UNIVERSITY OF OKLAHOMA

GRADUATE COLLEGE

RULES VERSUS PRINCIPLES, ACCOUNTANTS' COGNITIVE STYLES AND PROFESSIONAL PENALTIES

A Dissertation

SUBMITTED TO THE GRADUATE FACULTY

in partial fulfillment of the requirements for the

degree of

Doctor of Philosophy

By

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Norman, Oklahoma
2006

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RULES VERSUS PRINCIPLES, ACCOUNTANTS' COGNITIVE STYLES AND PROFESSIONAL PENALTIES

A Dissertation APPROVED FOR THE
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Acknowledgments

I am grateful for the comments and support of my dissertation committee, including Dr. Frances Ayres, Dr. Andrew Cuccia and Dr. Joseph Rodgers, and especially my co-chairs Dr. Terry Crain and Dr. Dipankar Ghosh. I thank the Oklahoma Society of Certified Public Accountants for providing the list of potential study participants. I thank Dr. Frances Ayres, Dr. Robert Lipe, Dr. Marlys Lipe, Dr. Andrew Cuccia and Dr. Anne Magro for teaching, guidance and opportunities they provided to me during the Ph.D. program. Finally, I thank Ms. Betsy Baker, without whose patience and support I would not have completed the Ph.D. program.

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1. Introduction

The Securities and Exchange Commission ("SEC") (2003), the Department of the Treasury (1999) and others view the recent wave of corporate accounting frauds and corporate tax shelters as being partly attributable to U.S. financial reporting standards and U.S. tax law being too rules-based. This has given rise to the current debate regarding whether U.S. financial reporting standards should be more principles-based.[1] A "rules versus principles" debate regarding U.S. tax law has been underway for decades (Colliton 1995).

When promulgating standards, policymakers need to consider how varying levels of standard precision would affect the behavior of the standards' users (Mason and Gibbins 1991; Nelson et al. 2002).[2] Thus, of relevance to the "rules versus principles" debate is how the precision of standards interacts with accountants' psychological characteristics and their professional environment, including the potential economic consequences of their decisions. A psychological characteristic of accountants found to be relevant to their judgment is their cognitive style (Fuller

[1] In section 108(d) of the Sarbanes-Oxley Act of 2002 ("Sarbanes"), the SEC was directed to ". . . conduct a study on the adoption by the United States financial reporting system of a principles-based accounting system" (Sarbanes 2002). In October 2002 the Financial Accounting Standards Board ("FASB") issued a proposal to consider the feasibility of adopting a principles-based approach for U.S. standard setting similar to that used in International Accounting Standards (FASB 2002). In March 2003 the American Accounting Association ("AAA") Financial Accounting Standards Committee ("AAA Committee") stated that it strongly supports the commitment by the FASB to evaluate the feasibility of principles-based standards (Maines et al. 2003). In July 2003 the SEC issued its report as directed by Sarbanes (SEC 2003).

[2] In a 1994 paper Dennis Beresford, then FASB Chairman, called for research to assist in setting accounting standards in situations such as the current "rules versus principles" debate. Beresford stated that, while it is useful to understand the behavioral implications of existing standards, it is perhaps even more useful to evaluate the potential behavioral implications of a standard before its implementation (Beresford 1994).

and Kaplan 2004; Ho and Rodgers 1993).[3] A potential economic consequence of accountants' decisions found to be relevant to their judgment is the potential applicability of professional penalties (Anderson and Cuccia 2000; Roberts 1998).

This study examined the effect on accountants' judgment and decision making of their cognitive style and the severity of potential professional penalties under standards of varying precision (i.e. rules-based versus principles-based standards) in the context of client pressure to support an "aggressive transaction". Herein, "aggressive transaction" refers to a transaction that may comply with the literal text of standards but nonetheless violate standards because, for example, it is devoid of economic substance. A key aim of those who advocate more principles-based standards is to discourage such transactions (Department of the Treasury 1999; FASB 2002; Joint Committee on Taxation 2002; SEC 2003). Study participants (62 Certified Public Accountants) were asked to indicate whether in exchange for a lucrative fee they would provide a written opinion stating that an aggressive transaction would be upheld if challenged by the pertinent regulatory authority ("approve an aggressive transaction"). Their cognitive styles were measured using the Myers-Briggs Type Indicator scales for the Perceiving (SN) mental function, Judging (TF) mental function and Judging-Perceiving (JP) attitude.[4]

Study results indicate that Thinking (T) (the Judging [TF] mental function preference of over 70% of accountants) accountants may be more willing than

[3] Ho and Rodgers (1993) calls for more research regarding the effect of accountants' cognitive characteristics and states that understanding such effect should lead to improving accountants' judgment.

[4] The Perceiving (SN) mental function, Judging (TF) mental function and Judging-Perceiving (JP) attitude are discussed in section 2.2.2.

Feeling (F) accountants to approve an aggressive transaction under rules-based but not under principles-based standards. Study results also indicate that this differential effect may be enhanced if an accountant is a Sensor (S) and a Judging (J) type as well as a Thinker (T) ("STJ"). Nearly 40% of accountants are STJs. Surprisingly, study results indicate that increasing the monetary amount of potential professional penalties may not lower, and may even heighten, the willingness of accountants to approve an aggressive transaction under either rules-based or principles-based standards. These results may be of interest to policymakers who aim to promulgate standards that result in consistent and not overly aggressive application by accountants.

The rest of the paper is organized as follows. The next section provides background, reviews related literature and sets forth expected study results. Section 3 outlines the study research method. Section 4 presents the study results. Section 5 discusses certain study weaknesses. Section 6 provides concluding comments.

2. Background, Literature Review and Expected Study Results

2.1 Rules-based versus principles-based standards

A law requiring drivers to stop at a red light is rules-based, while a law requiring drivers to proceed cautiously through a blinking yellow light is principles-based. Rules-based standards establish legal boundaries based on the presence or absence of well-specified triggering facts (e.g. did the car stop?). These standards are clear and easy to follow, are applied without regard to the substance of results but only with regard to the standard's terms, and are opaque to the standard's intent and purpose. Principles-based standards require evaluation by considering facts in light of one or more general questions (e.g. how fast was the car going, what were the weather, road and traffic conditions, and how much danger should the law tolerate?). These standards are vague, are substantive, and are transparent to the standard's intent and purpose (Huhn 2003; Korobkin 2000; Sullivan 1992).

In accounting "rules versus principles" represents a continuum ranging from unequivocally rigid standards on one end to general definitions of economics-based concepts on the other end (Maines et al. 2003). An example of unequivocally rigid standards is "[a]nnual depreciation expense for all fixed assets is to be 10 percent of the original cost of the asset until the asset is fully depreciated". An example of general definitions of economics-based concepts is "[d]epreciation expense for the reporting period should reflect the decline in the economic value of the asset over the period" (Maines et al. 2003, p. 74).

Both U.S. financial reporting standards (SEC 2003) and U.S. tax law (Department of the Treasury 1999) contain voluminous standards of varying precision. Most of these standards are very specific and are considered rules-based, e.g. scope and treatment exceptions and detailed implementation guidance in U.S. financial reporting standards (Schipper 2003) and most of the Internal Revenue Code and Treasury Regulations in U.S. tax law (Department of the Treasury 1999). However, some of the standards are less specific and are considered principles-based (Joint Committee on Taxation 2002; SEC 2003). U.S. financial reporting standards are under-girded by the FASB's Conceptual Framework (Schipper 2003) and U.S. tax law is overlaid by legislative, regulatory and judicial doctrines that potentially override a literal interpretation of the Internal Revenue Code and Treasury Regulations when such interpretation would produce unintended or inappropriate results (Department of the Treasury 1999).[5]

Studies indicate that accountants do not always interpret and apply either rules-based or principles-based standards as intended by standard setters. Standards with too few rules and vague, imprecise provisions may be interpreted inconsistently and reduce comparability between financial reports. However, standards with too

[5] For example, with respect to U.S. financial reporting standards, the SEC, the FASB, and the AAA Committee have all stated that the economic substance, not the form, of a transaction should guide financial reporting (FASB 2002; Maines et al. 2003; SEC 2003). In tax the economic substance doctrine becomes applicable when a taxpayer seeks to claim tax benefits unintended by Congress by means of transactions that serve no economic purpose other than tax savings (*ACM Partnership v. Commissioner* U.S. Tax Court 1997; Department of the Treasury 1999). The economic substance doctrine has been a principal weapon in recent Internal Revenue Service attempts to thwart corporate tax shelters. Most tax lawyers assume the validity of the economic substance doctrine (New York State Bar 2003). However, some aggressive tax lawyers do not (Madison 2003).

many rules may give rise to complexity that hampers mental processing (Nelson 2003).

Nelson et al. (2002) and Spilker et al. (1999) indicate that both auditors and tax professionals are more aggressive under low precision standards in unstructured contexts (transactions not intentionally planned and entered into by management or taxpayers)[6] but are more aggressive under high precision standards in structured contexts (transactions intentionally planned and entered into by management or taxpayers).[7] Nelson et al. (2002) reports the results of a field-based questionnaire to elicit auditors' recollections of specific incidents when managers attempted to manage earnings. In the context of unstructured earnings management transactions, auditors were significantly more likely to require adjustments under high precision (62%) versus low precision (39%) standards. In the context of structured earnings management transactions, auditors were significantly less likely to require adjustments under high precision (15%) versus low precision (33%) standards. Spilker et al. (1999) reports the results of an experiment in which the recommendations of tax professionals to clients regarding transactions were examined under different standard specificities (precise or ambiguous) and different

[6] Likewise, audit partners were more likely to allow a client's income-increasing accounting treatment in cases governed by a less precise standard (Trompeter 1994) and auditors were less likely to allow extraordinary treatment under a new standard requiring explicitly that extraordinary items be of a nonrecurring nature (Hronsky and Houghton 2001).

[7] Nelson et al. (2002) looked to theory from law and economics that provides that when applying imprecise standards people assess high exposure to error costs because adjudication is unpredictable (Shavell 1987) and may react by being more careful to comply with the spirit of the rule (Kessler and McClellan 1996). This theory also provides that people may be more willing to incur costs to structure transactions to evade legal norms when standards are precise because structuring is more likely to significantly reduce exposure to error costs under precise standards (Gifford 1971; Kaplow 1992).

decision contexts (unstructured compliance or structured planning).[8] In the unstructured compliance context, tax professionals were less likely to recommend an aggressive tax position under precise (2.33 on 7-point scale) versus ambiguous (4.22 on 7-point scale) standards, while in the structured planning context tax professionals were more likely to recommend an aggressive tax position under precise (4.71 on 7-point scale) versus ambiguous (3.08 on 7-point scale) standards.

2.2 Cognitive style[9]

2.2.1 Accountants' judgment and cognitive characteristics

Accountants' judgment in both audit (Bonner and Pennington 1991; Libby et al. 2002; Libby and Luft 1993; Pincus 1990) and tax (Marchant et al. 1989; Roberts 1998; Shields et al. 1995) is typically viewed as the product of individual accountants and the task environment. One relevant aspect of individual accountants is their cognitive characteristics, which encompass cognitive style, cognitive ability and cognitive strategy (Ho and Rodgers 1993; Kagan and Kogan 1970).[10]

[8] Unlike auditors, tax professionals have a duty to be advocates for their clients (AICPA 2000). However, tax professionals have a duty to not recommend a tax return position unless they have a good-faith belief that the position has a realistic possibility of being sustained administratively or judicially on its merits if challenged (AICPA 2000).

[9] In this study, "cognitive style" refers to the combination of an individual's Perceiving (SN) mental function, Judging (TF) mental function and Judging-Perceiving (JP) attitude as measured by the Myers-Briggs Type Indicator.

[10] Cognitive ability relates to knowledge encoding and retrieval and is concerned with level of skill. Cognitive strategy pertains to the interactions among an individual's cognitive styles, cognitive abilities and the environment (Ho and Rodgers 1993).

Cognitive style pertains to the preferred methods of acquiring and processing information during the problem-solving process and entails "distinctive ways of acquiring, storing, retrieving, and transforming information" (Ho and Rodgers 1993, p. 103). Unlike cognitive ability and cognitive strategy, cognitive style measures do not involve labels that imply one style is better than another. Analogous to right-handed versus left-handed, cognitive style is consistent over time, not easily modified, and not influenced by situational factors within a normal range of conditions (Ho and Rodgers 1993). Although cognitive ability has been the focus of most accounting studies examining the effect of accountants' cognitive characteristics,[11] studies that have examined the effect of accountants' cognitive styles on their judgment generally indicate it to be significant (Fuller and Kaplan 2004; Ho and Rodgers 1993).[12]

2.2.2 Jungian theory and cognitive style

According to Jung (1921), much of the apparently random variation in human behavior is actually a consistent and orderly result of basic observable differences between the way individuals prefer to make perceptions and judgments. Jungian theory (Jung 1921) continues to be an important influence in psychology and shares

[11] For example, see Bonner et al. (1990) and Libby and Tan (1994) with respect to auditors and Bonner et al. (1992) and Spilker (1995) with respect to tax professionals. With respect to interpretation of accounting standards, in Patel and Day (1996) the field-dependence versus field-independence (Witkin et al. 1971) of Australian business students affected their ability to interpret an Australian accounting pronouncement.

