



## The Impact of Psychological Traits on Judgments Related to Ethics

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## The Impact of Psychological Traits on Judgments Related to Ethics

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### Abstract

This paper examines how two contradictory psychological traits, self-deception (SD) and professional skepticism (PS), affect managers and auditors assessments of the ethicality of various earnings management choices. Whereas, self-deception allows individuals to reduce cognitive dissonance (Festinger 1957) arising from their self-serving behavior which could be unethical (Audi 1988; Sanford 1988), professional skepticism or trait skepticism (Hurt 2010) would force individuals to question such self-serving behavior and, as a result, could make them less likely to act unethically. The results indicate that SD, PS and participant type (Chartered Accountant (CA) versus Manager) had a significant effect on the ethicality ratings. Managers exhibiting high (low) SD and low (high) PS view the earnings management techniques that were generally considered to be unethical, as relatively more (less) ethical. For CAs, the SD and PS scores are not significantly related to their ethicality ratings. This result appears to be driven by the fact that CAs tend to have greater exposure information that emphasizes ethics such as their standards and education and hence psychological traits did not affect their ethicality ratings.

Keywords: Self-deception, professional skepticism, perceptions of ethicality

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## The Impact of Psychological Traits on Judgments Related to Ethics

### INTRODUCTION

Prior research has investigated how business factors like management compensation plans, competition, need to raise funds, internal controls etc. have created pressures and opportunities which in turn have resulted in fraudulent behavior in a business context (Hogan et al. 2008). However, there is still a great deal we do not know about why a specific individual will engage in opportunistic behavior while another individual in the same organization—facing similar pressures and opportunities—will not. This study addresses that gap in the literature by examining two psychological traits that could help us understand and hence predict an individual's perceptions of various earnings management scenarios.

This paper examines how two psychological traits; self-deception (SD) and professional skepticism (PS) affect managers and auditors assessments of the ethicality of various earnings management choices. Self-deception allows individuals to reduce cognitive dissonance (Festinger 1957) arising from their self-serving behavior which could be unethical (Audi 1988; Sanford 1988). Whereas, professional skepticism or trait skepticism (Hurt 2010) would force individuals to question such self-serving behavior and, as a result, could make them less likely to act unethically. Therefore, it would be interesting to investigate how these two relatively contradictory traits affect perceptions of the ethicality of different types of business transactions.

Prior research indicates that certain types of earnings management scenarios are considered unethical by various stakeholders (Kaplan, 2001a, b; Merchant and Rockness, 1994; Bruns and

Merchant, 1990)<sup>4</sup>. However, very little research till date examines how an individual's predispositions or traits affect perceptions related to the ethicality of earnings management. In a recent study Murphy (2012) found a positive relationship between an individual's propensity to misreport and their reported level of Machiavellianism. We argue that relatively sparse literature in this area may be, at least in part, due to the difficulty in measuring the potential psychological traits that could predict individuals' propensity to act unethically (e.g. self-deception, which could help in rationalizing earnings management and professional skepticism which could force individuals to challenge actions leading to earnings management and hence limit them). We add to the literature in this area by identifying two instruments namely the Self-Deception Scale and the Professional Skepticism Scale which could help in measuring the participants' psychological traits that help us understand their propensity to act unethically.

The SD scale which is a component of the balanced inventory of desirable responses scale (BIDR) developed by Paulhus (1986), has been developed and validated in social psychology. According to Pennelhum (1966), SD involves the invention of reasons, true or untrue, which render one's current attitudes, beliefs, or actions an appearance of acceptability. Sanford (1988) elaborates on this definition by suggesting that SD involves providing an explanation for one's attitudes, beliefs, or actions when the true explanation is something else entirely. Based on these definitions, it can be assumed that individuals who are more likely to self-deceive themselves are more likely to experience less cognitive dissonance (because they can develop false reasons to make such actions look more acceptable) after committing an unethical act. This in turn would make the high SD individuals more likely to act unethically.

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<sup>4</sup> Research indicates that manipulation of earnings using financial techniques is considered more unethical manipulation using operational techniques.

