (SFAS 109). Furthermore, one of these alternatives also imposes potentially smaller reductions in reported earnings than the FASB's preferred approach. Had FASB selected this alternative, the smaller earnings impact might have tempered the strong opposition FASB faced. To gain insight into that possibility, this research reports this alternative's impact on reported income. The results show that the SFAS 123 preferred approach often leads to measurably lower reported income.

**IMPLEMENTATION PROCESS OF FAS 133 AND A COMPARATIVE
ANALYSIS
OF ACCOUNTING TREATMENTS FOR DERIVATIVES**

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Wayne State University

John S. Patouhas
MCN Energy Group Inc.

ABSTRACT

The complexities of Statement of Financial Accounting Standards No. 133 (FAS 133), *Accounting for Derivative Instruments and Hedging Activities*, present tremendous teaching challenges to accounting educators. It is important that educators introduce students the implementation process of FAS 133 in a company so that students can better understand the accounting technicality and evaluate the impact of different accounting treatments for derivatives on a firm's financial statements. To address these concerns, two areas of discussions are included in this paper. First, the authors share steps taken by a FAS 133 implementation team at a major energy company in the gas industry and address practical issues during the implementation process. Second, allowing educators to focus on the framework of FAS 133, this paper uses a commodity contract as an example to provide a comparative analysis of the financial/economic results in using different accounting treatments for derivatives. The application of derivatives and the preparation of journal entries are explained. Four cases are used to illustrate how the designation of a derivative can impact the accounting treatment and financial results of an entity. Case 1 and Case 2 demonstrate hedge accounting under FAS 133 by designating the derivative as a fair value hedge and as a cash flow hedge. Case 3 illustrates accounting for a derivative that is not designated as a hedge. Case 4 is a base case, provided to show the impact of not entering or using a derivative to mitigate market risk.

DISCRETIONARY MANAGERIAL DISCLOSURE: INVESTIGATED IN COMBINED PRODUCT AND CAPITAL EXPERIMENTAL MARKETS

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ABSTRACT

Managers may employ considerable discretion in financial information release to investors and creditors. These voluntary disclosures have implications as to appropriate compensation of observable managerial action and the amount of required disclosure in financial statements and annual reports. This paper presents an experiment that tests a discretionary disclosure model, Dontoh (1989), which ties disclosure decision to managerial compensation. Compensation based on share value is predicted to result in a disclosure policy in which the manager discloses favorable news and withholds unfavorable (type A manager). Compensation based on expected product market profit is predicted to result in a disclosure of unfavorable news and the withholding of favorable (type B manager). In the experiment, student subjects play the role of type A, type B, or uninformed managers in product markets employing Cournot quantity competition. These product markets are run simultaneously with capital markets consisting of students playing the role of traders.

Results of the experiment indicate that disclosures are consistent with the model's predictions for 72.9% of the type A manager disclosure decisions and 95.8% of the type B manager disclosure decisions. Although the model's predictions are supported, there is evidence that the type A compensation scheme actually rewards the manager for inefficient product market performance. These disclosure actions can lead to a decrease in firm value over time.

EXAMINING ALTERNATIVE METHODS OF ESTIMATING COST OF EQUITY CAPITAL: A THEORY-BASED APPROACH

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ABSTRACT

This paper examines four alternative estimates of expected cost of equity capital: one produced by the classical dividend discount formula (r_{DIV}); one produced by the EBO valuation model and employed in Botosan (1997) (r_{EBO}); one produced by a finite horizon specification of the Gordon growth model and employed in Gordon and Gordon (1997) (r_{GORDON}); and one produced by the approach described in Gebhardt, Lee and Swaminathan (2001) (r_{GLS}). Recent papers use estimates of the cost of equity capital derived from empirical specifications such as these to investigate questions related to the market risk premia and its relationship to firm characteristics expected to be associated with risk. An empirical validation of these estimates of cost of equity capital has not been provided, however.

In this paper, we examine the association between estimates produced by the empirical specifications listed above and several theoretical variables expected to be related to equity risk. We find that r_{DIV} and r_{EBO} estimates are highly correlated and economically consistent in magnitude. r_{GORDON} and r_{GLS} estimates are correlated with r_{DIV} although the correlation is lower (much lower) for r_{GORDON} (r_{GLS}). However, the magnitudes of the estimates are much lower for both r_{GORDON} and r_{GLS} (at times r_{GLS} estimates are less than the long-term Treasury bill interest rate) suggesting an understatement in the cost of equity capital. We find that both r_{DIV} and r_{EBO} estimates are positively related to market beta and negatively related to firm size, as predicted by theory and expectation. When certain control variables are included in the regression, we find that r_{GORDON} estimates are also positively related to market beta and negatively related to firm size. In contrast, r_{GLS} estimates are negatively related to *both* market beta and firm size. Finally, we find the long-term Treasury bill interest rate is significantly related to all four measures, but the magnitude of the coefficient is closer to the theoretical prediction for the r_{DIV} and r_{EBO} estimates.