[12] Studies that have examined the effect of accountants' cognitive styles on their judgment have operationalized cognitive style as (1) simple versus complex, (2) adaptor versus innovator (measured by Kirton's [1987] index), (3) field-dependence versus field-independence (measured by Witkin et al.'s [1971] Embedded Figures Test) or (4) analytic versus intuitive (measured by the Myers-Briggs Type Indicator [Myers et al. 2003]) but have predominately used the latter two measures (Fuller and Kaplan 2004).

many concerns and features with cognitive science (Wheeler 2001). Jungian Theory is operationalized using the Myers-Briggs Type Indicator ("MBTI").[13]

In Jungian theory, there are two bipolar mental functions regarding the way individuals perceive and form judgments about the world: Perceiving (SN) and Judging (TF). Jung's Perceiving (SN) mental function refers to the way a person determines what a problem or situation entails and involves all the ways of becoming aware of things, people, happenings, or ideas and encompasses information gathering, the seeking of sensation or of inspiration, and the selection of a stimulus to attend to when solving a problem (Ho and Rodgers 1993; Myers and Myers 1995; Myers et al. 2003; Wheeler et al. 2004a). Sensors (S) tend to focus on immediate experiences and tend toward enjoyment of the present moment, realism, acute powers of observation, memory for the details of both past and present experiences, and practicality. They tend to be realistic and practical and are good at remembering and working with a large number of facts (Ho and Rodgers 1993; Myers and Myers 1995; Myers et al. 2003; Wheeler et al. 2004a). Intuitors (N) tend to focus on possibilities, meanings and relations by way of insight and tend toward the imaginative, theoretical and abstract. They tend to look at the big picture and try to grasp the essential patterns (Ho and Rodgers 1993; Myers and Myers 1995; Myers et al. 2003; Wheeler et al. 2004a). In sum, Sensors (S) tend toward the concrete and

[13] Wheeler et al. (2004a and 2004b) provides that the MBTI has three comparative strengths relative to other personality measures with respect to accounting information systems research. First, researchers have extensively tested the validity and reliability of the MBTI over approximately four decades. Second, the MBTI is grounded within a comprehensive psychology of personality. Third, the MBTI is well suited for research examining the relation of cognition and information processing to personality. The two most recent located studies that examine the effect of accountants' cognitive styles on their judgment (Cheng et al. 2003; Fuller and Kaplan 2004) used the MBTI.

details and tend to focus on individual elements and concrete facts and figures, while Intuitors (N) tend toward the theoretical and abstract and tend to perceive problems as a whole (Wheeler et al. 2004a).

Jung's Judging (TF) mental function is a processing function that transforms data provided by the Perceiving (SN) mental function in order to decide what action will be taken to solve a problem or resolve a situation. It encompasses evaluation, choice, decision-making and the selection of a response after perceiving a stimulus. Thinkers (T) tend to decide on the basis of potential logical consequences and rely on impartiality and neutrality with respect to the personal desires and values of both themselves and the people who may be affected by the decision. Feelers (F) tend to decide primarily on the basis of personal or social values and try to anticipate and take into account the effects of the decision at hand on the people involved (Ho and Rodgers 1993; Myers and Myers 1995; Myers et al. 2003; Wheeler et al. 2004a). For example, when deciding which of five employees to promote to supervisor, Thinkers (T) would likely develop a set of explicit criteria and rank the criteria as to importance and then rate the five employees accordingly, while Feelers (F) would likely focus on job qualifications including impact on other workers and the personal circumstances of the five employees and then determine if any candidate stood out clearly from this weighing of values (Myers et al. 2003).

In Jungian theory, there are two bipolar attitudes that reflect an individual's fundamental views of the world: Extraversion-Introversion (EI) and Judging-Perceiving (JP). Jung's Extraversion-Introversion (EI) attitude pertains to whether one's attention is primarily directed at the external world of people and objects or the inner, subjective world of body and mind (Myers and Myers 1995; Myers et al. 2003).

Jung's Judging-Perceiving (JP) attitude pertains to one's attitudes or orientations toward dealing with the outside world. Judging (J) types prefer the decisiveness and closure that results from dealing with the outer world using the Judging (TF) mental functions. Perceiving (P) types prefer the flexibility and spontaneity that results from dealing with the outer world using the Perceiving (SN) mental functions (Myers et al. 2003). In any new activity, it is appropriate first to use the Perceiving (SN) mental functions to observe or take in the situation; then it is appropriate to use the Judging (TF) mental functions to decide on the appropriate action. Perceiving (P) types typically remain longer in the observing attitude because it is more comfortable and natural for them. They will often suspend judgment to take another look and stay attuned to incoming information. Their aim is to receive information as long as possible in an effort to miss nothing that might be important. Judging (J) types move more quickly through perception in order to reach conclusions and achieve closure, as they are most comfortable and satisfied when a plan has been developed or when a decision has been made. They tend to shut off perception as soon as they have observed enough to make a decision. They are

concerned with making decisions, seeking closure, planning operations and organizing activities (Myers and Myers 1995; Myers et al. 2003).

Because people develop greater comfort and facility with their preferred mental functions and attitudes, individuals with different preferred mental functions and attitudes should differ in their information processing, judgment, learning and communicating (Myers and Myers 1995; Myers et al. 2003). However, non-preferred mental functions and attitudes are still present in the personality, and individuals may be quite competent using them. For example, an Intuitor (N) may find that using their non-preferred Sensing (S) ability is the most effective way of handling important financial records (Myers et al. 2003). Once preferred mental functions and attitudes are allowed to adequately develop to dominance, a general goal of development is to use each mental function and attitude for the tasks for which they are best fitted (Myers et al. 2003).

The mental functions and attitudes and cognitive style of the study participants, accountants and the general U.S. population are presented in Table 1.

Insert Table 1 about here

The mental functions and attitudes interact to form the personality. Because of this interactive effect, a mental function or attitude in one type may have a different effect on the personality than the same mental function or attitude in another type (Myers and Myers 1995; Myers et al. 2003). Combinations with a common mental function or attitude will share some qualities, but each combination has qualities all its own (Myers and Myers 1995; Myers et al. 2003).

The most common combination for accountants (39.1%) of the Perceiving (SN) mental function, the Judging (TF) mental function and the Judging-Perceiving (JP) attitude (herein "cognitive style") is Sensing-Thinking-Judging (STJ) (Kovar et al. 2003). Individuals with an STJ cognitive style are well suited to many of the tasks performed by accountants (Myers and Myers 1995). Kovar et al. (2003, p. 92) posits that the STJ cognitive style "may be something of a minimum requirement to successfully perform the tasks required by accountants" and observes that "the accountant's primary strength, whether in public or private practice, remains collecting actual information from the events in a business (an inherently sensing [S] function) creating logical categorizations and aggregations (an inherently thinking [T] function) and finding ways to communicate it in an organized fashion and to use it to facilitate effective decisions (a function requiring an individual focused on judging [J])".

2.3 Prior studies examining the effect of Jungian cognitive style on accounting-related decisions[14]

Casey (1980) examined the effect of the Perceiving (SN) mental function of 46 loan officers when analyzing three consecutive years of financial ratios for 30 firms and predicting which of the firms would file for bankruptcy within the subsequent three-year period. Intuitive (N) loan officers outperformed Sensing (S)

[14] Rodgers and Housel (1987) proposes a two-stage cognitive process model for decision-making. During the first stage, the decision maker uses their perceptual processes to acquire and filter information. During the second stage, the decision maker uses their judgmental processes as they make inferences based on filtered information and reference information in long-term memory to arrive at a decision. Several studies (e.g. Casey 1980; Cheng et al. 2003; Chenhall and Morris 1991; Rodgers and Housel 1987) have focused only on the effect of decision makers' Perceiving (SN) mental function on their judgment. Such studies implicitly assume that the Perceiving (SN) mental function affects judgment by determining what information is evaluated in judgmental processes.

loan officers, which Casey (1980) attributed to Intuitive (N) loan officers having a greater aptitude to perceive and understand the implications of the levels, trends, and trade-offs between the financial ratios provided. However, in Rodgers and Housel (1987), which examined the effect of the Perceiving (SN) mental function of 50 loan officers and 59 MBA students when making loan decisions, Sensing (S) loan officers outperformed Intuitive (N) loan officers.[15] Ho and Rodgers (1993) attempts to reconcile the results in Casey (1980) and Rodgers and Housel (1987) by pointing out that Rodgers and Housel (1987) did not provide participants with economic and management information, thereby removing the comparative advantage lntuitors (N) have in using this type of information to recognize performance patterns.[16]

Chenhall and Morris (1991) examined the effect of the Perceiving (SN) mental function of 64 middle- to senior-level managers when performing a resource-allocation task. It was expected that Intuitive (N) managers would focus on broader consequences and consider the information holistically and thus be more likely to identify the opportunity costs associated with various types of expenditures. As expected, Intuitive (N) managers tended to incorporate opportunity costs in their resource-allocation decisions, while Sensing (S) managers tended not to identify the opportunity-cost implications.[17]

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[15] There was no significant difference in the performance on the task of the Sensing (S) MBA students and the Intuitive (N) MBA students.
[16] Rodgers and Housel (1987) posits that their results differed from Casey (1980) because the task in Casey (1980) only pertained to the first stage of their two-stage cognitive process model.
[17] The introduction of project sponsorship (whether managers supervised the project) moderated the influence of cognitive style.

Vassen et al. (1993) examined the effect of the Perceiving (SN) mental function and Judging (TF) mental function of 25 experienced (5-39 years auditing experience) auditors from the three largest public accounting firms in The Netherlands. With respect to "information acquisition", Sensing (S) auditors accessed more information than did Intuitive (N) auditors. With respect to "information processing", Thinking (T) auditors took longer to process the information accessed and had a lower tolerance for ambiguity than did Feeling (F) auditors.

Cheng et al. (2003) examined the effect of the Perceiving (SN) mental function of students in third-year management accounting. The 48 (of 271) students with the highest Sensing (S) scores and the 46 (of 271) students with the highest Intuitive (N) scores were selected. After controlling for task conflict, results showed significantly better decision performance for Sensing (S)/Intuitive (N) pairs over Sensing (S)/Sensing (S) pairs but not over Intuitive (N)/Intuitive (N) pairs.

Fuller and Kaplan (2004) examined whether the cognitive styles of 44 Big 6 audit seniors significantly interacted with task type to affect performance. Building upon the work of Chan (1996), the study examined the role of "cognitive misfit" on auditor task performance. Chan's (1996) cognitive misfit framework posits that task performance will be better where there is a match between cognitive style and task attributes and will suffer when there is a mismatch between cognitive style and task attributes. Participants performed two judgment tasks, one analytic and one intuitive, and completed the MBTI. The analytic task required participants to review

workpapers prepared by a staff auditor. The intuitive task required participants to perform an analytic review of pre-report financials. Sensing-Thinking (ST) auditors performed better on the analytic task than the intuitive task, while Intuitive-Feeling (NF) auditors performed better on the intuitive task than on the analytic task.[18]

2.4 Expected effect of accountants' cognitive styles under rules-based versus principles-based standards[19]

Rules-based standards require a decision maker to answer clear questions such as "what is 10 percent of the original cost of the asset?" while focusing on well-specified triggering facts and the literal text of standards. Principles-based standards require a decision maker to answer vague questions such as "what was the decline in the economic value of the asset over the period?" while focusing on facts in a holistic fashion in light of standards' substantive intent and purpose (Huhn 2003; Korobkin 2000; Maines et al. 2003; Sullivan 1992).

The aggressive transactions that have given rise to the "rules versus principles" debate have typically arisen in contexts in which applicable standards consist of abstract principles-based provisions on top of which have accreted bright-line rules-based provisions (Colliton 1995; Department of the Treasury 1999; Nelson 2003; SEC 2003). The aggressive transactions typically comply with the accreted bright-line rules-based provisions but do not comply with the abstract principles-

[18] The remaining two cognitive styles, Sensing-Feeling (SF) and Intuitive-Thinking (NT), were collapsed together and termed "hybrid" for purposes of the study.

[19] Because it is not possible to construct rules-based standards and principles-based standards for which identical stringency is assured, the aggressiveness of accountants' decision-making under rules-based versus principles-based standards was explored as part of the study, but no formal hypotheses regarding the relation were proposed.

based provisions (Department of the Treasury 1999; SEC 2003). The intent and purpose of the applicable standards is typically apparent in the abstract principles-based provisions but not in the accreted bright-line rules-based provisions (Huhn 2003). Current proposals to move to more principles-based standards would remove accreted bright-line rules-based provisions from standards, leaving only the abstract principles-based provisions (Department of the Treasury 1999; SEC 2003).

I expected that Intuitive (N) accountants would be more likely than Sensing (S) accountants to recognize that aggressive transactions do not comply with applicable standards and thus would be less aggressive than Sensing (S) accountants in their decision-making related to such transactions. I expected Sensing (S) accountants to focus on the bright-line rules-based provisions with which aggressive transactions do comply and to ground their judgment on the individual concrete facts pertaining to such provisions and thus to be less cognizant that an aggressive transaction does not comply with relevant standards. In contrast, I expected Intuitive (N) accountants to focus on the abstract principles-based provisions with which aggressive transactions do not comply and to ground their judgment on the holistic information needed to recognize that aggressive transactions do not comply with relevant standards. I expected this effect to be greater under rules-based standards (than under principles-based standards) because the bright-line rules-based provisions with which aggressive transactions do comply would serve as a focal point for Sensors (S) and direct their attention to individual concrete facts. Accordingly, my Hypotheses 1a, 1b and 1c were:

H1a: If an aggressive transaction complies with rules-based provisions but does not comply with principles-based provisions, Intuitive (N) accountants will be less aggressive than Sensing (S) accountants in their decision-making related to such transaction.