Additionally, the concept of SD appears to be one of the primary factors that lead to rationalization which is one the three fraud risk factors mentioned by SAS No. 99. For example, Batson et al. (1997, 1999) argue that the ability to deceive one's own self may be important to the goal of deceiving others. In fact, self-deception is a key component of rationalization. Therefore, in this paper, we examine if there is a negative relationship between individuals' SD scores and their ethicality ratings of various transactions. This would allow us to examine how a psychological trait (SD) related to an important fraud risk factor (rationalization) which has not been studied in accounting literature ((Murphy and Dacin, 2011; Hogan et al., 2008; Carcello and Hermanson, 2008; Wells, 2004), affects the behavior of managers and auditors.

According to Hurtt (2010), PS comprises of six major characteristics: a questioning mind, suspension of judgment, search of knowledge, interpersonal understanding, autonomy, and self-esteem. Most prior research has examined how auditors' judgment and decision making are related to their level of PS (Nelson 2009; Hurtt et al. 2013). Based on the characteristics of PS as defined by Hurtt (2010), it appears that while SD allows people to act unethically without feeling dissonance, PS could prevent individuals from acting unethically by making them question their actions. Therefore, we examine if a relatively higher level of PS is positively related to perceptions of ethicality. Additionally, we also investigate the relationship between the level of SD and PS observed among our participants. Considering the contradictory nature of the two traits, we specifically examine if relatively higher levels of PS are observed in conjunction with relatively lower levels of SD and vice versa.

According to Fishbein and Ajzen (1975, 1980) an individual's intentions are indicative of the likelihood that they will engage in a particular behavior. These intentions are also closely related to perceptions (i.e., beliefs) about behavior. Thus, we argue that individuals who perceive questionable or aggressive accounting practices as ethically acceptable may be more likely to engage in such practices in the future. Research also indicates that the propensity to act in a corrupt and self-serving manner tends to escalate over time (Zyglidopoulos et al., 2009). Therefore, it is possible that individuals and organization that start out by aggressively managing earnings could eventually end up in engaging in outright fraudulent financial reporting in the future. Prior research also indicates that companies where financial fraud has been discovered are more likely to have aggressively managed earnings in the years leading up to the year in which the fraud is uncovered compared to similar companies which, have not been the victim of fraud (Perols and Lougee 2011). Therefore, identifying individuals who are more likely to engage in unethical or self-serving behavior *a priori*, could be useful; in designing appropriate training programs and control systems, or in hiring and/or promotion decisions. Thus, it is important to understand the factors that affect an individual's propensity to aggressively manage earnings.

We conducted a within-subjects experiment where participants were first asked to answer questions on the SD (Paulhus 1986) and PS (Hurt 2010) scales and then they were asked to rate the ethicality of ten earning management scenarios. The earnings management scenarios were adapted from Bruns and Merchant (1990) and the numbers were adjusted to exhibit current business context. We got usable responses from one hundred and three mid-level managers from

three of India's largest companies and seventy-seven Chartered Accountants (CA)<sup>5</sup> employed by two Big four accounting firm in India<sup>6</sup>. The ten earnings management scenarios varied in terms of ethicality and the overall results indicate that participants exhibiting high (low) SD and low (high) PS view the earnings management techniques that were generally considered to be unethical, as relatively more (less) ethical. The results also indicate that the participant type (CA versus Managers) also had a significant effect on the ethicality ratings. Therefore, we separated the CA data from the manager data to conduct further analysis.

The overall results for the manager data indicate that participants exhibiting high (low) SD and low (high) PS view the earnings management techniques that were generally considered to be unethical, as relatively more (less) ethical. However, the results related to the CAs indicate that there SD and PS scores are not significantly related to their ethicality ratings. This result appears to be driven by the fact that CAs tend to have greater exposure information that emphasizes ethics such as their standards and education and hence psychological traits did not affect their ethicality ratings. The CAs also rated the relatively more unethical transactions (accounting based) to be significantly more unethical than the managers. Additionally, the CAs exhibited relatively higher PS and lower SD than the managers, and their SD scores were also significantly negatively correlated with their PS scores.

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<sup>5</sup> The Chartered Accountant in India is the equivalent of the CPA in the US. In most common wealth countries like Australia, Canada, UK etc. public accountants are referred to as Chartered Accountants rather than Certified Public Accountant like in the US.

<sup>6</sup> The primary business of the three companies was infrastructure development, manufacturing of heavy machinery and insurance.