IMPLICATIONS OF ACCOUNTING CONSERVATISM FOR THE RETURNS/EARNINGS RELATIONSHIP

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ABSTRACT

This paper examines whether conservatism may be regarded as another determinant of the earnings response coefficient (ERC) and hence whether conservatism may be regarded as a value-relevance attribute. For the purposes of this study, conservatism is defined in terms of accounting measurement methods. This study examines conservatism across three accounting methods simultaneously and is the first to do so within the context of a market-based accounting research framework. To operationalize the notion of conservatism, a dummy variable approach is used and a conservatism score is constructed for use in the empirical analysis.

The results of the study indicate that the ERC is positively related to accounting method conservatism and hence that conservatism is a value-relevant attribute. Furthermore, this result holds after controlling for other potential ERC determinants such as risk, growth, persistence and size. Finally, the sensitivity of the results to controlling for cross-sectional dependence and to the use of alternative return metrics is tested. The sensitivity analyses indicate that the relationship between the ERC and conservatism, risk, growth, size and persistence are generally strong and robust to alternative model specifications.

DOES TRADING VOLUME DETECT INFORMATION CONTENT IN EARNINGS REPORTS OF FOREIGN FIRMS?

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Rasoul H. Tondkar

Virginia Commonwealth University

Ruth Ann McEwen

Suffolk University

ABSTRACT

The Securities and Exchange Commission (SEC) regulates equity markets in the U.S. while maintaining the objectives of investor protection and market quality. Preserving investor protection is operationalized by requiring that foreign firms trading securities on U.S. markets provide periodically a quantitative reconciliation of selected financial data according to U.S. GAAP (hereafter referred to as reconciled information). Currently, the SEC is studying responses to its February 2000 *Concept Release on International Accounting Standards* to determine, among other things, if users believe the reconciliation process required on Form 20-F has enhanced the usefulness and reliability of the information contained in the quantitative reconciliation. The focus of this study is to provide additional evidence regarding the usefulness of the reconciliation information in Form 20-F to the user.

This paper examines whether the disclosure of a foreign firm's (1) earnings according to foreign GAAP and (2) earnings reconciled to U.S. GAAP are associated with abnormal trading volume. The results indicate that abnormal volume is associated with both events.

Additionally, a regression model examines four firm-specific variables in the firm's information environment--similarities of accounting systems, number of analysts following the firm (size), difference in reconciled earnings and foreign GAAP earnings, and dispersion of analysts' expectations--to determine if the firm-specific variables systematically affect abnormal volume around the time of filing Form 20-F. The results of the regression model indicate that the reconciled earnings variable and the dispersion variable are significant in explaining the variation observed in abnormal trading volume.

**SURVIVAL ANALYSIS OF DISTRESSED FIRMS
CORPORATE GOVERNANCE AND PREDICTORS OF BANKRUPTCY**

Susan Parker

Santa Clara University

Gary F. Peters

University of Georgia

Howard F. Turetsky

San Jose State University

ABSTRACT

We examine the extent that corporate governance structure and changes differentiate financially distressed firms that subsequently fail and those that recover. We specifically employ hazard regression models. The results suggest that higher levels of creditor ownership may signal increases in the likelihood of bankruptcy for distressed firms. On the other hand, increasing changes in creditor ownership signal an increase in the likelihood of survival for distressed firms. Larger levels of blockholder ownership signal a higher likelihood of firm survival. Surprisingly, changes in blockholder ownership exhibit the opposite association. Increases in blockholder ownership signal an increase in the likelihood of bankruptcy.

**A WORKSHEET APPROACH TO PREPARING
GOVERNMENT-WIDE FINANCIAL STATEMENTS**

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ABSTRACT

This paper presents a worksheet approach for converting the account balances in the governmental fund types from the modified accrual basis of accounting to the accrual basis of accounting and making the eliminations, consolidations, and other adjustments necessary for presentation in the government-wide financial statements in accordance with Statements No. 33 and 34 of the Governmental Accounting Standard Board.

**AUDIT EFFORT AND AUDIT FEES IN LOCAL GOVERNMENT AUDITS:
A COMPARISON OF STATE AUDITORS
AND INDEPENDENT PUBLIC ACCOUNTANTS**

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ABSTRACT

In the U.S., state agencies, and independent CPA firms provide financial statement audits for local governments. Jakubowski reports anecdotal evidence implying that state audit agencies may provide higher-quality audits than do independent CPA firms. We report a study comparing the audit effort and fees associated with state auditors versus the audit effort and fees associated with independent auditors for 216 local government financial statement audits for fiscal 1996. We find that, on an aggregate basis, state auditors devote more effort (audit hours) than do independent auditors, yet do not command premium fees. State-by-state analysis reveals that the audit effort result is driven by three of the state audit agencies of the four in our data. We further find that, on a state-by-state basis, some state auditors charge premium fees while one charges "discounted" fees. Overall, our results provide support for Jakubowski's suggestion that the quality of state-provided local government audits may exceed that of government audits performed by independent audit firms, at least in some states.