H1b: If there are no applicable rules-based provisions and an aggressive transaction does not comply with principles-based provisions, Intuitive (N) accountants will be less aggressive than Sensing (S) accountants in their decision-making related to such transaction.

H1c: The degree to which Intuitive (N) accountants are less aggressive than Sensing (S) accountants in decision-making related to an aggressive transaction that does not comply with principles-based provisions will be greater when rules-based provisions (with which the transaction does comply) are applicable in addition to principles-based provisions.

2.5 Professional penalties and their expected effect under rules-based versus principles-based standards and their expected interaction with accountants' cognitive styles

The willingness of both auditors (Hackenbrack and Nelson 1996) and tax professionals (Roberts 1998) to support aggressive, client-preferred positions is affected by their incentives, including potential professional penalties (Anderson and Cuccia 2000; Roberts 1998). However, because accountants may receive a psychological reward from beating the Internal Revenue Service or other tax agency, increasing professional penalties can cause accountants to increase their effort and produce a backlash effect (Cuccia 1994).

Commentators have noted (Department of the Treasury 1999; Nelson 2003) and studies indicate (Cuccia et al. 1995)[20]that efforts to discourage accountants from

[20] Cuccia et al. (1995) investigated whether replacing a professional standard that employs a vague, verbal disclosure threshold with a professional standard that employs a more stringent, numerical threshold mitigates the aggressiveness of reporting decisions. Results indicate that (1) when a verbal professional standard is in place, tax practitioners use the latitude inherent in the standard to support aggressive reporting decisions, and (2) when a numerical professional standard is in place, tax

supporting aggressive transactions by varying the precision of standards may prove ineffective unless they are coupled with appropriate changes in relevant incentives (Department of the Treasury 1999; Nelson 2003). Nelson (2003) posits that changing the balance of incentives should have a greater effect on accountants' judgment under imprecise (i.e. principles-based) standards than under precise (i.e. rules-based) standards. This is consistent with prior studies that indicate that accountants use the flexibility inherent in standards to allow reporting favored by their incentives (Cuccia et al. 1995; Hackenbrack and Nelson 1996; Libby et al. 2002; Roberts 1998).

I expected that under principles-based (i.e. imprecise) standards if potential professional penalties were low (high) accountants would be more (less) likely to use the flexibility inherent in such standards to justify supporting aggressive transactions. I expected the presence of bright-line rules-based provisions with which an aggressive transaction does comply to reduce the effect of the severity of potential professional penalties. This is because accountants may perceive that compliance with the bright-line rules-based provisions suffices to shield them from professional penalties. I expected this to be especially true with respect to accountants who are not cognizant that an aggressive transaction does not comply with also applicable principles-based provisions (i.e. Sensors [S] as opposed to Intuitors [N]) and/or are more focused on the logical consequences of supporting the aggressive transaction

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practitioners instead use the latitude available in assessing evidential support to justify an aggressive reporting decision. This shift in incentive effect is pronounced enough to render reporting decisions made under the numerical professional standard as aggressive as reporting decisions made under the verbal professional standard.

(Thinkers [T] as opposed to Feelers [F]). When accountants perceive less chance of the applicability of professional penalties, the effect of the severity thereof should be reduced. Accordingly, my Hypotheses 2, 3a and 3b were:

H2: When aggressive transactions do not comply with principles-based provisions, the effect of increasing the severity of potential professional penalties will be greater when no rules-based provisions (with which the transaction does comply) are applicable.

H3a: Increasing the severity of potential professional penalties will have a greater effect on the aggressiveness of Sensing (S) accountants than on the aggressiveness of Intuitive (N) accountants.

H3b: Increasing the severity of potential professional penalties will have a greater effect on the aggressiveness of Thinking (T) accountants than on the aggressiveness of Feeling (F) accountants.

3. Study Research Method

3.1 Study Participants

The 62 participants were members of the Oklahoma Society of Certified Public Accountants ("OSCPA"). Demographic statistics for the participants are presented in Table 2.

Insert Table 2 about here

3.2 Study design

The study used a 2 (manipulated rules-based versus principles-based standards condition) x 2 (manipulated low potential professional penalty versus high potential professional penalty condition) between-subjects design together with participants' measured Sensing (S) versus Intuitive (N), Thinking (T) versus Feeling

(F) and Judging (J) versus Perceiving (P) measured preferences and whether or not the participant was indicated as having a Sensing-Thinking-Judging (STJ) cognitive style.

3.3 Study procedure

The OSCPA provided a list of the names and addresses of the 2,016 of their members self-identified as being in public practice, 1,702 of which self-identified their area of practice as tax. The list was organized by zip code. For purposes of randomization, I sequentially numbered each participant using a repeating "1 2 3 4, 1 2 3 4, etc." pattern and then sorted using this numbering. I assigned participants to the four conditions using this sorting number. A letter on university letterhead was forwarded to each of the 2,016 asking for their participation in the study. Forty-two participants responded to the initial letter. Approximately six weeks later a postcard was forward to each of the 2,016 asking again for their participation in the study. Twenty participants responded to the postcard.[21]

Data were collected using four websites, one for each condition. Participants were directed to one of the websites. Upon reaching the website, they read an informed consent form and indicated whether they wished to proceed. If they wished to proceed, participants clicked a link to a separate webpage containing the study instrument, which is described in section 3.4. After completing the study instrument, participants clicked a link to a separate webpage containing the study

[21] Results did not differ significantly between the 42 participants who responded to the initial letter and the 20 participants who responded to the postcard ($p < .1355$) and there was no significant interaction with RvP ($p < .7795$) or PENALTY ($p < .4994$).

questionnaire. The study questionnaire asked manipulation checks, questions related to the study instrument, questions related to the control variables, and demographic questions.[22] After completing the study questionnaire, participants clicked a link to a separate website. This website is the commercial website for CPP, Inc., the providers of the MBTI. Participants completed the MBTI at this website. The letter forwarded to the OSCPA members and the study websites informed participants that, if they wished to be entered into a drawing for a cash prize of $100 and/or they wished to obtain their MBTI results, they could forward an email to me at my University of Oklahoma email address.[23]

[22] A copy of the study instrument and study questionnaire is attached in Appendix A.
[23] One participant who forwarded an email requesting to be entered into the drawing for a cash prize of $100 was selected at random and awarded the cash prize. I forwarded their MBTI results to all participants who so requested.

3.4 Study instrument

As did Cuccia et al. (1995), I used a tax context to examine issues related to standard precision. Although financial accounting and tax differ in important ways, the effect of accountants' psychological characteristics and potential economic consequences such as professional penalties should generalize across the two realms (Nelson 2003).

Participants were presented with a scenario in which an insurance company client wishes to engage in an aggressive transaction plan to reduce its state insurance gross premiums tax ("plan"). Under such a tax, insurers pay a tax equal to a percentage of gross premiums received with respect to business done in a state (Commerce Clearing House 2004). This infrequently encountered tax practice topic was chosen to minimize the potential effects of prior participant knowledge. Only four participants indicated prior experience with the study scenario topic, and only one participant indicated that such experience entailed more than 3 occurrences. Mythical tax provisions were also used to minimize the potential effects of prior participant knowledge.

In the scenario, the client wishes to lower its gross premiums tax with respect to employee group health insurance plans by having employers (rather than the insurance company client) "pay" employee claims for up to 80% of the actuarially predicted monthly mean level of aggregate employee claims, thus lowering the amount of premiums "received" by the client. In an actual case involving a materially less aggressive plan of this type, the Supreme Court of California

concluded that in economic substance the employers were mere agents of the insurance company for collection of employee premiums, not independent insurers, and thus held the insurance company taxable on the sum of the premium payments it received from the employers and the pre-trigger point claims paid from employer funds during the years in question (*Metropolitan Life Insurance Company v. State Board of Equalization* Supreme Court of California 1982). To minimize the potential effects of social influences such as pressure from firm superiors, the scenario asked participants to assume that they practice as the sole owner of a small accounting firm.

3.5 Dependent variable

For the dependent variable ("AGGRESSIVE"), participants were asked to indicate using an 11-point (0% to 100%) Likert scale whether in exchange for a lucrative fee they would provide a written opinion stating that the "plan" would be upheld if challenged by the pertinent regulatory authority ("approve an aggressive transaction").

3.6 Independent variables

The first independent variable ("RvP") is a manipulated dichotomous variable pertaining to whether participants were assigned to the rules-based standards ("rules") condition or the principles-based standards ("principles") condition. In the rules condition, applicable standards were comprised of bright-line rules-based provisions with which the aggressive transaction did comply and abstract principles-

based provisions with which the aggressive transaction did not comply. In the principles condition, applicable standards were comprised only of abstract principles-based provisions with which the aggressive transaction did not comply.

The second independent variable ("SN") is a continuous variable pertaining to participants' Sensing (S) versus Intuitive (N) Perceiving mental function preference (range from -30 for Sensing [S] to +30 for Intuitive [N]). The third independent variable ("TF") is a continuous variable pertaining to participants' Thinking (T) versus Feeling (F) Judging mental function preference (range from -30 for Thinking [T] to +30 for Feeling [F]). An additional continuous independent variable ("JP") pertaining to participants' Judging (J) versus Perceiving (P) attitudes or orientations toward dealing with the outside world (range from -30 for Judging [J] to +30 for Perceiving [P]) was examined in the further analysis. A dichotomous independent variable ("STJ") pertaining to whether or not a participant was indicated as having a Sensing-Thinking-Judging (STJ) cognitive style was also examined in the further analysis.

SN, TF, JP and STJ were all measured using the MBTI. Researchers have extensively validated and tested the reliability of the MBTI (Myers et al. 2003; Wheeler 2001; Wheeler 2004a; Wheeler 2004b).[24] The MBTI is the primary psychometric instrument for measuring Jungian theory constructs and determining personality types. It has undergone numerous revisions since its initial publication in 1962. MBTI Form M (published in 1998) was used in the study. Form M is

[24] Although the MBTI has been subject to criticism (Barbuto 1997), it remains the most widely used personality instrument in the world and is used extensively in consulting (Myers et al. 2003).

arranged in a forced-choice 93-question format and yields a numerical score based on responses indicating a preference for one mental function or attitude versus its opposite (Myers et al. 2003). The MBTI is not necessarily an indication of individuals' abilities to utilize either their most or least preferred personality functions, but rather is only a measure of preference (Kovar et al. 2003).

The MBTI dimensions were originally intended to measure dichotomous preferences and the dichotomous preferences are widely used in research. Although not entirely consistent with Jung's original theory, the continuous scores reveal the strength of preferences and create the opportunity to examine the stability of preferences over time. The validity of the continuous scores for each of the four dimensions has been indicated as strong (Wheeler 2001; Kovar et al. 2003) and researchers have used the continuous preference clarity index in prior research (Kovar et al. 2003; Wheeler et al. 2004a).

The fourth independent variable ("PENALTY") is a manipulated dichotomous variable pertaining to the level of potential professional penalties (low [$250] or high [three times the fee obtained for the opinion]).

3.7 Control variables

Studies indicate that perceived likelihood of audit ("AUDIT") may affect tax accountants' assessed likelihood of recommending an aggressive transaction (Roberts 1998). AUDIT, as measured using participants' responses to a question in

the study instrument (assessed % likelihood of audit if the client engaged in the proposed aggressive transaction), was included as a potential control variable.[25]

Risk propensity ("RISK") has been associated with aggressive recommendations by tax accountants (Roberts 1998). RISK, as measured by the risk-taking subscale of the Jackson Personality Inventory—Revised ("JPI-R") (Jackson 1994), was included as a potential control variable (scale of 0 to 20, with higher numbers indicating greater risk propensity).[26] The JPI-R assesses personality variables relevant to work, educational/organizational and interpersonal situations. The test has been shown to be reliable and valid.[27]

Tax accountants' client advocacy ("ADVOCACY") has been shown to produce confirmation bias in the evaluation of pertinent authorities, which leads to higher assessed likelihood of litigation success and higher assessed likelihood of recommending an aggressive transaction (Davis and Mason 2003; Roberts 1998). ADVOCACY has also been show to affect auditors' judgment in certain circumstances (Haynes et al. 1998). ADVOCACY, as measured using the sum of two questions adapted from two questions from the Mason and Levy (2001) scale (scale of 0 to 20, with higher numbers indicating greater client advocacy), was included as a potential control variable.[28]

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[25] One participant did not respond to the AUDIT question. The mean of the AUDIT question answers for the other participants was used for AUDIT for this participant.
[26] One participant did not respond to the RISK subscale. The mean of the RISK subscale results for the other participants was used for RISK for this participant.
[27] Prior studies indicate that risk propensity varies between different cognitive styles and that its effect interacts with task environment factors (Blaylock 1981; Gardner and Martinko 1996; Henderson and Nutt 1980).
[28] One participant responded to only one of the ADVOCACY questions. For this participant, ADVOCACY was measured as twice the single question answered.

3.8 Hypotheses tests

Hypotheses were tested using equation (1).

(1) $AGGRESSIVE = \beta_0 + \beta_1 RvP + \beta_2 SN + \beta_3 TF + \beta_4 PENALTY + \beta_5 RvP*SN + \beta_6 RvP*PENALTY + \beta_7 SN*PENALTY + \beta_8 TF*PENALTY + \beta_9 AUDIT + \beta_{10} RISK + \beta_{11} ADVOCACY + e$

For H1a β_2 pertained to the rules condition and was expected to be negative and significant. For H1b β_2 pertained to the principles condition and was expected to be negative and significant. For H1c β_5 was expected to be significant. For H2 β_6 was expected to be significant. For H3a β_7 was expected to be significant. For H3b β_8 was expected to be significant.