## LITERATURE REVIEW

Relatively few studies have examined individual characteristics that could induce individuals to engage in unethical practices in a business context. In a recent study Murphy (2012) indicates that individuals exhibiting higher levels of MACH experience relatively less cognitive dissonance and hence are able to rationalize their wrong actions with relatively more ease. This in turn makes high MACH individuals more likely to act unethically. We intend to add to this stream of literature by identifying two more factors namely SD and PS, which could further our understanding of how personality traits could explain the propensity to indulge in unethical behavior.

### **Self-Deception**

Neutralization and cognitive dissonance theory suggest that the likelihood that an individual will employ techniques of neutralization and/or rationalization to justify their actions primarily depends on the situation rather than the person (Sykes and Matza, 1957; Festinger, 1957). For example, the extent to which the particular action is considered to be unethical is driven by social norms or concerns about punishment and conflict. On the other hand, clinical psychologists argue in favor of the importance of personality and trait variables (i.e., person factors) in explaining individual behavior. However, certain social psychologists suggest that a Person x Situation interaction approach accounts for more variance in behavior than either on its own (Bowers, 1972; Argyle and Little, 1972; Endler, 1973). Consistent with this perspective, in a business context, Murphy and Dacin (2011) suggest that situational factors and ethical climate within an organization interact with personality traits to affect the likelihood that an individual will engage in fraudulent financial reporting. Based on this research it can be deduced that



individuals may possess traits or characteristics that, in certain situations, will significantly affect their behavior. In the earnings management context, we argue that one such characteristic is self-deception – a mechanism by which individuals appear moral, to themselves and others, while not actually behaving in a moral fashion (Batson et al., 1997, 1999).

Sanford (1988) suggests that SD involves providing an explanation for one's attitudes, beliefs, or actions when the true explanation is something entirely different. For example, SD strategies might include falsely perceiving an immoral behavior as being moral or avoiding comparison of the behavior in question with moral standards (Batson et al., 1999). SD involves the invention of reasons, true or untrue, which provide one's current attitudes, beliefs, or actions an appearance of acceptability (Pennebaker, 1966; Gilbert and Jones, 1986). SD can also be used to justify behavior that is inconsistent with one's moral self-concept or which violates valued moral principles (Tsang, 2002). According to Palhus (1991), individuals with a tendency towards self-deception also have a tendency to internally deny psychologically negative or threatening thoughts and feelings. In sum, the capability to self-deceive facilitates the ability to devise self-satisfying, yet false or inconsistent reasons for one's actions.

The ability to self-deceive could also help in reducing cognitive dissonance (Festinger 1957) that is experienced by acting in a morally or ethically deviant manner. According to Sykes and Matza (1957), individuals are thought to employ certain techniques to neutralize Cognitive Dissonance before engaging in deviant behavior in order to deflect disapproval and maintain a positive self-image. Sykes and Matza (1957) divide these neutralizations techniques into five categories, including denial of responsibility, denial of injury, denial of the victim, condemnation of the

condemners and appeal to higher loyalties. The ability to self-deceive (devise self-satisfying yet false or inconsistent reasons for one's actions) could help in developing such neutralizations. SD could also be a factor that facilitates rationalization which is one of the three fraud risk factors mentioned in SAS no. 99. Rationalization is characterized as a mental process that allows individuals to justify dishonest actions and feel less guilty or uncomfortable about their acts (Festinger, 1957; Ross and Nisbett, 1991; Sykes and Matza, 1957, 2003; Coleman, 2001; Kieffer and Sloane, 2009). Audi (1988) argues that the two constructs are mutually related—rationalization can be caused by self-deception and it can also produce self-deception (p. 93).

### **Professional Skepticism**

According to Hurtt (2010), PS is a “multidimensional characteristic” comprised of six different behavioral characteristics (questioning mindset; suspension of judgment; search for knowledge; interpersonal understanding; autonomy; and self-esteem). Research in a marketing context indicates that individuals who are more skeptical are more likely to question the validity of available information (Ford et al. 1990; Koslow 2000; Kurtz 1992 pp. 66; Mangleburg and Bristol 1998; Obermiller and Spangenberg 1998). Evidence from philosophical writings also suggest that a questioning disposition is an important behavioral characteristic of PS (Stough 1969 pp.3; Fogelin 1994 pp.4). According to McGinn (1989 pp.6), an individual who is very skeptical critically questions even his own judgments and decisions.