THE RELATIVE VALUE RELEVANCE OF EARNINGS AND BOOK VALUES IN BRAZIL

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ABSTRACT

This paper examines the relative value relevance of earnings and book values of publicly traded companies in Brazil from 1990 to 1998. I address the following question in this study. Are accounting earnings more value relevant than book values in explaining security prices in Brazil? The results of the study suggest that book values are more value relevant than accounting earnings in Brazil during periods of both high and lower inflation. The results seem to suggest more persuasively, however, that book values were more value relevant than accounting earnings in 1996, 1997, and 1998. These were years of lower inflation rates when inflation-adjusted financial reporting was no longer required by the Securities Commission (CVM). These results are consistent with those found by Black and White (1999) for Germany and Japan. The results are plausible considering Brazil's equity markets are still small compared with major equity markets and that firm ownership and control structures are concentrated. For these reasons equity holders in Brazil may find book values to be more value relevant than accounting earnings.

FINANCIAL PERFORMANCE OF CHINESE COMPANIES

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ABSTRACT

Agency theory focuses on the external effects of monitoring and bonding costs, e.g., changes in accounting variables, stock price returns and capital structure. Partial privatization or the formation of joint stock companies is expected to give additional leverage above state control on the appointment and succession of agents. As a result, bureaucratic considerations become less important while efficiency considerations, measured by accounting results and investments or disinvestments as they affect stock price, become more important. This is an expected result of potential private ownership and a capital market, as in PRC (People's Republic of China).

This study tests the hypothesis that privatization of state-owned enterprises (joint stock companies) will improve financial performance. It will test this hypothesis in several ways, and PRC will be the test site. External accounting ratios will be examined for newly listed companies to determine whether there were significant increases for the population as a whole and then tests are to be applied to subsamples in different markets (called unsophisticated and sophisticated), controlled for size, profitability and degree of privatization.

Being grounded in the current accounting literature, the results of this project are important to emerging markets in understanding the impact and influence of private ownership.

CHALLENGES AND IMPLICATIONS OF RAPID IMPLEMENTATION OF ENTERPRISE SYSTEM FINANCIALS INTO THE CURRICULUM

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Mohsen Sharifi

Eastern Michigan University

ABSTRACT

Most academic institutions that wish to provide current, up to date and real world software applications to their students face a number of common difficulties. These frequently involve resource issues for hardware, software, training and ongoing administration. This is especially true as those applications become far larger and more complex, such as in Enterprise Resource Planning (ERP) systems, more recently referred to as Enterprise Systems (ES). These are the packages of computer applications that support many, even most, aspects of a company's (or non-profit organization's, university's or government agency's) information needs. The authors' institution has a degree program in accounting information systems, and the authors believed that it was critical that ERP skills and applications be included in order to maintain the stature of the program. This is especially true as the ERP market is also rapidly growing in sales even to companies in the \$50 to \$250 million sales range. Further, convergence of internationalization, E-business, E-commerce and web-enabling has caused a need for many more businesses to consider enterprise solutions, and that will create a demand for knowledgeable graduates.

Although difficulties were expected, the authors nonetheless pursued different curriculum ERP alternatives. Various presentations at professional meetings were attended and several firm and professional contacts were made, most of which were discouraging in terms of necessary resource requirements. However, one of these contacts was with an alumnus working at Oracle Corporation, and as will be described this led to the ultimate choice and implementation of Oracle financial applications. This paper reports on those efforts, which culminated in the creation and offering of an ERP financial applications class in a six month time period. It is believed that such information will provide encouragement and useful information to other institutions that are considering how to incorporate ERP into their programs. Although the authors' institution is a large public university that has a typically long (several years) bureaucratic process for the creation of new courses, the course is being run as a "Special Topics" offering while the appropriate channels for permanent status are traversed.

SURVEY OF INTRODUCTORY ACCOUNTING COURSE PEDAGOGY

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ABSTRACT

A survey of pedagogy in the introductory Accounting courses was sent to all four-year programs in the United States and Canada offering accounting coursework. Current course offerings are compared to baseline data collected in 1991. The current study is based on 154 usable responses. This paper reports on 1) changes in approach, focusing on user vs. preparer, 2) changes in course content, specifically computer integration, and 3) changes in communication emphasis, specifically the use of groups.

Results indicate that for the responding schools there has been a highly significant shift to a user orientation for both introductory courses between 1991 and 2000. There is little difference, however, in the extent to which different types of schools have made the transition, whether stratified by highest degree offered or AACSB accreditation, although AACSB schools did report a significantly more user-oriented approach in the second, primarily managerial course.

With respect to computer content, large numbers of faculty are assigning a substantial amount of computer-based homework assignments. Many faculty also are having students utilize e-mail, but not at an “extensive” level of use. Computerized practice sets are widely used, but again, few faculty are using them at an “extensive” level of use. A surprising number of faculty (27.4 percent) are using computerized testing and assessment, although many respondents may be including computerized test banks. List serves, chat rooms and self-paced instruction are less popular computer uses.

Finally, results indicate that the movement to include more group work in the introductory classes has met with significant success. It is somewhat surprising to find that the Ph.D.-granting schools are leading the way in this movement, since some have speculated that in-class group activities are most suitable to teaching-oriented schools with small class size.

While changes in all three areas are perceptible, the authors question whether these changes have affected the overall teaching of introductory accounting to the extent called for in the AECC Statement #2.