4. Results

4.1. Initial analysis

4.1.1 Manipulation checks

For the manipulation check pertaining to RvP, the principles-based provision (present under both rules and principles) and the rules-based provision (present only under rules) were restated in the study questionnaire and participants were asked to indicate whether or not each provision was applicable in their condition. The correct response for the rules condition was "yes" with respect to both provisions. One participant in this condition incorrectly answered "no" with respect to the principles-based provision and, and three participants in this condition incorrectly answered "no" with respect to the rules-based provision. The correct response for the

principles condition was "yes" with respect to the principles-based provision and "no" with respect to the rules-based provision. Two participants in this condition incorrectly answered "no" with respect to the principles-based provision, and one participant in this condition incorrectly answered "yes" with respect to the rules-based provision. The key difference between the rules and principles conditions is whether the rules-based provision was present. If the data for participants who answered incorrectly with respect to this provision were excluded, neither the hypotheses tests results nor the further analysis tests results differ qualitatively.

For the manipulation check pertaining to PENALTY, participants were asked to indicate whether the potential professional penalty amount was "$250" (the correct response for the "low" penalty condition) or "three times the fee obtained for the opinion" (the correct response for the "high" penalty condition). Three participants in the "low" penalty condition incorrectly answered "three times the fee obtained for the opinion". One participant in the "high" penalty condition incorrectly answered "$250" and one participant in this condition did not respond to this manipulation check. If the data for participants who answered incorrectly or did not respond with respect to the manipulation check for PENALTY were excluded, neither the hypotheses tests results nor the further analysis tests results differ qualitatively.

4.1.2 Study realism

Participants on average rated the study realism as 7.2 on a 0 to 10 scale with higher scores indicating more assessed realism. This indicates that participants believed the study entailed a relatively high degree of realism.

4.1.3 Descriptive statistics

Descriptive statistics for the dependent variable, measured independent variables and control variables are presented in Table 3, Panel A.

Insert Table 3 about here

Correlations between the dependent variable, independent variables and the control variables are presented in Table 3, Panel B. RvP was coded using "0" for the principles condition and "1" for the rules condition. PENALTY was coded using "0" for the low penalty condition and "1" for the high penalty condition. The composite STJ variable was coded using "0" for non-STJ participants and "1" for STJ participants. AGGRESSIVE (the dependent variable) is significantly positively correlated with PENALTY ($r = .300$, $p < .018$) and marginally negatively correlated with JP ($r = -.234$, $p < .067$). PENALTY is marginally positively correlated with RISK ($r = .233$, $p < .068$). SN is significantly positively correlated with TF ($r = .329$, $p < .009$) and is significantly positively correlated with RISK ($r = .460$, $p < .0002$). TF is significantly positively correlated with JP ($r = .415$, $p < .001$). RISK is significantly positively correlated with ADVOCACY ($r = .290$, $p < .022$). Except for the correlations between STJ and its constituent elements, no other correlations were indicated as significant.

4.1.4 Study participant demographics

The dependent variable was regressed on each demographic variable alone (position, years of tax experience, years of audit experience, years of other accounting experience, highest degree completed and gender) and on the interaction of each demographic variable with RvP and PENALTY. Years of other accounting experience is significantly negatively related to the dependent variable ($b = -0.7282$, $p < .0031$). Years of other accounting experience does not interact significantly with RvP ($p < .4187$) but does interact marginally significantly with PENALTY ($p < .0731$), with years of other accounting experience indicated as significant when potential professional penalties were high (three times the fee obtained for the opinion) ($b = -1.2067$, $p < .002$) but not when potential professional penalties were low ($250) ($p < .2255$). No other demographic variable was significantly related to the dependent variable or interacted significantly with RvP or PENALTY. Years of other accounting experience is not significantly correlated with any independent variable or any significant control variable. Thus, exclusion of demographic variables should not result in biased partial slope coefficients for the model variables (Berry and Feldman 1985).

4.1.5 Study power

To compute the desired number of participants, I used the following Cohen (1988) formula for determining sample size for testing fixed main and interaction effects in factorial designs.[29]

$$n = \frac{(n' - 1)(\mu + 1)}{\text{number of cells}} + 1$$

In the formula, n is the desired cell sample size (n is multiplied by the number of cells to determine N, the total sample size), n' is drawn from a table and μ is the degrees of freedom for the effect being analyzed. I drew n' from the Cohen (1988) Table 8.3.12 (pages 311-312) for $\alpha = .05$, power $(1 - \beta) = .80$, $\mu = 1$ (for the tests of main effects $\mu = 1$ [2-1] and for the tests of interaction effects $\mu = 1$ [(2-1) * (2-1)]) and f = .25 (f for "medium" effect size per Cohen [1988]). Inserting the values into the formula:

$$n = \frac{(62 - 1)(1 + 1)}{4} + 1$$

This yields n = 31.5, which rounded to 32 and multiplied times four yields N, or total desired number of participants, of 128.

The actual N (total number of participants) was only 62. For tests with equal cell sample sizes, $\alpha = .05$ and power $(1 - \beta) = .80$, the f for N of 62 is approximately .35[30]. Effect size expressed in terms of the number of standard

[29] Tests of interaction effects (as opposed to main effects) and tests pertaining to dichotomous (as opposed to continuous) variables generally are less powerful (Aiken and West 1991). Thus, the Cohen (1988) formula should compute sufficient sample size to yield adequate power for testing the study hypotheses and further analysis.

[30] See Cohen (1988) Table 8.3.12 (pages 311-312).

deviations between the largest and smallest population means anticipated is $d = (\mu_1 - \mu_2) / \sigma_\varepsilon$. In most cases, d is between two and four times as large as f (Maxwell and Delaney 2000). Thus, the approximate AGGRESSIVE percentage effect size for N of 62 is between 17.82% (effect size / 25.46% = f of .35 * 2) and 35.64% (effect size / 25.46% = f of .35 * 4). Using the standard deviation of AGGRESSIVE of 25.46% as an estimate of population within-cell error variance, for N of 62 the power for a "medium" AGGRESSIVE percentage effect size of 12.73% (effect size / 25.46% = f of .25 * 2) to 25.46% (effect size / 25.46% = f of .25 * 4) is approximately 50%[31].

In addition to effect size, sample size and α, power $(1 - \beta)$ is affected by the degree of extraneous variability and the normality of data (Maxwell and Delaney 2000; Toothaker and Miller 1996). In both the hypotheses tests (section 4.2) and the further analysis (section 4.3), variables that reduce extraneous variability were included. AGGRESSIVE has a skewness of 1.80 and a kurtosis of 2.22, and a Kolmogorov-Smirnov goodness-of-fit test (Sheskin 2004) indicates that the values of AGGRESSIVE are not normally distributed (asymp. sig. 2-tailed = .000). I thus transformed the values of AGGRESSIVE using a square root transformation (Maxwell and Delaney 2000) and used these transformed values for both the hypotheses tests (section 4.2) and the further analysis (section 4.3).

[31] See Cohen (1988) Table 8.3.12 (pages 311-312).

4.2 Hypotheses tests

Because the focus of the hypotheses and the further analysis is interaction effects, I centered all of the continuous independent variables (Jaccard and Turrisi 2003). All results are reported using non-standardized coefficients. All reported Pr > t for t values pertain to two-tailed t tests.

Insert Table 4 about here

See Table 4. In Panel A RvP was coded such that the SN parameter estimate pertains to the rules condition, while in Panel B RvP was coded such that the SN parameter estimate pertains to the principles condition (Jaccard and Turrisi 2003). Neither RISK nor ADVOCACY approached marginal significance in the initial hypotheses tests and thus were dropped from the reported hypotheses tests.

With respect to Hypothesis 1a, b_2 in Panel A is not negative and significant as expected. With respect to Hypothesis 1b, b_2 in Panel B is not negative and significant as expected. With respect to Hypothesis 1c, b_5 is not significant as expected. With respect to Hypothesis 2, b_6 is not significant as expected. With respect to Hypothesis 3a, b_7 is not significant as expected. With respect to Hypothesis 3b, b_8 is not significant as expected.

4.3 Further analysis

4.3.1 Introduction

Because SN is significantly positively correlated with TF ($r = .329$, $p < .009$) and TF is significantly positively correlated with JP ($r = .415$, $p < .001$), testing for the effect of one cognitive style element in the presence of other cognitive style

elements may yield lower power (Berry and Feldman 1985). Further, the complexity of the study model likely reduces the power of testing for any given effect (Hayes 1994). Finally, Jungian Theory is consistent with cognitive style effects in addition to the hypothesized effects. Thus, in the further analysis I examine the interaction of RvP and PENALTY controlling only for AUDIT, the interaction of RvP with each of the cognitive style elements (SN, TF and JP) and STJ controlling only for PENALTY and AUDIT, and the interaction of PENALTY with each of the cognitive style elements (SN, TF and JP) and STJ controlling only for AUDIT. Neither RISK nor ADVOCACY approached marginal significance in the initial further analysis tests and thus were dropped from the reported further analysis tests.

4.3.2 RvP and PENALTY

With respect to the interaction of RvP and PENALTY, see Table 3, panels C through E. RvP and PENALTY are not indicated as interacting significantly ($p < .8363$). See Panels D and E.

The mean (std. dev.) for the dependent variable in the four conditions obtained by crossing RvP and PENALTY are presented in Panel C. Participants were more aggressive under rules than under principles in both PENALTY conditions. However, RvP is not significantly correlated with the dependent variable ($p < .1971$). See Panel B.

Surprisingly, participants were more aggressive when potential professional penalties were high rather than low under both rules and principles. PENALTY is significantly positively correlated with the dependent variable ($r = .300$, $p < .018$), indicating greater aggressiveness when potential professional penalties were high rather than low. See Panel B. One possible explanation for this surprising indication is that PENALTY is marginally positively correlated with RISK ($r = .233$, $p < .068$), indicating that participants assigned to the high penalty condition had greater risk propensity than participants assigned to the low penalty condition. However, RISK is not significantly correlated with the dependent variable ($p < .843$). See Panel B. Another possible explanation is the Cuccia (1994) backlash effect, under which accounting professionals behave more aggressively in response to regulatory attempts to reduce their aggressiveness.

Kadous et al. (2003) highlights another possible explanation. In Kadous et al. (2003) performing a quality assessment amplified the effect of participants' (experienced auditors) directional goals on their acceptance of a client-preferred accounting method and on their ratings of the quality of that method. The results were consistent with the authors' expectations grounded in motivated reasoning theory. The authors expected that, because requiring a quality assessment would force auditors to not only decide whether a method is acceptable but to also consider whether the method is close enough in quality to the best method, auditors required to perform a quality assessment would increase the intensity of their effort devoted to justifying the client-preferred method and this additional justification effort would

increase both the perceived quality and acceptability of that method. In the instant study, the relatively severe potential professional penalty in the high penalty condition may have motivated participants in that condition to similarly increase the intensity of their effort devoted to justifying providing the opinion supporting the proposed aggressive transaction. Such additional justification effort may have increased the perceived acceptability of the proposed aggressive transaction and thus resulted in greater willingness to provide an opinion supporting the proposed aggressive transaction.

4.3.3 Perceiving (SN) mental function

Insert Table 5 about here

With respect to the Perceiving (SN) mental function, see Table 5. The mean (std. dev.) for the dependent variable in the four conditions obtained by crossing RvP and dichotomous SN are presented in Panel A. Contrary to Hypotheses 1a and 1b, Intuitors (N) were more aggressive than Sensors (S) under both rules and principles. In panel B the parameter estimate for SN pertains to the rules condition, while in panel C the parameter estimate for SN pertains to the principles condition (Jaccard and Turrisi 2003). SN is not significant under rules ($p < .2895$) or under principles ($p < .6189$) and does not significantly interact with RvP ($p < .2736$). See Panels B and C.

One possible explanation for Intuitors (N) unexpectedly exhibiting greater aggressiveness than Sensors (S) is that Intuitors (N) have higher risk propensity. SN and RISK are significantly positively correlated ($r = .461$, $p < .0002$). See Table 3,

Panel B. However, if RISK is also included as a control variable, SN is not significant under either rules ($p < .5294$) or principles ($p < .7456$). Thus, study results are not consistent with this explanation.

The mean (std. dev.) for the dependent variable in the four conditions obtained by crossing PENALTY and dichotomous SN are presented in Panel D. Both Intuitors (N) and Sensors (S) were more aggressive when potential professional penalties were high rather than low. This effect is significant ($p < .0137$). SN does not interact significantly with PENALTY ($p < .2958$). See Panels E and F.

4.3.4 Judging (TF) mental function

The study results with respect to the Perceiving (SN) mental function are unexpected in light of prior studies (discussed in Section 2.3). However, prior studies did not ask participants to make decisions they may have perceived as professionally questionable. Study results indicate that the Judging (TF) mental function may be more important when making decisions perceived as professionally questionable.