Skeptical individuals are more likely to suspend their judgment till all necessary information is known as opposed to trying to gain closure with existing information (Bungee 1991; Kurtz 1992;). Research in psychology indicates that ability to suspend judgment is inversely related to

the need for cognitive closure and that skeptical individuals tend to function more efficiently than less skeptical individuals even when closure is not attained and the context is uncertain and complex (Kruglanski 1990; Webster and Kruglanski 1994). Another characteristic of PS is greater willingness to investigate as much information as possible and try and observe beyond the “obvious” (Bungee 1991; Popkin and Stroll 2002).

Skeptical individuals are also likely to have a relatively high self-esteem (Hookway 1990 pp. 234; Lom 2001 pp. 32). Prior research indicates that self-esteem is negatively related to the characteristic of being easily persuaded (Maguire 1968) and also negatively related to normative influence (Clark and Goldsmith 2005). According to Boush et al. (1994), low self-esteem individuals lack the confidence to rely on their judgments which might be contrary to popular views or beliefs. Lin et al. (1982) argue that high self-esteem is necessary to facilitate skepticism because only high self-esteem individuals would allow themselves to place a relatively higher value on their own insights. Additionally, skeptical individuals are likely to be relatively more independent and autonomous in their thought process (Kurtz 1992; McGinn 1989; Bungee 1991) and are also more likely to try and understand the motivations and behaviors of the individuals who are related to the context being investigated (Burnyeat 1983; Hallie 1985; Hookway 1990; Johnson 1978; Kurtz 1992; McGinn 1989). According to Hurtt (2010), “philosophers also indicate that professional skepticism involves individual autonomy i.e., self-direction and moral independence. McGinn (1989, pp. 6) identifies a skeptic as one who does not easily accept the claims of others. The skeptic identifies contradictions and fallacies present in the evidence or in the claims presented by others (Kurtz 1992, pp.22) and undertakes additional investigation and evidence until he or she is personally satisfied (Bunge 1991).”

## HYPOTHESES DEVELOPMENT

Prior research states that SD allows individuals to reduce cognitive dissonance by being able to justify actions that either are not consistent with social or personal norms, or are outright unethical (Tsang 2002; Batson et al., 1999; Audi, 1988; Festinger, 1957). This also enables individuals to rationalize their dishonest and/or unethical actions and make them feel less guilty about committing such actions (Ross and Nisbett, 1991; Sykes and Matza, 1957, 2003; Coleman, 2001; Kieffer and Sloane, 2009). Therefore, based on the above discussion of prior research, it can be inferred that individuals exhibiting high ability to self-deceive would be more likely to perceive unethical earnings management practices as relatively less unethical if it helps them meet their goals. This is because such high SD individuals would experience less discomfort or dissonance from acting unethically, as they would easily justify such actions to themselves by developing true or untrue reasons, which give their actions an appearance of acceptability (Pennelhum, 1966; Gilbert and Jones, 1986). Formally stated:

***H1:*** *Individual's exhibiting low Self Deception will perceive earnings management techniques as more unethical than will individuals exhibiting high Self Deception.*

Psychology and sociology research on PS indicates that individuals exhibiting high PS tend to have a questioning mindset and also tend to evaluate and question all possible information and alternatives before making a decision. The majority of the research on trait skepticism in a business context has been conducted in the field of auditing (see Hurt et al. 2013 for a comprehensive review). The results of this stream of research indicate that auditors exhibiting higher PS are, more likely to question existing audit evidence and exhibit a greater tendency to

question management's tendency to manage earnings (Frag and Elias 2012; Rose 2007). There has been no research which investigates the link between managers' level of trait skepticism and the likelihood of them acting unethically.

Higher levels of skepticism are likely to make individuals more inquisitive (Ford et al. 1990; Koslow 2000; Kurtz 1992 pp. 66; Mangleburg and Bristol 1998; Obermiller and Spangenberg 1998), more likely to look for additional corroborative information (Bungee 1991; Naess 1969; Popkin and Stroll 2002) and more critical of one's own judgments and decisions (McGinn 1989 pp.6). Such individuals are also supposed to be more autonomous and less likely to be influenced by others (Kurtz 1992; McGinn 1989; Bungee 1991). Therefore, it is possible that managers possessing such traits would be more likely to question unethical behavior which in turn could either prevent them from making such unethical decisions or prevent others from making such unethical decisions by not being easily persuaded by such individuals to act unethically. Formally stated:

**H2:** *Individual's exhibiting high Professional Skepticism will perceive earnings management techniques as more unethical than will individuals exhibiting low Professional Skepticism.*

## **Research Questions**

### Relationship between SD and PS

The characteristics of PS and SD appear to be contrary to each other. While SD allows individuals to devise self-serving explanations for one's unethical or wrong actions, PS forces individuals to be more questioning and critical of one's actions. Based on prior literature, we

could infer that the act of self-deception helps individuals reduce cognitive dissonance whereas trait skepticism could actually increase cognitive dissonance by making individuals critically question all information and also their own behavior. Therefore, it would be interesting to investigate the relationship between levels of SD and PS reported by the participants. Would the two constructs be negatively correlated as evident by their trait characteristics or would they be positively correlated?

#### Differences in Professional Training and Ethicality Ratings

In the current study, we use two types of participants; mid-level managers and CAs. The CAs' have a very strong background in accounting, auditing and finance. They are also trained to have a skeptical mindset while conducting audits and their professional training also puts emphasis on promoting and maintaining ethical standards. Their professional conduct and work is also governed by various ethical norms laid down by regulators and the accounting firms that employ them. On the other hand, the managers who participated in this experiment have a varied educational background (primarily engineering and general management). Their education (unlike the CAs education) does not specifically enforce the concepts of having a skeptical mindset and ethics, nor is their professional behavior regulated by any ethical norms. Therefore, given the participants PS and SD scores, it would be interesting to investigate how a CA acting as a divisional manager would perceive the ethicality of various earnings management techniques compared to a non-CA who is acting in the same capacity. More specifically, it would be interesting to examine if the CAs' training suppresses or mitigates the effects of their traits while assessing the ethicality of earnings management scenarios.

## METHODOLOGY

### *Participants*

A within subjects experiment was conducted to examine our hypotheses and research questions. Participants were recruited from executive training programs conducted by a management school in India and from the Big 4 accounting firms located in India. We received a total of 103 usable responses from corporate managers and 77 CAs. The managers possessed an average work experience of 9.74 years and the CAs possessed an average work experience of 5.68 years. Participants were first asked to answer questions on the SD (Paulhus 1986) and PS (Hurt 2010) scales and then they were asked to rate the ethicality of ten earning management scenarios (adapted from Bruns and Merchant, 1990). Lastly the participants provided demographic information. Managers working for manufacturing and construction firms represented 68% of the sample, while financial services and other service providers accounted for 32% of the sample (manager sample). All the managers were attending sessions on strategic cost accounting when they participated in this experiment. The CAs' were approached at their respective offices and if they agreed to participate in the experiment they were provided with the experiment materials which were collected once they were completely filled out.

### **Research Instruments**

#### *Self-deception*

Paulhus' (1986, 1991) SD scale consists of twenty questions which were designed to measure a participant's ability to internally deny psychologically negative or threatening thoughts and feelings stemming from their self-serving actions (Paulhus, 1991, 37). Responses were measured on a 7-point Likert scale ranging from Not True (1) to Very True (7), with Somewhat True (4) as the midpoint. The SD score is computed by averaging participants' responses to the twenty

questions. Thus, it is a continuous variable ranging, in value, from 1 through 7. Low scores on the SD scale indicate a lower ability to self-deceive whereas higher scores indicate a higher ability to self-deceive.

### ***Professional Skepticism***

To measure PS we use the thirty question scale developed by Hurtt (2010). The scale consists of thirty questions and the answers to the questions range from Strongly Disagree (1) to Strongly Agree (6). Individuals scoring higher on the scale are inferred to be more skeptical than individuals scoring lower on the scale.

### ***Earnings Management Vignettes***

Participants were presented with a series of ten vignettes describing instances of earnings management and asked to rate their ethical perceptions on an 11 point scale, ranging from ethical (0) to totally unethical (10) with moderately ethical (5) as the midpoint. We adapted five accounting based manipulations and five operations based manipulations from the original work by Bruns and Merchant (1990) by adjusting the amounts and years to ensure that the instrument was relevant at the time of conducting the experiment. Prior research (Bruns and Merchant, 1990; Merchant and Rockness, 1994; Fischer and Rosenzweig, 1995) has demonstrated that the accounting based manipulations are considered to be more unethical than operations based manipulations.