BARRIERS AND INCENTIVES FOR THE DEVELOPMENT OF PARTNERSHIP BETWEEN ACCOUNTING FACULTY AND PRACTITIONERS

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Winston-Salem State University

Norm Meonske

Kent State University

ABSTRACT

This paper reports on the results of a survey that was undertaken to investigate practitioners' point of view on barriers and incentives for the development of a genuine partnership between accounting faculty and practitioners to work on mutual educational concerns. According to the results, factors such as time pressure, not knowing local faculty, lack of upper management support, and educators' focus on public accounting appear to be making it difficult for practitioners to interact with accounting faculty. Furthermore, the driving factors for practitioner interaction with accounting faculty are real world input, relay information on what needs to be taught, keep current with the material being taught to students, exchange of ideas, obtain a perspective that is different from day to day accounting application, and build a company's reputation on campuses for recruiting. The results of the study should be of interest to the accounting educators and the accounting administrators in developing and maintaining effective and dynamic accounting programs.

INVESTIGATION INTO THE DECLINE IN THE NUMBER OF ACCOUNTING GRADUATES

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ABSTRACT

The decline in the number of accounting graduates in business schools in the United States has generated concern and a firm belief in the need for remedial action among both accounting practitioners and accounting educators nationwide. This paper reports on the results of a study that was undertaken to identify the reasons that college students do not choose accounting as their majors.

THE ANGST OF ACCOUNTING EDUCATION: DEATH ARRIVES IN INSTALLMENTS, WHILE RECOVERY IS PROBLEMATIC

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ABSTRACT

During the past decade, there has been a "cottage industry" of commissions, committees, and task forces of a variety of professional organizations that has identified a number of factors that have made accounting education unattractive to above-average students. Most of these groups also have recommended a number of competencies needed by entry-level staff for the practice of accounting in industry, government, and public accounting. The competency lists have a great deal in common and the competencies are not much different from those cited by earlier persons and groups beginning in the early 1900s.

Accounting education continues to be in trouble. Accounting enrollments continue to stagnate or to decline. Accounting programs are attracting students who are comparatively less qualified than those in past decades. Some people are seeking to find causes for these negatives by playing the role of "victim" and trying to find a "persecutor" rather than conducting an internal examination of what is fundamentally wrong with accounting education itself. The problem became very apparent in the 1960s and early 1970s when accounting educators did not embrace technology as a part of the accounting process. The result has been the rise of information systems as a new career path. As the technology has advanced, the accounting process itself has become irrelevant as the focus of a career field. Accounting education now needs to move forward to grasp the banner of change to develop "information leaders." Accounting education needs to once again "find the cheese." It is foolhardy and a waste of resources to continue to pursue excellence in an approach to accounting education that no longer is relevant. It is time to pursue a relevant approach to accounting education that has a changed philosophical focus.

**APPLYING HOW THE BRAIN WORKS TO TEACHING MANAGEMENT
ACCOUNTING: BRAIN-FRIENDLY OR LEARNING LATIN**

James T. Mackey

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ABSTRACT

This paper describes recent insights into how the brain learns and retains memories and then demonstrates applications of these insights to teaching Management Accounting. Using information gathered from a literature review brain-friendly information processing is juxtaposed against computerized knowledge. Educational researchers have found that teaching strategies differ across disciplines in order to promote efficient, brain-friendly, learning (Redish, 1996; Shulman, 1986, 1987). In particular, the paper suggests specific strategies to exploit pre-existing knowledge, learning anchors, formative feedback, active learning, emotion, anxiety, and stories to enhance learning in an accounting setting.

**‘BORN THE WRONG TIME’
INTERVIEWS WITH NEW ZEALAND WOMEN WHO BECAME CHARTERED
ACCOUNTANTS BETWEEN THE LATE 1930s AND THE EARLY 1950s**

Michelle Emery

Auckland University of Technology

Jill Hooks

Massey University

Ross Stewart

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ABSTRACT

Although New Zealand was the first country within the Commonwealth to allow women to enter the profession of accountancy on a continuous basis, this did not result in a large number of women becoming chartered accountants until the 1990s. Research conducted by the Institute of Chartered Accountants of New Zealand in 1995 revealed that women members were significantly behind male members in terms of career outcomes such as remuneration and seniority. This paper focuses on the development of the status of women within the accounting profession in New Zealand. Documents from the early and middle part of this century provide evidence that the accounting profession was firmly gendered male in these years. A number of women who joined the Institute of Chartered Accountants of New Zealand in the 1940s and 1950s were interviewed and their testimonies were compared with the extant literature on gender and the professionalisation of accounting. From this comparison it was found that barriers to entry and progression identified in earlier literature existed within the New Zealand context.

STAKEHOLDERS' PERSPECTIVES OF ACCOUNTING FACULTY TIME ALLOCATIONS

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ABSTRACT

The purpose of this study is to provide descriptive evidence on how various stakeholder groups perceive faculty time *is* and *should* be allocated across teaching, research and service. Over the past decade there has been considerable debate regarding the priorities of accounting faculty in their allocation of time. Prior research indicates diverse viewpoints regarding how faculty should be allocating their efforts and whether the needs and desires of stakeholders are being met. To ascertain the priorities of various stakeholder groups, a questionnaire was administered to accounting professionals, accounting students, and jurors (taxpayer surrogates). Assistant professors of accounting were also surveyed to determine the extent to which their perceptions match those of their stakeholders. Overall, the findings indicate a disparity between the perceptions of accounting professors and their stakeholders regarding time allocations between teaching, research and service. Stakeholders believe more time is and should be devoted to teaching than research and further that research should be focused on the more practical, current problems of the profession. Suggestions on ways to mitigate these differences are offered.