Insert Table 6 about here

With respect to the Judging (TF) mental function, see Table 6. The mean (std. dev.) for the dependent variable in the four conditions obtained by crossing RvP and dichotomous TF are presented in Panel A. Feelers (F) were slightly (3.73%) more aggressive than Thinkers (T) under principles, but Thinkers (T) were 7.86% more aggressive than Feelers (F) under rules. In panel B the parameter estimate for TF pertains to the rules condition, while in panel C the parameter estimate for TF

pertains to the principles condition (Jaccard and Turrisi 2003). TF is significant under rules (b_1 = -0.0855, $p < .0460$), indicating that under rules Thinkers (T) were more willing to approve an aggressive transaction than were Feelers (F). See Panel B. TF is not significant under principles ($p < .6832$). See Panel C. The interaction of TF and RvP is marginally significant ($p < .0705$). See Panels B and C.

These results evidence that under rules but not under principles Thinkers (T) may be more aggressive than Feelers (F). Although hypotheses consistent with these results were not proposed, the results are consistent with Jungian Theory. When making a decision, Thinkers (T) focus primarily on potential logical consequences, while Feelers (F) focus primarily on personal and social values (Myers and Myers 1995; Myers et al. 2003). Under principles, Thinkers (T) are likely restrained by perceived potential negative consequences if they approve the aggressive transaction, while Feelers (F) are likely restrained by their personal and social values from approving an aggressive transaction that does not accord with the intent and purpose of the principles-based provision. Thus, under principles both Thinkers (T) and Feelers (F) exhibited little aggressiveness (mean response to AGGRESSIVE of 9.00% for Thinkers [T] and 12.73% for Feelers [F]). Feelers (F) were not materially more aggressive under rules than under principles (increase in mean response to AGGRESSIVE of only 0.91%), likely because the abstract principles-based provision (present under both rules and principles) still indicated that the aggressive transaction did not accord with the intent and purpose of relevant standards. However, Thinkers (T) were materially more aggressive under rules than under

principles (increase in mean response to AGGRESSIVE of 12.50%), likely because they believed that the bright-line rules-based provision (present only under rules) would shield them from negative consequences if they approved the aggressive transaction. See Panel A.

The mean (std. dev.) for the dependent variable in the four conditions obtained by crossing PENALTY and dichotomous TF are presented in Panel D. Both Thinkers (T) and Feelers (F) were more aggressive when potential professional penalties were high rather than low. This effect is significant ($p < .0111$). TF does not interact significantly with PENALTY ($p < .8643$). See Panels E and F.

4.3.5 Judging-Perceiving (JP) attitude

Insert Table 7 about here

With respect to the Judging-Perceiving (JP) attitude, see Table 7. The mean (std. dev.) for the dependent variable in the four conditions obtained by crossing RvP and dichotomous JP are presented in Panel A. Judging (J) types were approximately 12.5% more aggressive that Perceiving (P) types under both rules and principles. Consistently, AGGRESSIVE is marginally negatively correlated with JP ($r = -.234$, $p < .067$, see Table 3, Panel B) and a t-test indicates a significant difference between Judging (J) types and Perceiving (P) types (with RvP collapsed) for AGGRESSIVE ($p < .0412$). Although hypotheses consistent with these results were not proposed, the results are consistent with Jungian Theory. Perceiving (P) types likely spent longer perceiving the study scenario information and thus viewed the facts in a more holistic fashion and were more cognizant (than were Judging [J] types) that the

aggressive transaction did not comply with the abstract principles-based provision (present under both rules and principles). In panel B the parameter estimate for JP pertains to the rules condition, while in panel C the parameter estimate for JP pertains to the principles condition (Jaccard and Turrisi 2003). Although AGGRESSIVE is marginally negatively correlated with JP ($r = -.234$, $p < .067$) and a t-test indicates a significant difference between Judging (J) types and Perceiving (P) types (with RvP collapsed) for AGGRESSIVE ($p < .0412$), in the presence of PENALTY and AUDIT JP is not significant under rules ($p < .1575$) or under principles ($p < .3672$) and does not significantly interact with RvP ($p < .7346$). See Panels B and C.

The mean (std. dev.) for the dependent variable in the four conditions obtained by crossing PENALTY and dichotomous JP are presented in Panel D. Judging (J) types were 22.35% more aggressive than Perceiving (P) types when potential professional penalties were high, while Judging (J) types were only 1.35% more aggressive than Perceiving (P) types when potential professional penalties were low. In panel E the parameter estimate for JP pertains to the low penalty condition, while in panel F the parameter estimate for JP pertains to the high penalty condition (Jaccard and Turrisi 2003). JP interacts significantly with PENALTY ($p < .0353$) and is indicated as significant when potential professional penalties are high ($b_1 = -0.0954$, $p < .0078$) but not when they are low ($p < .8998$). See Panels E and F. I did not locate any material pertaining to Jungian theory that would explain this result. It is possible that Judging (J) types were made to feel uncomfortable by a high

potential professional penalty and quickly ceased the perception needed to accurately grasp the nature of the aggressive transaction. However, this approaches speculation.

4.3.6 STJ cognitive style

Insert Table 8 about here

I also examined the effect of the cognitive style elements together. STJ is the most prevalent cognitive style of accountants, with nearly 40% of accountants being STJs (Kovar et al. 2003). With respect to the study results for STJ participants versus non-STJ participants, see Table 8. The mean (std. dev.) for the dependent variable in the four conditions obtained by crossing RvP and STJ are presented in Panel A. STJs were 2.02% less aggressive than non-STJs under principles but were 15.19% more aggressive than non-STJs under rules. In panel B the parameter estimate for STJ pertains to the rules condition, while in panel C the parameter estimate for STJ pertains to the principles condition (Jaccard 1998). STJ is significant under rules ($p < .0123$) but is not significant under principles ($p < .5861$) and the interaction of STJ and RvP is significant ($p < .0315$). See Panels B and C.

Under both rules and principles, the mean response to AGGRESSIVE for non-STJs differs by less than 2% from the mean response for Feelers (F). Under principles the mean response to AGGRESSIVE for STJs differs by only approximately 0.1% from the mean response for Thinkers (T), while under rules the mean response to AGGRESSIVE for STJs was 7.50% higher than the mean response for Thinkers (T) (29.00% for STJs versus 21.50% for Thinkers [T]). Thus, the differential effect of the Judging (TF) mental function between rules and principles may be enhanced if a Thinker (T) is also a Sensor (S) and a Judging (J) type. Such enhancement would be consistent with Jungian theory. With respect to the Perceiving (SN) mental function, if Sensors (S) focus more (than Intuitors [N]) on the bright-line rules-based provision present only under rules (as expected in the hypotheses) this would enhance the effect of Thinkers (T) believing that this provision would shield them from negative consequences if they approved the aggressive transaction. With respect to the Judging-Perceiving (JP) attitude, under both rules and principles Perceiving (P) types likely spent longer perceiving the study scenario information and thus viewed the facts in a more holistic fashion and were more cognizant (than Judging [J] types) that the aggressive transaction did not comply with the abstract principles-based provision (present under both rules and principles). However, it is likely that this effect was greatest for Thinkers (T) under rules because Judging (J) types most quickly ceased perception if they were focused on potential logical consequences and believed that the bright-line rules-based

provision (present only under rules) would shield them from negative consequences if they approved the aggressive transaction.

The mean (std. dev.) for the dependent variable in the four conditions obtained by crossing PENALTY and STJ are presented in Panel D. Both STJs and non-STJs were more aggressive when potential professional penalties were high rather than low. In panel E the parameter estimate for STJ pertains to the low penalty condition, while in panel F the parameter estimate for STJ pertains to the high penalty condition (Jaccard 1998). STJ is not indicated as significant when potential professional penalties are high ($p < .1110$) or low ($p < .6422$) and STJ does not interact significantly with PENALTY ($p < .4182$). See Panels E and F. The mean response to AGGRESSIVE for STJs in the high penalty condition (32.00%) was only 1.47% higher than the mean response to AGGRESSIVE for Judging (J) types in the high penalty condition (30.53%). Thus, the differential effect of the Judging-Perceiving (JP) attitude between high potential professional penalties and low potential professional penalties does not appear to be materially enhanced if a Judging (J) type is also a Sensor (S) and a Thinker (T).

5. Study Weaknesses

The greatest weakness of this study is the small sample size, which raises concerns regarding power and external validity. Participants were only 62 volunteers from the pool of 2,016 OSCPA members in public practice. Total sample size of 62 yields only power ($1 - \beta$) of approximately 50% for a "medium" effect

size of approximately between 12.73% and 25.46%, which is considerably lower than the generally recommended power of 80% (Cohen 1988).

For the study to be of use for the intended purpose, it must be valid to generalize the study results for the 62 participants to the general accountant population. This generalization could be of questionable validity for a number of reasons.

First, the pool of potential participants may differ from the general accountant population. That is, OSCPA members in public practice may differ from the United States accountant population in general. For example, Oklahoma accountants are almost certainly more likely to practice in a rural setting than are accountants in many other states. Further, Oklahoma is located in the "Bible Belt". Religiosity has been shown to impact taxpayer compliance (Grasmick et al. 1991) and may also impact accountant aggressiveness.

Second, the 62 individuals who volunteered to help a Ph.D. student with their dissertation may differ in some respects from the other 1,954 OSCPA members in public practice. That is, self-selection bias may have occurred. Of the 5,826 OSCPA members in good standing as of January 12, 2006, 62% were male as compared to 69% of participants. For these OSCPA members, median number of years as a CPA was approximately 20 years. For the participants who indicated a practice area of tax compliance or tax planning, median professional experience was 24 years. Thus, the 62 OSCPA members who volunteered likely differ from the other 1,954 members in public practice at least to a certain degree with respect to

certain demographics. The participants may be less task-focused, which would be consistent with only 59.7% of participants being a Judging (J) type versus 71.7% of accountants generally (See Table 1). Further, participants may have an unusually high interest in general intellectual pursuits, may be more highly educated, may be more civic minded, may feel more of a duty to help their fellow citizens, etc. These are only a few of the possible differential characteristics that come to mind.

Another potential limitation of this study is that care may need to be taken when generalizing the results to non-tax accounting realms (Cuccia et al. 1995).

6. Conclusion

I examined the effect of accountants' cognitive styles and the severity of potential professional penalties under rules-based versus principles-based standards in the context of client pressure to approve of an inappropriately aggressive transaction. Cognitive style was operationalized using the MBTI. My hypotheses pertained to the expected effect of Sensing (S) versus Intuition (N) and the severity of potential professional penalties. While my hypotheses were not supported, further analysis of study results provides evidence of relations between accountants' aggressiveness, standard precision and cognitive style that are interesting and consistent with Jungian theory.

With respect to the individual elements of cognitive style, the Perceiving (SN) mental function was not significant and did not interact significantly with standard precision (rules-based versus principles-based standards, or rules versus

principles). The Judging (TF) mental function interacted marginally significantly with standard precision and was significant under rules but not significant under principles, with Thinkers (T) under rules exhibiting greater aggressiveness (21.5% mean chance of approving an inappropriately aggressive transaction versus 9.00%, 12.73% and 13.64%). This differential effect of the Judging (TF) mental function may be enhanced if the Thinker (T) is also a Sensor (S) and a Judging (J) type (STJ) (29% mean chance of approving an inappropriately aggressive transaction for STJs versus 21.5% chance of doing so for Thinkers [T]).

While 40.2% of the general U.S. population are Thinkers (T), 70.5% of accounting professionals are Thinkers (T). While 20.3% of the general U.S. population are STJs, 39.1% of accounting professionals are STJs and the STJ cognitive style combination is the most prevalent cognitive style combination for accounting professionals. Thus, this study provides evidence that the cognitive style preferences materially more prevalent among accounting professionals than the general U.S. population may lead to more willingness to approve an inappropriately aggressive transaction under rules but not under principles.

Surprisingly, under both rules-based and principles-based standards, significantly greater aggressiveness was indicated when potential professional penalties were high (three times the fee obtained for the opinion) rather than low ($250). Thus, this study provides evidence that increasing the monetary amount of potential professional penalties may not lower, and may even heighten, the

willingness of accountants to approve an aggressive transaction under either rules or principles.

These results may be of interest to policymakers who aim to promulgate standards that result in consistent and not overly aggressive application by accountants. Further, because with awareness and training one can become quite competent at using their non-preferred cognitive styles and can learn to bring their non-preferred cognitive styles to bear in appropriate circumstances (Myers and Myers 1995; Myers et al. 2003), these results may be of interest to accounting educators (Kovar et al. 2003).

Table 1

Mental Functions and Attitudes of Study Participants, Accountants and the General U.S. Population (percentages)

	I (E)	**S** (N)	**T** (F)	**J** (P)	**STJ**
% Study Participants	**50.0** (50.0)	**61.3** (38.7)	**64.5** (35.5)	**59.7** (40.3)	**30.6**
Mean % Accounting Professional Studies (Kovar et al. 2003)	**51.9** (48.1)	**66.6** (33.4)	**70.5** (29.6)	**71.7** (28.3)	**39.1**
Mean % General U.S. Population[32] (Myers et al. 2003)	**50.7** (49.3)	**73.3** (26.7)	**40.2** (59.8)	**54.1** (45.9)	**20.3**

[32] Mean % General U.S. Population differs materially by gender for Thinking (T) versus Feeling (F) and STJ versus non-STJ. Mean % General U.S. Population by gender is presented below (Myers et al. 2003).