## **RESULTS**

Our sample consisted of two distinct groups (practicing CAs and Managers who did not have a similar professional degree), which had significant differences in their education and type of work experience. Therefore, we include a dummy variable which controls for the professional qualification and type of work experience (CA versus Manager) of the participants. The results



of our regression analysis (Table 2) indicate that there is significant negative relationship between the participants SD scores and ethicality ratings and a significant positive relationship between the participants PS scores and ethicality ratings (Table 3). These results support both H1 and H2. Further, the overall results (Tables 2 and 3) also indicate that the type of participant (CA/Manager) has a significant effect on the ethicality scores of certain scenarios. This is especially true for accounting based manipulations (Figure 1). Therefore we conduct a further simple effect analysis of our data by segregating it by participant type.

**Table 1: Average Ethicality Scores for Earnings Management Scenarios**

	<u>Managers</u>	<u>CA</u>
<b>Operations Based Manipulation</b>		
Q1	2.43	2.47
Q2	2.87	2.75
Q3	3.17	3.22
Q6	2.16	2.21
Q7	5.47	5.44
<b>Accounting Based Manipulation</b>		
Q4	7.03	7.52
Q5	7.14	7.51
Q8	7.35	8.06
Q9	7.54	8.32
Q10	7.49	8.38

**Table 2: Regression Analysis Examining Relationship between SD and Ethicality Scores**

	B (t)	p-value
<b>Operations Based Manipulation</b>		
Q1		
SD	-0.23 (-2.98)	<0.01*
Participant Type	0.02 (0.27)	0.78
Q2		
SD	-0.27 (-3.59)	<0.01*
Participant Type	0.16 (2.19)	0.03*
Q3		
SD	-0.22 (-2.88)	<0.01*
Participant Type	0.03 (0.31)	0.76
Q6		
SD	0.01 (0.12)	0.91
Participant Type	0.05 (0.58)	0.56

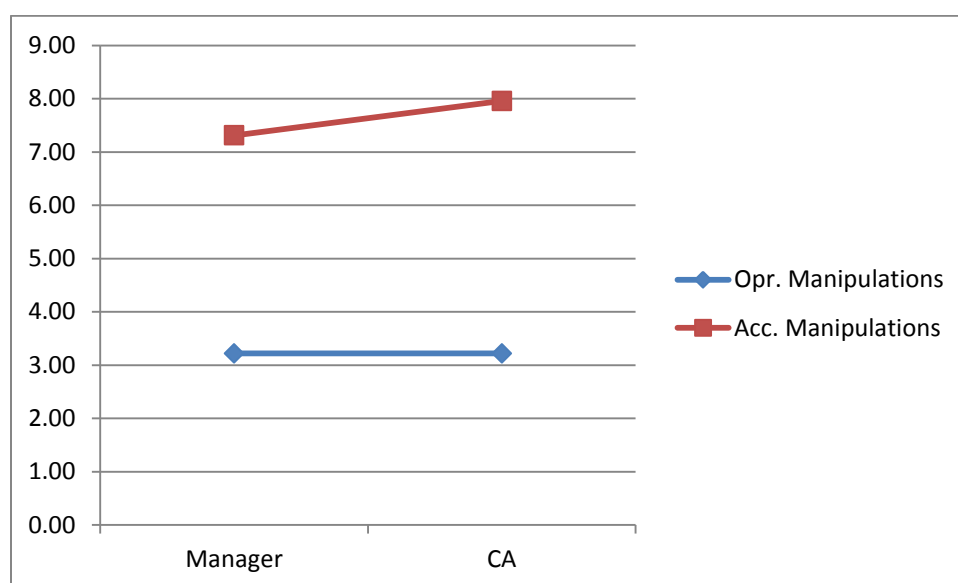
Q7		
SD	-0.41 (-5.75)	<0.01*
Participant Type	0.12 (1.59)	0.12
<u>Accounting Based Manipulation</u>		
Q4		
SD	-0.22 (-3.07)	<0.01*
Participant Type	0.21 (2.88)	<0.01*
Q5		
SD	-0.16(-1.98)	0.05*
Participant Type	0.18 (2.37)	0.02*
Q8		
SD	-0.31 (-4.63)	<0.01*
Participant Type	0.32 (4.77)	<0.01*
Q9		
SD	-0.46 (-7.46)	<0.01*
Participant Type	0.31 (4.99)	<0.01*
Q10		
SD	-0.37 (-5.81)	<0.01*
Participant Type	0.36 (5.75)	<0.01*