**MAKE STUDENT FEEDBACK MEANINGFUL:
“CUSTOMIZING” COURSE CRITIQUES**

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ABSTRACT

Most faculty members want to be excellent teachers and to see their students excel. However, end-of-term student evaluations-used by most universities in North America to assess teaching effectiveness-do not provide timely information of a specific nature that will result in improvements to a course. Many faculty members have found informal techniques requesting mid-semester feedback from students to be more useful for improving courses. The purpose of this paper is to extend one of these informal techniques by providing instructors with a method where they can create their own “customized” course critiques. The method is illustrated using case study methodology. Findings indicate that the proposed method is easy to use, provides more generalizable and less contradictory student feedback than the informal method, and may result in more meaningful course improvements and higher end-of-term student evaluations.

EXPLAINING DEFERRED TAX LIABILITIES RESULTING FROM DEPRECIATION DIFFERENCES WITH THE NET-OF-TAX METHOD

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ABSTRACT

At the present time, the rules covering the measurement and allocation of income taxes for financial reporting purposes are found in SFAS No. 109, which was issued in February, 1992. The FASB kept the allocation method (comprehensive allocation) unchanged but replaced the deferred method of APBO No. 11 with the liability method. The purpose of this paper is to express doubt about the understandability of the deferred tax liabilities that result from the use of different depreciation methods for tax and financial reporting purposes. Having taught intermediate accounting classes for more than 20 years, I am very familiar with the difficulty students have with the whole topic of accounting for income taxes. Part of the problem stems from the weakness of the conceptual arguments found in textbooks to explain the depreciation-related deferred tax liability. During the past few years I have developed my own approach to explaining this account, and much of this paper involves illustrating that approach. At the heart of my approach is the net-of-tax method, which the FASB did find compatible with its definitions. While net-of-tax is not acceptable at this time, per SFAS No. 109, we should not limit ourselves to showing students only currently acceptable methods. I argue that combining the net-of-tax method with the liability, at least for depreciation differences, would improve financial statement disclosures and thus help users. I also show that the net-of-tax presentation makes sense in this context because it reconciles perfectly with a decomposition approach to explaining the cost and subsequent net book value of depreciable assets.

**FACULTY PERSEPECTIVES ON THE TEACHING OF
INTERMEDIATE ACCOUNTING**

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Margaret A. Hoskins
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ABSTRACT

Historically, most accounting curricula have included two intermediate accounting courses whose content was a fairly standardized array of financial accounting topics. However, as the volume of financial accounting material has expanded and as a result of the 150-hour requirement, various ways of restructuring these courses have emerged. This paper reports the results of a mail survey designed to gather data regarding how universities currently present intermediate accounting. The study considers the number of intermediate accounting courses, the arrangement of topics within these courses, and techniques for addressing the increase in authoritative pronouncements.

DIFFERENCES IN STUDENT LEARNING TECHNIQUES: COOPERATIVE LEARNING, QUIZZES, AND HOMEWORK

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ABSTRACT

A college instructor's employment of a learning technique, such as cooperative learning (CL), quizzes, or homework, may affect student comprehension of course concepts. The effectiveness of such techniques may be explained by expectancy theory, which states that behavior may be related to reward value and the perceived probability of reward resulting from effort.

This study examines the comparative effectiveness of CL, quizzes, and homework in teaching three classes of a financial accounting principles course at one private university. Every student experienced each of the three techniques for one third of the semester and completed an exam after exposure to each method. Results indicated that students earned higher exam grades when they prepared homework than when they completed CL exercises or were administered quizzes. Results also suggest that CL may engender ethical concerns regarding assignment of grades to individual students that are largely determined by the efforts of fellow group members.

COGNITIVE ELABORATION AND ACCOUNTING LEARNING OUTCOMES

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ABSTRACT

This paper investigates the effects of different expert instructional strategies on accounting students' learning outcomes. Specifically, this paper examines how three alternative forms of cognitive elaboration strategy- self-generated elaboration, instructor-assisted elaboration, and self-generated followed by instructor-assisted, affect accounting students' acquisition of declarative knowledge, intellectual skills, and their attitudes. The results indicate that self-generated elaboration instructional strategy did significantly improve accounting students' acquisition of declarative knowledge and intellectual skills than instructor-assisted elaboration strategy, but it did not significantly improve students' knowledge acquisition than the combination strategy. The different expert instructional strategies did not have significant difference on attitudes. The paper also finds that GPAs did have significant impact on the three learning outcomes. The results imply that to promote knowledge acquisition and knowledge transfer accounting expertise instructional strategies should be chose primarily based on the types of learning outcomes, because different learning outcomes are required for different conditions necessary for student's achievement.