	I	S	T	J	STJ
% Males	54.1	71.7	56.5	52.0	27.6
% Females	47.5	74.9	24.5	56.2	13.2

Table 2

Participant Demographics

Panel A: Position

Position	n
Tax Compliance	29
Audit	15
Other	9
Tax Planning	7
Not Indicated	2

Panel B: Years of accounting experience

Experience	Mean	(Std. Dev.)
Tax	16.7	(12.2)
Audit	9.3	(11.2)
Other Accounting	9.5	(12.9)

Panel C: Highest degree completed

Degree	n
Bachelors Accountancy	22
Masters Accountancy	10
Not Indicated	9
Bachelors Other	8
Bachelors Business	6
Masters Tax	3
Masters Business Admin	2
Masters Other	2

Panel D: Gender

Gender	n
Male	42
Female	19
Not Indicated	1

Table 3

Dependent, Independent and Control Variables

Panel A: Mean (std. dev.) for dependent variable, continuous independent variables and control variables

Variable	Mean	Std. Dev.
Dependent variable:		
AGGRESSIVE (0 to 100 scale)	14.52	(25.46)
Independent variables:		
SN (-30 to 30 scale)	-7.35	(15.78)
TF (-30 to 30 scale)	-6.87	(14.31)
JP (-30 to 30 scale)	-8.65	(16.29)
Control variables:		
RISK (0 to 20 scale)	6.54	(4.10)
ADVOCACY (0 to 20 scale)	12.48	(5.21)
AUDIT (0 to 100 scale)	94.26	(13.11)

Panel B: Correlations of the dependent variable, independent variables and control variables

Pearson Correlation Coefficients, N = 62
Prob > | r | H_o : Rho = 0

	AGGR	RvP	PEN	SN	TF	JP	STJ	AUD	RISK	ADV
AGGR	1.000	0.166 0.197	0.300 0.018	-.009 0.942	-0.034 0.796	-0.234 0.067	0.131 0.312	-0.140 0.278	0.026 0.843	-0.044 0.735
RvP		1.000	0.129 0.317	0.008 0.949	0.043 0.739	0.000 1.000	0.035 0.787	-0.154 0.233	0.065 0.614	-0.037 0.773
PEN			1.000	0.069 0.592	0.157 0.222	0.027 0.837	0.056 0.663	0.040 0.756	0.233 0.068	0.015 0.905
SN				1.000	0.329 0.009	0.190 0.140	-0.631 <.001	-0.090 0.488	0.461 <.001	0.126 0.330
TF					1.000	0.415 0.001	-0.531 <.001	-0.155 0.230	0.005 0.971	0.050 0.698
JP						1.000	-0.491 <.001	0.037 0.777	0.181 0.159	-0.017 0.893
STJ							1.000	0.159 0.217	-0.183 0.154	0.087 0.504
AUD								1.000	0.011 0.935	0.204 0.112
RISK									1.000	0.290 0.022
ADV										1.000

Panel C: Mean (std. dev.) for AGGRESSIVE by study condition

	Low penalty	High penalty
Principles	5.00 (15.43) n = 18	17.69 (28.03) n = 13
Rules	10.00 (18.81) n = 14	25.88 (32.80) n = 17

Panel D: Ancova-PENALTY parameter estimate pertains to rules condition (Jaccard 1998)

AGGRESSIVE = b_0 + b_1 RvP + b_2 PENALTY + b_3 RvP*PENALTY + b_4 AUDIT + e

Source	Est. unstd. b	Std. Error	t value	Pr > t
Intercept	b_0= 5.4657	2.8577	1.91	.0608
RvP	b_1 = -1.0192	1.0862	-0.94	.3520
PENALTY	b_2 = 1.6567	1.0938	1.51	.1354
RvP*PENALTY	b_3 = 0.3222	1.5522	0.21	.8363
AUDIT	b_4 = -0.0388	0.0230	-1.30	.2002
R^2 = 0.142688				
Source	**DF**	**Mean Square**	**F value**	**Pr > F**
Model	4	21.7493	2.37	.0630
Error	57	9.1702		
Corrected Total	61			

Panel E: Ancova-PENALTY parameter estimate pertains to principles condition (Jaccard 1998)

$AGGRESSIVE = b_0 + b_1\ RvP + b_2\ PENALTY + b_3\ RvP*PENALTY + b_4\ AUDIT + e$

Source	**Est. unstd. b**	**Std. Error**	**t value**	**Pr > t**
Intercept	$b_0 = 4.4465$	2.9520	1.51	.1375
RvP	$b_1 = 1.0192$	1.0862	0.94	.3520
PENALTY	$b_2 = 1.9789$	1.1033	1.79	.0782
RvP*PENALTY	$b_3 = -0.3222$	1.5522	-0.21	.8363
AUDIT	$b_4 = -0.0388$	0.0300	-1.30	.2002
$R^2 = 0.142688$				
Source	**DF**	**Mean Square**	**F value**	**Pr > F**
Model	4	21.7493	2.37	.0630
Error	57	9.1702		
Corrected Total	61			

AGGRESSIVE = participants' assessed likelihood of whether they would approve an aggressive transaction (measured using an 11-point (0% to 100%) Likert scale), transformed by square root transformation for Ancovas

RvP = manipulated condition rules-based standards versus principles-based standards

PENALTY = manipulated condition low ($250) versus high (three times the fee obtained for the opinion) potential professional penalty

AUDIT = participants' assessed % likelihood of audit if the client engaged in the proposed aggressive transaction

Table 4

Hypotheses Tests

Panel A: Ancova-SN parameter estimate pertains to rules condition (Jaccard and Turrisi 2003)

AGGRESSIVE = b_0 + b_1 RvP + b_2 SN + b_3 TF + b_4 PENALTY + b_5 RvP*SN + b_6 RvP*PENALTY + b_7 SN*PENALTY + b_8 TF*PENALTY + b_9 AUDIT + e

Source	Est. unstd. b	Std. Error	t value	Pr > t
Intercept	b_0 = 5.7160	2.9251	1.95	.0561
RvP	b_1 = -1.0847	1.1260	-0.96	.3399
SN	b_2 = 0.0044	0.0491	0.09	.9282
TF	b_3 = -0.0321	0.0451	-0.71	.4799
PENALTY	b_4 = 2.0200	1.1521	1.75	.0854
RvP*SN	b_5 = 0.0460	0.0518	0.89	.3791
RvP*PENALTY	b_6 = 0.1043	1.6072	0.06	.9485
SN*PENALTY	b_7 = -0.0642	0.0551	-1.16	.2496
TF*PENALTY	b_8 = 0.0058	0.0601	0.10	.9236
AUDIT	b_9 = -0.0422	0.0309	-1.37	.1773
R^2 = 0.196997				
Source	**DF**	**Mean Square**	**F value**	**Pr > F**
Model	9	13.3455	1.42	.2050
Error	52	9.4153		
Corrected Total	61			

Panel B: Ancova-SN parameter estimate pertains to principles condition (Jaccard and Turrisi 2003)

$AGGRESSIVE = b_0 + b_1\ RvP + b_2\ SN + b_3\ TF + b_4\ PENALTY + b_5\ RvP*SN + b_6\ RvP*PENALTY + b_7\ SN*PENALTY + b_8\ TF*PENALTY + b_9\ AUDIT + e$

Source	Est. unstd. b	Std. Error	t value	Pr > t
Intercept	$b_0 = 4.6313$	3.0306	1.53	.1325
RvP	$b_1 = 1.0847$	1.1260	0.96	.3399
SN	$b_2 = 0.0504$	0.0429	1.18	.2450
TF	$b_3 = -0.0321$	0.0451	-0.71	.4799
PENALTY	$b_4 = 2.1243$	1.1346	1.87	.0668
RvP*SN	$b_5 = -0.0460$	0.0518	-0.89	.3791
RvP*PENALTY	$b_6 = -0.1043$	1.6072	-0.06	.9485
SN*PENALTY	$b_7 = -0.0642$	0.0551	-1.16	.2496
TF*PENALTY	$b_8 = 0.0058$	0.0601	0.10	.9236
AUDIT	$b_9 = -0.0422$	0.0309	-1.37	.1773
$R^2 = 0.196997$				
Source	**DF**	**Mean Square**	**F value**	**Pr > F**
Model	9	13.3455	1.42	.2050
Error	52	9.4153		
Corrected Total	61			

AGGRESSIVE = participants' assessed likelihood of whether they would approve an aggressive transaction (measured using an 11-point (0% to 100%) Likert scale), transformed by square root transformation for Ancovas

RvP = manipulated condition rules-based standards versus principles-based standards

SN = participants' Perceiving (SN) mental function preference measured using the MBTI (range from -30 for Sensing (S) to +30 for Intuition (N))

TF = participants' Judging (TF) mental function preference measured using the MBTI (range from -30 for Thinking (T) to +30 for Feeling (F))

PENALTY = manipulated condition low ($250) versus high (three times the fee obtained for the opinion) potential professional penalty

AUDIT = participants' assessed % likelihood of audit if the client engaged in the proposed aggressive transaction

Table 5

Effect of Sensing (S) versus Intuitive (N) Perceiving Mental Function on Aggressiveness

Panel A: Mean (std. dev.) for AGGRESSIVE, RvP by SN

	Sensing (S)	**Intuitive (N)**
Principles	8.95 (23.55) n = 19	12.50 (20.50) n = 12
Rules	15.79 (26.94) n = 19	23.33 (30.55) n = 12

Panel B: Ancova-SN parameter estimate pertains to rules condition (Jaccard and Turrisi 2003)

$AGGRESSIVE = b_0 + b_1\,SN + b_2\,RvP + b_3\,SN*RvP + b_4\,PENALTY + b_5\,AUDIT + e$

Parameter	**Est. unstd. b**	**Std. Error**	**t value**	**Pr > t**
Intercept	$b_0 = 5.3802$	2.8274	1.90	.0622
SN	$b_1 = -0.0377$	0.0352	-1.07	.2895
RvP	$b_2 = -0.8381$	0.7838	-1.07	.2896
SN*RvP	$b_3 = 0.0551$	0.0499	1.11	.2736
PENALTY	$b_4 = 2.0004$	0.7909	2.53	.0143
AUDIT	$b_5 = -0.0399$	0.0300	-1.33	.1891
$R^2 = .162711$				
Source	**DF**	**Mean Square**	**F value**	**Pr > F**
Model	5	19.8412	2.18	.0696
Error	56	9.1160		
Corrected Total	61			

Panel C: Ancova-SN parameter estimate pertains to principles condition (Jaccard and Turrisi 2003)

$AGGRESSIVE = b_0 + b_1\,SN + b_2\,RvP + b_3\,SN*RvP + b_4\,PENALTY + b_5\,AUDIT + e$

Parameter	**Est. unstd. b**	**Std. Error**	**t value**	**Pr > t**
Intercept	$b_0 = 4.5421$	2.9368	1.55	.1276
SN	$b_1 = 0.0175$	0.0349	0.50	.6189
RvP	$b_2 = 0.8381$	0.7838	1.07	.2896
SN*RvP	$b_3 = -0.0551$	0.0499	-1.11	.2736
PENALTY	$b_4 = 2.0004$	0.7909	2.53	.0143
AUDIT	$b_5 = -0.0399$	0.0300	-1.33	.1891
$R^2 = .162711$				
Source	**DF**	**Mean Square**	**F value**	**Pr > F**
Model	5	19.8412	2.18	.0696
Error	56	9.1160		
Corrected Total	61			

Panel D: Mean (std. dev.) for AGGRESSIVE, PENALTY by SN

	Sensing (S)	Intuitive (N)
High Penalty	23.33 (33.25) n = 18	20.83 (27.46) n = 12
Low Penalty	2.50 (5.50) n = 20	15.00 (25.41) n = 12

Panel E: Ancova-SN parameter estimate pertains to low penalty condition (Jaccard and Turrisi 2003)

AGGRESSIVE = b_0 + b_1 SN + b_2 PENALTY + b_3 SN*PENALTY + b_4 AUDIT + e

Parameter	Est. unstd. b	Std. Error	t value	Pr > t
Intercept	b_0 = 5.4443	2.8340	1.92	.0597
SN	b_1 = 0.0130	0.0332	0.39	.6957
PENALTY	b_2 = 1.9643	0.7721	2.54	.0137
SN*PENALTY	b_3 = -0.0523	0.0496	-1.06	.2958
AUDIT	b_4 = -0.0446	0.0297	-1.50	.1390
R^2 = .143218				
Source	**DF**	**Mean Square**	**F value**	**Pr > F**
Model	4	21.8301	2.38	.0621
Error	57	9.1645		
Corrected Total	61			

Panel F: Ancova-SN parameter estimate pertains to high penalty condition (Jaccard and Turrisi 2003)

AGGRESSIVE = b_0 + b_1 SN + b_2 PENALTY + b_3 SN*PENALTY + b_4 AUDIT + e

Parameter	**Est. unstd. b**	**Std. Error**	**t value**	**Pr > t**
Intercept	b_0 = 7.4086	2.8727	2.58	.0125
SN	b_1 = -0.0393	0.0370	-1.06	.2925
PENALTY	b_2 = -1.9643	0.7721	-2.54	.0137
SN*PENALTY	b_3 = 0.0523	0.0496	1.06	.2958
AUDIT	b_4 = -0.0446	0.0297	-1.50	.1390
R^2 = .143218				
Source	**DF**	**Mean Square**	**F value**	**Pr > F**
Model	4	21.8301	2.38	.0621
Error	57	9.1645		
Corrected Total	61			

AGGRESSIVE = participants' assessed likelihood of whether they would approve an aggressive transaction (measured using an 11-point (0% to 100%) Likert scale), transformed by square root transformation for Ancovas

SN = participants' Perceiving (SN) mental function preference measured using the MBTI (range from -30 for Sensing (S) to +30 for Intuition (N))

RvP = manipulated condition rules-based standards versus principles-based standards