**GROUP TASK STRUCTURE, REWARDS, AND VIRTUAL TEAMS:
A STUDY OF COMPUTER-MEDIATED COLLABORATION**

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ABSTRACT

The benefits of electronic meetings offer organizations a potentially effective alternative to same time/same location team work. In the accounting industry, team work and electronic communication have become important elements in the day-to-day business of auditing, consulting, and corporate accounting. Virtual teams create new unexplored team environments in which groups interact and act. Investigating how virtual teams achieve group success has become an important and fertile ground for current research.

This study provides insight into the team work processes of computer-mediated collaboration and demonstrates the use of computer conferencing as an effective communication medium in an accounting course. It contributes to the extant literature by addressing what happens in groups working in computer conferencing environments under different types of group task structures and rewards. As part of their normal learning activities, students from two universities formed virtual teams and collaborated electronically through computer conferencing over a period of several months.

Results provide limited support for the application of the Hackman (1987) effort submodel to virtual teams. The findings suggest that a mixed incentive with both individual and group measurement components leads to higher group effort toward the task. There is no evidence that group effort differs between a moderate or high level of group task structure.

**DEVELOPMENT OF COMPETENCIES:
A COOPERATIVE LEARNING RESOURCE GUIDE
TO DEVELOP TEAMWORK AND COMMUNICATIONS SKILLS**

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ABSTRACT

Research shows that skills learned through team activities in education are highly desirable and in demand by Corporate America. In this paper, we provide a unique summary of 56 papers from the accounting, marketing, and management disciplines on group work and classify the research into “how to” (describes a team work technique), and “empirical” (evidence of the effectiveness of a technique).

Albrecht and Sack (2000) believe that accounting education today is plagued with many serious problems that could, if not addressed, lead to the demise of accounting education. At the same time, corporate executives are critical of the academic preparedness of entry-level personnel. In response to these concerns, many business school educators are now experimenting with cooperative learning innovations to help students develop a number of the critical skills that corporate executives demand.

**AUDITORS' PERCEPTION OF COLLEGE EXPOSURES AND FIRM
TRAINING
ON INFORMATION TECHNOLOGY ISSUES**

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ABSTRACT

This study explores auditors' perceptions of their college exposure to and training by their firms on the Top Ten Technology Issues for the Year 2000 as identified by the AICPA Technology Committee. Participants are staff and senior auditors currently employed by Big-5 accounting firms. The results indicate that the auditors received only limited exposure to the emerging technology issues while pursuing a college degree. Separating respondents by professional rank, we found that audit staff had significantly more exposure to technology in college than seniors had. This finding confirms that accounting educators have included technology topics in accounting curricula. Even so, auditors appear to obtain most of their knowledge on information technology through accounting firm training. Findings of this study imply that accounting educators need to continue developing technology-relevant curriculum. Moreover, educators and practitioners should work closely in the future to enhance accounting graduates' competency in information technology.

COMPUTER-BASED TESTING: PERCEPTIONS OF SUCCESSFUL AND UNSUCCESSFUL CERTIFIED IN FINANCIAL MANAGEMENT CANDIDATES, ACCOUNTING EDUCATORS, AND EXAM ADMINISTRATORS

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ABSTRACT

The Institute of Management Accountants first offered the Certified in Financial Management (CFM) certification in 1997; the CFM is unique in being the first accounting-related certification available solely via the computer. We surveyed recent successful and unsuccessful CFM candidates, CFM exam administrators, and accounting educators to determine their perceptions of computer-based testing. Two survey instruments were used: one involved the first 500 successful CFM candidates, while the second involved both successful and unsuccessful CFM candidates, accounting educators, and exam administrators.

In the first survey, 69% of the respondents reported that the overall computerized-testing experience was positive, 24% gave mixed reviews, and only 7% felt that the overall experience was negative. Most respondents felt that the objective questions were no more difficult, and were perhaps even easier to answer, than the traditional essay/computational problems.

In the second survey, successful CFM candidates reported many of the same perceptions as the unsuccessful candidates. Respondents felt that computer-based testing scores accurately reflect candidate knowledge, that the scope of material tested is not affected, and that the positive aspects of computerized testing include the flexibility of scheduling exams, instant feedback on performance, the elimination of judgment in grading, and the lower costs of administering the exams. Both groups felt that computerized testing reduces the ability to cheat, and that overall stress- and anxiety-levels are not affected. The testing environment itself was viewed rather negatively. In the future, candidates predict that computerized exams will attract larger numbers of test takers, but that writing and problem-solving skills should still be evaluated on certification exams.

However, somewhat different perceptions of computerized testing were also found between the groups of successful and unsuccessful candidates, which is not surprising. Successful candidates felt that computerized testing made the exam easier to pass, while unsuccessful candidates believed the opposite. Successful candidates felt that computerized testing weakens the perception of the certification itself. Some of the unsuccessful candidates indicated that the computerized format may give an advantage to candidates for whom English is a second language.

While the results of accounting faculty and CFM administrators were not directly tested against those of the CFM candidates, we found that the administrators may have an overly optimistic opinion of the benefits to be gained from computerized testing, while

accounting educators may have an overly pessimistic view.