PENALTY = manipulated condition low ($250) versus high (three times the fee obtained for the opinion) potential professional penalty

AUDIT = participants' assessed % likelihood of audit if the client engaged in the proposed aggressive transaction

Table 6

Effect of Thinking (T) versus Feeling (F) Judging Mental Function on Aggressiveness

Panel A: Mean (std. dev.) for AGGRESSIVE, RvP by TF

	Thinking (T)	**Feeling (F)**
Principles	9.00 (20.49) n = 20	12.73 (25.73) n = 11
Rules	21.50 (29.07) n = 20	13.64 (26.93) n = 11

Panel B: Ancova-TF parameter estimate pertains to rules condition (Jaccard and Turrisi 2003)

AGGRESSIVE = b_0 + b_1 TF + b_2 RvP + b_3 TF*RvP + b_4 PENALTY + b_5 AUDIT + e

Parameter	**Est. unstd. b**	**Std. Error**	**t value**	**Pr > t**
Intercept	b_0 = 6.5828	2.8096	2.34	.0227
TF	b_1 = -0.0855	0.0419	-2.04	.0460
RvP	b_2 = -0.8220	0.7642	-1.08	.2868
TF*RvP	b_3 = 0.0998	0.0542	1.84	.0705
PENALTY	b_4 = 2.0471	0.7685	2.66	.0101
AUDIT	b_5 = -0.0527	0.0299	-1.76	.0839
R^2 = .204009				
Source	**DF**	**Mean Square**	**F value**	**Pr > F**
Model	5	24.8770	2.87	.0224
Error	56	8.6664		
Corrected Total	61			

Panel C: Ancova-TF parameter estimate pertains to principles condition (Jaccard and Turrisi 2003)

AGGRESSIVE = b_0 + b_1 TF + b_2 RvP + b_3 TF*RvP + b_4 PENALTY + b_5 AUDIT + e

Parameter	**Est. unstd. b**	**Std. Error**	**t value**	**Pr > t**
Intercept	b_0 = 5.7609	2.9175	1.97	.0533
TF	b_1 = 0.0143	0.0350	0.41	.6832
RvP	b_2 = 0.8220	0.7642	1.08	.2868
TF*RvP	b_3 = -0.0998	0.0542	-1.84	.0705
PENALTY	b_4 = 2.0471	0.7685	2.66	.0101
AUDIT	b_5 = -0.0527	0.0299	-1.76	.0839
R^2 = .204009				
Source	**DF**	**Mean Square**	**F value**	**Pr > F**
Model	5	24.8770	2.87	.0224
Error	56	8.6664		
Corrected Total	61			

Panel D: Mean (std. dev.) for AGGRESSIVE, PENALTY by TF

	Thinking (T)	Feeling (F)
High Penalty	22.22 (30.59) n = 18	22.50 (31.94) n = 12
Low Penalty	9.55 (19.63) n = 22	2.00 (6.32) n = 10

Panel E: Ancova-TF parameter estimate pertains to low penalty condition (Jaccard and Turrisi 2003)

AGGRESSIVE = b_0 + b_1 TF+ b_2 PENALTY + b_3 TF*PENALTY + b_4 AUDIT + e

Parameter	Est. unstd. b	Std. Error	t value	Pr > t
Intercept	b_0 = 5.7559	2.8616	2.01	.0490
TF	b_1 = -0.0216	0.0403	-0.54	.5940
PENALTY	b_2 = 2.0564	0.7831	2.63	.0111
TF*PENALTY	b_3 = -0.0095	0.0551	-0.17	.8643
AUDIT	b_4 = -0.0486	0.0301	-1.61	.1123
R^2 = .138073				
Source	**DF**	**Mean Square**	**F value**	**Pr > F**
Model	4	21.0458	2.28	.0715
Error	57	9.2196		
Corrected Total	61			

Panel F: Ancova-TF parameter estimate pertains to high penalty condition (Jaccard and Turrisi 2003)

AGGRESSIVE = b_0 + b_1 TF+ b_2 PENALTY + b_3 TF*PENALTY + b_4 AUDIT + e

Parameter	Est. unstd. b	Std. Error	t value	Pr > t
Intercept	b_0 = 7.8123	2.9160	2.68	.0096
TF	b_1 = -0.0311	0.0382	-0.81	.4191
PENALTY	b_2 = -2.0564	0.7831	-2.63	.0111
TF*PENALTY	b_3 = 0.0095	0.0551	0.17	.8643
AUDIT	b_4 = -0.0486	0.0301	-1.61	.1123
R^2 = .138073				
Source	**DF**	**Mean Square**	**F value**	**Pr > F**
Model	4	21.0458	2.28	.0715
Error	57	9.2196		
Corrected Total	61			

AGGRESSIVE = participants' assessed likelihood of whether they would approve an aggressive transaction (measured using an 11-point (0% to 100%) Likert scale), transformed by square root transformation for Ancovas

TF = participants' Judging (TF) mental function preference measured using the MBTI (range from -30 for Thinking (T) to +30 for Feeling (F))

RvP = manipulated condition rules-based standards versus principles-based standards

PENALTY = manipulated condition low ($250) versus high (three times the fee obtained for the opinion) potential professional penalty

AUDIT = participants' assessed % likelihood of audit if the client engaged in the proposed aggressive transaction

Table 7

Effect of Judging (J) versus Perceiving (P) Attitude or Orientation Toward the Outer World on Aggressiveness

Panel A: Mean (std. dev.) for AGGRESSIVE, RvP by JP

	Judging (J)	**Perceiving (P)**
Principles	15.26 (26.95) n = 19	2.50 (6.22) n = 12
Rules	23.89 (31.09) n = 18	11.54 (22.67) n = 13

Panel B: Ancova-JP parameter estimate pertains to rules condition (Jaccard and Turrisi 2003)

AGGRESSIVE = b_0 + b_1 JP + b_2 RvP + b_3 JP*RvP + b_4 PENALTY + b_5 AUDIT + e

Parameter	**Est. unstd. b**	**Std. Error**	**t value**	**Pr > t**
Intercept	b_0 = 5.1564	2.7854	1.85	.0694
JP	b_1 = -0.0467	0.0326	-1.43	.1575
RvP	b_2 = -0.8676	0.7735	-1.12	.2668
JP*RvP	b_3 = 0.0160	0.0470	0.34	.7346
PENALTY	b_4 = 1.8524	0.7657	2.42	.0188
AUDIT	b_5 = -0.0367	0.0295	-1.24	.2200
R^2 = .183996				
Source	**DF**	**Mean Square**	**F value**	**Pr > F**
Model	5	22.4365	2.53	.0394
Error	56	8.8843		
Corrected Total	61			

Panel C: Ancova-JP parameter estimate pertains to principles condition (Jaccard and Turrisi 2003)

$AGGRESSIVE = b_0 + b_1\,JP + b_2\,RvP + b_3\,JP*RvP + b_4\,PENALTY + b_5\,AUDIT + e$

Parameter	**Est. unstd. b**	**Std. Error**	**t value**	**Pr > t**
Intercept	$b_0 = 4.2888$	2.8933	1.48	.1439
JP	$b_1 = -0.0307$	0.0338	-0.91	.3672
RvP	$b_2 = 0.8676$	0.7735	1.12	.2668
JP*RvP	$b_3 = -0.0160$	0.0470	-0.34	.7346
PENALTY	$b_4 = 1.8524$	0.7657	2.42	.0188
AUDIT	$b_5 = -0.0367$	0.0295	-1.24	.2200
$R^2 = .183996$				
Source	**DF**	**Mean Square**	**F value**	**Pr > F**
Model	5	22.4365	2.53	.0394
Error	56	8.8843		
Corrected Total	61			

Panel D: Mean (std. dev.) for AGGRESSIVE, PENALTY by JP

	Judging (J)	Perceiving (P)
High Penalty	30.53 (34.40) n = 19	8.18 (15.37) n = 11
Low Penalty	7.78 (15.55) n = 18	6.43 (19.06) n = 14

Panel E: Ancova-JP parameter estimate pertains to low penalty condition (Jaccard and Turrisi 2003)

AGGRESSIVE = b_0 + b_1 JP + b_2 PENALTY + b_3 JP*PENALTY + b_4 AUDIT + e

Parameter	Est. unstd. b	Std. Error	t value	Pr > t
Intercept	b_0 = 5.9111	2.7042	2.19	.0329
JP	b_1 = 0.0038	0.0301	0.13	.8998
PENALTY	b_2 = 1.9802	0.7316	2.71	.0089
JP*PENALTY	b_3 = -0.0992	0.0460	-2.16	.0353
AUDIT	b_4 = -0.0497	0.0283	-1.75	.0846
R^2 = .227058				
Source	**DF**	**Mean Square**	**F value**	**Pr > F**
Model	4	34.6095	4.19	.0048
Error	57	8.2678		
Corrected Total	61			

Panel F: Ancova-JP parameter estimate pertains to high penalty condition (Jaccard and Turrisi 2003)

AGGRESSIVE = b_0 + b_1 JP + b_2 PENALTY + b_3 JP*PENALTY + b_4 AUDIT + e

Parameter	Est. unstd. b	Std. Error	t value	Pr > t
Intercept	b_0 = 7.8913	2.7363	2.88	.0055
JP	b_1 = -0.0954	0.0346	-2.76	.0078
PENALTY	b_2 = -1.9802	0.7316	-2.71	.0089
JP*PENALTY	b_3 = 0.0992	0.0460	2.16	.0353
AUDIT	b_4 = -0.0497	0.0283	-1.75	.0846
R^2 = .227058				
Source	**DF**	**Mean Square**	**F value**	**Pr > F**
Model	4	34.6095	4.19	.0048
Error	57	8.2678		
Corrected Total	61			

AGGRESSIVE = participants' assessed likelihood of whether they would approve an aggressive transaction (measured using an 11-point (0% to 100%) Likert scale), transformed by square root transformation for Ancovas

JP = participants' Judging-Perceiving (JP) attitude preference measured using the MBTI (range from -30 for Judging (J) to +30 for Perception (P))

RvP = manipulated condition rules-based standards versus principles-based standards

PENALTY = manipulated condition low ($250) versus high (three times the fee obtained for the opinion) potential professional penalty

AUDIT = participants' assessed % likelihood of audit if the client engaged in the proposed aggressive transaction

Table 8

Effect of Sensing-Thinking-Judging (STJ) on Aggressiveness

Panel A: Mean (std. dev.) for AGGRESSIVE, RvP by STJ

	STJ	Not STJ
Principles	8.89 (23.15) n = 9	10.91 (22.23) n = 22
Rules	29.00 (32.13) n = 10	13.81 (25.39) n = 21

Panel B: Ancova-STJ parameter estimate pertains to rules condition (Jaccard 1998)

AGGRESSIVE = b_0 + b_1 STJ + b_2 RvP + b_3 STJ*RvP + b_4 PENALTY + b_5 AUDIT + e

Parameter	Est. unstd. b	Std. Error	t value	Pr > t
Intercept	b_0 = 5.5493	2.6955	2.06	.0442
STJ	b_1 = 2.9181	1.1275	2.59	.0123
RvP	b_2 = 0.3341	0.9093	0.37	.7147
STJ* RvP	b_3 = -3.5481	1.6086	-2.21	.0315
PENALTY	b_4 = 1.9806	0.7466	2.65	.0104
AUDIT	b_5 = -0.0519	0.0290	-1.79	.0795
R^2 = .237440				
Source	**DF**	**Mean Square**	**F value**	**Pr > F**
Model	5	28.9536	3.49	.0082
Error	56	8.3024		
Corrected Total	61			

Panel C: Ancova-STJ parameter estimate pertains to principles condition (Jaccard 1998)

AGGRESSIVE = b_0 + b_1 STJ + b_2 RvP + b_3 STJ*RvP + b_4 PENALTY + b_5 AUDIT + e

Parameter	Est. unstd. b	Std. Error	t value	Pr > t
Intercept	b_0 = 5.8834	2.8406	2.07	.0430
STJ	b_1 = -0.6300	1.1503	-0.55	.5861
RvP	b_2 = -0.3341	0.9093	-0.37	.7147
STJ* RvP	b_3 = 3.5481	1.6086	2.21	.0315
PENALTY	b_4 = 1.9806	0.7466	2.65	.0104
AUDIT	b_5 = -0.0519	0.0290	-1.79	.0795
R^2 = .237440				
Source	**DF**	**Mean Square**	**F value**	**Pr > F**
Model	5	28.9536	3.49	.0082
Error	56	8.3024		
Corrected Total	61			

Panel D: Mean (std. dev.) for AGGRESSIVE, PENALTY by STJ

	STJ	Not STJ
High Penalty	32.00 (36.15) n = 10	17.50 (27.12) n = 20
Low Penalty	5.56 (7.26) n = 9	7.83 (19.53) n = 23

Panel E: Ancova-STJ parameter estimate pertains to low penalty condition (Jaccard 1998)

AGGRESSIVE = b_0 + b_1 STJ + b_2 PENALTY + b_3 STJ*PENALTY + b_4 AUDIT + e

Parameter	Est. unstd. b	Std. Error	t value	Pr > t
Intercept	b_0 = 6.0249	2.8266	2.13	.0374
STJ	b_1 = 0.5500	1.1772	0.47	.6422
PENALTY	b_2 = 1.4644	0.9137	1.60	.1145
STJ*PENALTY	b_3 = 1.3480	1.6530	0.82	.4182
AUDIT	b_4 = -0.0526	0.0296	-1.77	.0814
R^2 = .165244				
Source	**DF**	**Mean Square**	**F value**	**Pr > F**
Model	4	25.1874	2.82	.0332
Error	57	8.9290		
Corrected Total	61			

Panel F: Ancova-STJ parameter estimate pertains to high penalty condition (Jaccard 1998)

AGGRESSIVE = b_0 + b_1 STJ + b_2 PENALTY + b_3 STJ*PENALTY + b_4 AUDIT + e

Parameter	Est. unstd. b	Std. Error	t value	Pr > t
Intercept	b_0 = 7.4892	2.8269	2.65	.0104
STJ	b_1 = 1.8980	1.1723	1.62	.1110
PENALTY	b_2 = -1.4644	0.9137	-1.60	.1145
STJ*PENALTY	b_3 = -1.3480	1.6530	-0.82	.4182
AUDIT	b_4 = -0.0526	0.0296	-1.77	.0814
R^2 = .165244				
Source	**DF**	**Mean Square**	**F value**	**Pr > F**
Model	4	25.1874	2.82	.0332
Error	57	8.9290		
Corrected Total	61			

AGGRESSIVE = participants' assessed likelihood of whether they would approve an aggressive transaction (measured using an 11-point (0% to 100%) Likert scale), transformed by square root transformation for Ancovas

STJ = whether participants indicated as Sensing (S)-Thinking (T)-Judging (J) per the MBTI (dichotomous)

RvP = manipulated condition rules-based standards versus principles-based standards

PENALTY = manipulated condition low ($250) versus high (three times the fee obtained for the opinion) potential professional penalty

AUDIT = participants' assessed % likelihood of audit if the client engaged in the proposed aggressive transaction

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Appendix A

Study Instrument and Questionnaire

Please read the following:

This scenario is hypothetical and pertains to a mythical state. The "state statutes" are mythical and are not known to be substantially similar to those of any actual state.