INSTRUCTIONAL TECHNOLOGY USED IN ACCOUNTING EDUCATION: WHAT FACTORS INFLUENCE OR HINDER ITS USE

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ABSTRACT

The Accounting Education Change Commission in its Position Statement No. One states that creative uses of technology should be an essential component of accounting education [AECC, 1990]. As with the AECC, the American Assembly of Collegiate Schools of Business in its Standards for Business Accreditation requires that appropriate instructional technology be available and utilized by the business faculty [AACSB, 1993]. The word technology with applications relevant to instructions include a wide range of media and protocols such as audio and video equipment, graphics, images, animation, and other applications of computer hardware and software including data transmission equipment used in the delivery of concepts and applications of knowledge to students in and out of the classroom.

While the AECC and AACSB use the term "technology" in a general sense, others are more specific in their recommendations. For example, The American Accounting Association's Bedford Committee suggests that the accounting educator's kit of teaching tools should include "computer-assisted" instructions [AAA, 1986]. Also, the American Institute of Certified Public Accountants indicates that all professional accountants must acquire relevant theoretical and practical knowledge about "information systems" [AICPA, 1998]. The question remains, however, exactly what technology is appropriate and whether technology can enrich learning or enhance student achievement.

Using the term technology in its general sense, the purpose of this research is to investigate: (1) what technologies are used in accounting education; (2) what factors influence accounting educators' decision to integrate technology into their teaching; and (3) what factors prevent the use of technology? The results should be of particular interest to university administrators to identify the level of interest in and resistance to technology among educators. Accounting faculty will also learn what technology is more popular among their colleagues for use in and out of the classroom. Finally, accounting practitioners and recruiters will be better prepared to compare their technology-based job expectations and requirements with the information provided by the educators in an attempt to better assess preparation of college graduates.

**E-MAIL: WILL THIS MEDIUM AFFECT THE QUALITY
OF WRITTEN ASSIGNMENTS?"**

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ABSTRACT

Many college students have found e-mail particularly attractive because they can complete assignments and ask questions of their instructors late at night or on weekends. Messages sent through this medium are typically combined elements of both print and speech. This research focuses on an experiment that measured the writing skills of accounting students using e-mail versus hard copy to complete homework assignments. Would the quality of writing suffer because e-mail was used? Assignments were graded for grammar, punctuation and spelling, and the results were statistically analyzed. It was concluded that the hard copy assignments, although not perfect, were written better.

HOW EXPENSIVE IS THE 150-HOUR RULE?

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ABSTRACT

Policy debates about the 150-hour rule have taken place without information regarding the *marginal* impacts that candidate inputs, such as "extra" education, scholastic aptitude, or dedicated exam review, have on CPA exam performance. This paper shows that scholastic aptitude and dedicated CPA exam review have the strongest marginal impacts on passing. The 150-hour rule is thus quite expensive for many candidates. Moving from the traditional undergraduate requirement of 128 hours to 150 hours is equivalent to a four-percentile increment in a candidate's mathematics aptitude. An "extra" 22 hours could also be offset by two-thirds of one review course on one section of the exam. Despite "extra" education's relatively weak substitutability for other exam inputs, the 150-hour rule could be based on other grounds. Additional general education fits the portrayal (Elliott 2000) of the CPA as a generalist who must adapt quickly. Higher levels of accounting education also helps to differentiate the CPA from other financial service professionals.

AN EXAMINATION OF FORENSIC ACCOUNTING COURSES: CONTENT AND LEARNING ACTIVITIES

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ABSTRACT

Forensic accounting is a rapidly growing area within the accounting profession, due to the prevalence of fraud in business. Accounting educators agree that there is a need to provide students with some forensic accounting education, and specific courses have been developed at various universities across the United States. Sixteen of these universities shared their forensic accounting syllabi so that the content and learning activities might be compared and contrasted. A review of the syllabi revealed not only several similarities in the course content and learning activities used, but also a great deal of creativity in how the course content was taught.

While the exact wording of the forensic accounting course's learning objectives varied from syllabus to syllabus, in general the spirit of the objectives was identical. Typically, the syllabi indicated that successful completion of the course should enable the student to understand various techniques of fraud prevention, investigation, and detection. The learning activities included in the forensic accounting courses generally involved a textbook, term projects, videos, cases, and guest speakers. Term projects seem to be a particularly favorite learning tool by instructors of this course, and the subject matter seems to lend itself very well to a wide variety of possible term projects. Because all of the forensic accounting courses were upper-level courses, the student term projects were generally fairly rigorous. Few of the syllabi were alike in terms of these assignments.

It may be difficult for many universities to add another course to the accounting curriculum. Prior research has found that one of the primary reasons cited by accounting faculty for not currently covering the topic of fraud in an individual course is the lack of resources to allow for an additional course, as well as the lack of space in the curriculum for another class. In addition, these faculty have indicated that there is no space available in currently offered courses (e.g., auditing) to allow much more than a cursory coverage of fraud, if that. However, adding a course in forensic accounting can be a "win-win" situation for all parties who have an interest in accounting education (students, academic institutions, and employers).

More importantly, the need for fraud education of accounting students is present. Prior research has found that a large majority of accounting faculty believe that fraud is a serious problem to the accounting profession. The magnitude of the available fraud statistics would seem to confirm that perception.

It may seem overwhelming for faculty to develop a course in such a new and dynamic area as forensic accounting. However, with the existence of an organization specializing in fraud—the Association of Certified Fraud Examiners—even more resources are available for instructors to use in development of such a course than even just a decade ago.

AN ENTITIES BASED APPROACH TO THE REQUIRED TAX COMPONENT OF THE UNDERGRADUATE ACCOUNTING CURRICULUM

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ABSTRACT

The School of Accountancy at San Diego State University [SDSU] has offered an integrated accounting curriculum for more than seven years. The focus was on invigorating the accounting curriculum by changing technical competencies and emphasizing business and personal competencies. SDSU responded to this call, taking into account its situation as a member of a 21-campus system located in an urban setting with an ethnically diverse student body and a large evening program. SDSU's traditional curriculum stressed micro-accounting (i.e., knowing all of the details of everything). How could the curriculum be structured to encourage the development of the right skills? Which accounting course should include communication, reasoning, and interpersonal skills? Where should we teach dealing with uncertainty, critical thinking, and learning to learn? Every course should include unstructured problems that force the students to deal with uncertainty and missing information. Each course should include group work, writing assignments, extraordinary class participation, and mostly essay examinations. The technical competencies could be structured to fit within this environment. A process for developing this curriculum and a model for continuous improvement were implemented.

Active learning techniques are the featured teaching methodology. There is very little lecture from the faculty. Instead, cases with open-ended (and ambiguous) solutions are discussed in class--challenging student's critical thinking skills. By creatively integrating the various fields of accounting around topics, efficiency could result. Since there was a total shift in instructional methods and course and topic sequencing, it was an excellent opportunity to also evaluate topical coverage for all components of the curriculum. Prior to this change, accounting students at SDSU completed a traditional required course in individual income tax, and could elect to take an additional course covering the tax treatment of business entities, estates and trusts, and estate and gift taxation. The new emphasis in the tax portion of this curriculum is the tax treatment of business transactions. This involves exposure to the taxation of sole proprietorships, partnerships, S corporations and C corporations and students are required to prepare income tax returns for all these entities. In addition, the return of the one common owner of these entities is prepared, so the student can observe how the operations of the entities affect the owners' tax. These cases are quite similar in approach to those proposed by the AICPA Model Tax Curriculum Task Force. They are different, however, particularly in that there are written elements of the cases beyond the mere preparation of the tax return. The proposal by the Model Curriculum Task Force reflects the fact that not all accounting majors, and business majors, are tax specialists and that all accounting majors, and business majors, need to develop and improve certain core competencies, both technical and personal. These recommendations are consistent with the direction of change in the accounting curriculum nationally, the changing demographics at SDSU and the changes in the curriculum at SDSU.

UNIVERSITY STUDENT'S PERCEPTIONS OF COMPUTER INSTRUCTION WITHIN THE COLLEGE OF BUSINESS

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ABSTRACT

Despite a very real diversity in the instructors and computer content of six courses student surveys indicate a remarkable similarity of student perceptions regarding computer instruction. There appears to be a great deal of variability among the students with respect to their degree of comfort with computer instruction. This variability in the student's satisfaction is independent of instructor and computer exercise content.

Prior experience with accounting software may make new accounting software easier to learn and prior programming experience may reduce felt tension. However, no other prior computer experience, as evidenced by student self-reports, is correlated with the student's satisfaction or behavior in the classroom.

The indications are that someone teaching a class with computer content can expect to make a *sizable* percentage of students unhappy no matter what tactics they employ. This may account, at least in part, for the lower student evaluations experienced by AIS professors.

**THE EFFECTS OF COURSE INVOLVEMENT
ON THE EMOTIONAL EXHAUSTION COMPONENT OF BURNOUT
FOR ACCOUNTING STUDENTS**

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ABSTRACT

This paper examines the emotional exhaustion component of burnout in accounting students. Burnout has been linked with negative consequences to both individuals and organizations. High levels of course involvement are posited to be positively associated with high levels of emotional exhaustion - the catalyst in the burnout process. Other variables that may impact emotional exhaustion independently are hours of study and expected GPA. Emotional exhaustion is regressed on these three demand stressors, and the result is a significant model of emotional exhaustion. The results have implications for accounting faculty and administrators by specifically identifying demand stressors of emotional exhaustion in accounting students.

UTILIZING PROFESSIONAL ACCOUNTING PANELS AS A CO-CURRICULAR STUDENT DEVELOPMENT ACTIVITY: INFORMING STUDENTS ABOUT THE ACCOUNTING PROGRESSION

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ABSTRACT

Leaders in accounting education and the accounting profession have warned that a serious concern facing the profession is the attraction and retention of today's top students. Much research has shown that public accounting has a poor image with many college students and that the number and the quality of accounting graduates are declining. This paper discusses the utilization of professional accounting career panels as a co-curricular student development and recruitment activity. These career panels provided an opportunity for students to interact with the members of our Accounting Advisory Council to learn more about the accounting profession and the opportunities available to accounting majors. We address two questions in this paper: (1) can professionals be used to better inform students about the accounting profession and, (2) can this approach be used to increase the degree to which students consider accounting as a major. The analysis of the responses to questions elicited in a post career panel questionnaire indicates that students learned a significant amount from the experience. In addition, it was discovered that students from principles level accounting courses who participated in the discussions significantly increased the degree to which they would consider accounting as a major.