Assume you practice as the sole owner of an accounting firm specializing in providing tax advice. You have been consulted by the CFO of Healthco. Healthco provides group health insurance coverage for corporate client employees. Healthco has been a client of your firm for approximately five years and revenues from Healthco average approximately 2% of your firm's annual revenues.

Healthco operates only in your state (hereafter "State"), which has no state corporate income tax. State does, however, impose a "gross premiums" tax equal to 10% of "gross premiums" received in a particular year by corporations such as Healthco that meet the statutory definition of an "insurance company".

The market is very competitive for Healthco. CFO wants your advice regarding a plan he has devised to allow Healthco to reduce the cost of its employee group health insurance policy to employers by reducing gross premiums "received" and hence gross premiums tax.

Currently, Healthco offers only a "standard" group health insurance policy, under which employers pay monthly health insurance premiums on behalf of their benefited employees, who are the actual insured parties. In return for the monthly premiums, Healthco assumes the entire obligation to provide health insurance coverage to the benefited employees.

CFO's plan, the "Mini-Health" policy, is designed to reduce the gross premiums tax by reducing the amount of gross premiums employers "pay" to Healthco on behalf of employees each month. Healthco would remain responsible for processing and then approving or rejecting all employee claims for benefits and negotiating or litigating any related disputes, but employers would assume the obligation to "pay" all employee claim payments each month until the aggregate employee claim payments for that month equal or exceed 80% of the actuarially predicted monthly average of aggregate employee claim payments (the "trigger amount"). Healthco would be obligated to "pay" all employee claim payments each month once aggregate employee claim payments exceed the trigger amount.

Employers would be required to deposit funds equal to the trigger amount into a bank account in their name but accessible only to Healthco on the first of each month. Healthco would have unfettered use of these deposited funds from the time of deposit by the employers until disbursement of the funds to satisfy employee claims. Healthco would retain all earnings on the deposited funds as an additional administrative fee.

Except for the above-described differences, the Mini-Health policy would not materially differ from the standard policy.

Under the standard policy, the expected level of aggregate employee claim payments has equaled approximately 80% of gross premiums, loading (other than gross premiums tax) has equaled approximately 10% of gross premiums, and gross premiums tax has equaled approximately 10% of gross premiums. (Loading typically includes a charge for assuming the risk that aggregate employee claim payments will exceed the expected level, the administrative costs, the gross premiums tax and the cost of capital.)

CFO has estimated that total employer outlay under the Mini-Health policy would equal 92.6% of standard policy premiums, resulting in a 7.4% (100% - 92.6%) reduction in employers' total outlay, and there would be no other material tax effect on the employers, their employees or Healthco. (Under either the standard policy or the Mini-Health policy, employers' benefited employees, the actual insured parties, would not be subject to taxation. Under either policy, employers would receive a deduction for federal income tax purposes equal to their total outlay. State has no state corporate income tax. Employers would not be subject to the State gross premiums tax with respect to the Mini-Health policy because they do not meet the statutory definition of an "insurance company". There would be no material effect on Healthco's federal income tax.)

CFO's calculations of employers' total outlay under the Mini-Health policy:

	Standard	**Mini-Health**
	As % of Standard policy premium	As % of Standard policy premium
Gross Premium:		
Employee claim payments paid by Healthco	80%	20% of Standard = 20% * 80% = 16%
Loading (other than gross premuims tax)	10%	100% of Standard = 100% * 10% = 10%
Gross premiums tax	10%	10% tax rate * (employee claim payments paid by Helathco + loading) = 10% *(16% + 10%) = 2.6%
Gross Premium	80% + 10% + 10% = 100%	16% + 10% + 2.6% = 28.6%
Total Employer Outlay:		
Employee claim payments paid by employer	0%	80% (100% less 20% paid by Healthco) *80% = 64%
Total Employer Outlay	Gross premium + employee claim pyaments paid by employer = 100% + 0% = 100%	Gross premium + employee claim payments paid by employer = 28.6% + 64% = 92.6%

Relevant State statutes:

State Code § 1001 – Tax on Gross Premiums Received by Insurance Companies
There is hereby imposed a tax on insurance companies in the amount of 10% of the gross premiums received from State residents during a given year.

State Code § 1002 -- Definition of Gross Premiums Received by Insurance Companies
(1) In general. —Gross premiums received by insurance companies represent the entire consideration paid by (or on behalf of) an insured for insurance coverage. This generally includes the total cost of the insurance coverage provided to the insured.

[section (2) provided only to participants in rules standards condition]

(2) Items included in employee group health insurance premiums. —Gross premiums received by an insurance company with respect to an employee group health insurance policy include (but are not limited to) —

(A) If an employer self insures with respect to a portion of its group health insurance obligation to employees, but the insurance company is obligated to pay all employee claim payments each period once aggregate employee claim payments exceed a trigger amount that is less than 75% of the actuarially predicted average aggregate employee claim payments for that period, then "gross premiums received" by the insurance company shall include the sum of: (1) 100% of the actuarially predicted average aggregate employee claim payments, and (2) loading (including a charge for assuming the risk that aggregate employee claim payments will exceed the expected level, administrative costs, the gross premiums tax and the cost of capital).

Relevant potential State penalties:
Healthco's gross premiums tax returns have been audited by the State tax agency every year for the past 20 years and Healthco expects them to be audited by the State tax agency every year for the foreseeable future.

If the State tax agency disallows Healthco's tax treatment of the CFO plan (that is, the State tax agency contends that the amount of pre-trigger employee claims "paid" by employers should be included in gross premiums "received" by Healthco) and prevails, the Accuracy-related penalty of State Code § 101 equal to 20% of the resultant additional tax owing would apply unless Healthco can establish "reasonable cause" and "good faith" with respect to the CFO plan.

To establish "reasonable cause" and "good faith", Healthco can point to reliance on the written opinion of a tax professional stating that there is at least a 50-percent likelihood that the CFO plan will be upheld by a court if challenged by the State tax agency. State Reg. § 1.101-1. Healthco wishes for you to provide such a written opinion and offers to pay you a fee for doing so equal to three times the total fees you have earned each year for providing advice to Healthco (that is, the fee would equal approximately 6% of your firm's annual revenues).

State Code § 102 provides that a tax professional who provides such a written opinion when a reasonable tax professional would conclude that the likelihood that the taxpayer's tax treatment will be upheld by a court if challenged by the State tax agency is NOT at least 50 percent shall pay a penalty in the amount of three times the fee obtained for such opinion [$250 for participants in "low" penalty condition].

State Code § 102 further provides that "said penalty must be paid from the personal assets of the tax professional and may not be reimbursed directly or indirectly by an insurance company or any other party".

Please answer the following question:

Given the information provided, please indicate how likely it is that pursuant to Healthco's request you would provide a written opinion stating that if the State tax agency disallows Healthco's tax treatment of the CFO plan (that is, the State tax agency contends that the amount of pre-trigger employee claims "paid" by employers should be included in gross premiums "received" by Healthco) there is at least a 50-percent likelihood that Healthco's tax treatment of the CFO plan will be upheld by a court.

Indicate the degree of likelihood of providing a written opinion by making a selection on the scale below.

please choose one

Now I will ask you some questions to better understand your decision about Healthco.

1. What is the amount of the State Code § 102 penalty potentially applicable to tax professionals who provide an improper written opinion?

   select one

   2. a. Did the relevant State statutes include the following provision?

   Gross premiums received by insurance companies represent the entire consideration paid by (or on behalf of) an insured for insurance coverage. This generally includes the total cost of the insurance coverage provided to
   the insured.

   select one

   b. If yes, do you agree that the CFO plan complied with the provision?

   select one

3. a. Did the relevant State statutes include the following provision?

Items included in employee group health insurance premiums. —Gross premiums received by an insurance company with respect to an employee group health insurance policy include (but are not limited to) —

(A) If an employer self insures with respect to a portion of its group health insurance obligation to employees, but the insurance company is obligated to pay all employee claim payments each period once aggregate employee claim payments exceed a trigger amount that is less than 75% of the actuarially predicted average aggregate employee claim payments for that period, then "gross premiums received" by the insurance company shall include the sum of: (1) 100% of the actuarially predicted average aggregate employee claim payments, and (2) loading (including a charge for assuming the risk that aggregate employee claim payments will exceed the expected level, administrative costs, the gross premiums tax and the cost of capital).

select one

b. If yes, do you agree that the CFO plan complied with the provision?

select one

4. How likely is it that Healthco would prevail in legal proceedings against the State tax agency with respect to the CFO plan?

select one

5. If Healthco did engage in the CFO plan, what is the chance that Healthco's State Gross Premiums Tax returns will be audited by the State tax agency?

select one

6. Assume that Healthco has engaged in the CFO plan. What is the chance that the tax professional penalty of State Code § 102 would be held applicable if a tax professional provides a written opinion?

select one

7. How realistic were the study materials and task?

select one

8. I believe it is important that tax professionals encourage taxpayers to pay the least amount of taxes possible.

select one

9. I believe it is important that tax professionals always interpret unclear/ambiguous laws in favor of taxpayers.

select one

10. Have you ever encountered a state gross premiums tax in your practice?

select one

If yes, how may times?

If yes, briefly describe your experience with the gross premiums tax.

11. Which of the following degrees do you hold (indicate all that apply)?

Bachelors Type:

Masters Type:

Doctorate Type:

12. How many tax courses have you have taken in college?

13. Indicate the length of time you have worked in each of the following fields:

(years) in Auditing

(years) in Tax

(years) in other Accounting

14. Which of the following best describes your current position:

Sole practitioner, owner

Sole practitioner, employee

- ☐ Small Firm (2-10 owners)
- ☐ Medium Firm (10-50 owners)
- ☐ Large Firm (over 50 owners), Not Big Four
- ☐ Big Four
- ☐ Corporation, Fortune 500
- ☐ Other corporation or partnership
- ☐ Gov't -- U.S.
- ☐ Gov't -- state, county or city
- ☐ Not for profit organization
- ☐ Other

15. Which of the following best describes your current area of practice?

- ☐ Audit
- ☐ Tax Compliance
- ☐ Tax Planning
- ☐ Cost
- ☐ Other

16. Your gender:? select one

17. For each of the following statements, select "T" if you agree that the statement is a true description of you. If you disagree and feel the statement falsely describes you, then select "F". Please select one of the letters for each statement even if you are somewhat unsure.

a. People have told me I seem to enjoy taking chances. select one

b. When I want something, I'll sometimes go out on a limb to get it.
select one

c. I consider security an important element in every aspect of my life.
select one

d. I rarely, if ever, take risks when there is another alternative.
select one

e. In games I usually "go for broke" rather than playing it safe.
select one

f. I try to avoid situations that have uncertain outcomes. select one

g. Taking risks does not bother me if the gains involved are high.
select one

h. I would prefer a stable position with a moderate salary to one with a higher salary but less security. select one

i. The thought of investing in stocks excites me. select one

j. I would participate only in business undertakings that are relativelycertain.
select one

k. I would enjoy bluffing my way into an exclusive club or private party.
select one

l. If the possible reward was very high, I would not hesitate putting my money into a new business that could fail. select one

m. I rarely even make small bets. select one

n. If I invested any money in stocks, it would probably only be in safe stocks from large, well-known companies. select one

o. I enjoy taking risks. select one

p. When in school, I rarely took the chance of bluffing my way through an assignment. select one

q. I would enjoy the challenge of a project that could mean either a promotion or loss of a job. select one

r. Skin diving in the ocean would be much too dangerous for me. select one

s. I think I would enjoy almost any type of gambling. select one

t. I probably would not take the chance of borrowing money for a business deal even if it might be profitable. select one

Appendix B

Institutional Review Board Permission