**Table 3: Regression Analysis Examining Relationship between PS and Ethicality Scores**

	B (t)	p-value
<u>Operations Based Manipulation</u>		
Q1		
PS	0.37 (4.75)	<0.01*
Participant Type	-0.12 (-1.50)	0.14
Q2		
PS	0.26 (3.24)	<0.01*
Participant Type	-0.20 (-2.57)	0.01*
Q3		
PS	0.28 (3.56)	<0.01*
Participant Type	-0.08 (-1.08)	0.28
Q6		
PS	0.03 (0.32)	0.75
Participant Type	0.04 (0.52)	0.61
Q7		
PS	0.50 (6.81)	<0.01*
Participant Type	-0.22(-2.97)	<0.01*
<u>Accounting Based Manipulation</u>		
Q4		
PS	0.24 (3.14)	<0.01*
Participant Type	-0.16 (-2.14)	0.03*
Q5		
PS	0.21 (2.67)	<0.01*
Participant Type	-0.132 (-1.61)	<0.11

Q8		
PS	0.30 (4.16)	<0.01*
Participant Type	-0.27 (-3.79)	<0.01*
Q9		
PS	0.47 (7.14)	<0.01*
Participant Type	-0.23 (-3.42)	<0.01*
Q10		
PS	0.41 (6.23)	<0.01*
Participant Type	-0.28 (-4.27)	<0.01*

**Figure 1: Difference in Average Ethicality Ratings between CAs and Managers for the Operations and Accounting Based Manipulations**



### **Managers**

Consistent with prior research (Bruns and Merchant, 1990; Merchant and Rockness, 1994; Fischer and Rosenzweig, 1995), the average ethicality ratings reported in Table 1 indicate that the managers consider accounting based manipulations to be significantly more unethical than the operations based manipulations. The average ethicality scores for the operations based manipulations was 3.22 whereas the same for accounting based manipulations was 7.31 ( $t = -58.91$ ;  $p < 0.01$ ). The results of the regression analysis (Table 4 Panel A) indicate that there is a

significant negative relationship between the managers average ethicality ratings and SD scores. This indicates that managers scoring relatively high (low) on the SD scale tend to perceive the various earnings management techniques to be relatively less (more) unethical. These results indicate that managers that have a higher ability to self-deceive are likely to find various forms of earnings management to be relatively less unethical and as a result they could be more likely to indulge in such techniques. These results also provide strong support in favor of H1.

The results of the regression analysis in Table 5, Panel A indicate that there is a significant positive relationship between managers PS scores and average ethicality ratings for the ten earnings management scenarios. These results suggest that managers possessing relatively higher (lower) levels of PS are more likely to consider various earnings management techniques to be more (less) unethical. It can be inferred that managers possessing a questioning mind-set are likely to perceive various earnings management techniques as more unethical and as a result less likely to indulge in such techniques. These results provide support in favor of H2.

The results of a correlation analysis (not tabulated) indicate that there is a significant negative correlation between the managers SD and PS scores ( $r = -0.88$ ;  $p < 0.01$ ). This indicates that managers possessing relatively lower (higher) ability to self-deceive are more (less) likely to possess a skeptical mindset. It can also be inferred that these two traits are not complementary and the presence of one actually reduces the other.

**Table 4: Regression Analysis Examining Relationship between SD and Ethicality Scores for Mangers and CAs**

<b>Panel A: Analysis of Manager Data</b>		
	B (t)	p-value
<u>Operations Based Manipulation</u>		
Q1	-0.35 (-3.76)	<0.01*
Q2	-0.48 (-5.52)	<0.01*
Q3	-0.51 (-5.96)	<0.01*
Q6	-0.01 (-0.12)	0.91
Q7	-0.64 (-8.41)	<0.01*
<u>Accounting Based Manipulation</u>		
Q4	-0.41 (-4.46)	<0.01*
Q5	-0.40 (-4.42)	<0.01*
Q8	-0.48 (-5.49)	<0.01*
Q9	-0.69 (-9.76)	<0.01*
Q10	-0.65 (-8.58)	<0.01*
<b>Panel B: Analysis of CA Data</b>		
	B (t)	p-value
<u>Operations Based Manipulation</u>		
Q1	-0.04 (-0.31)	0.75
Q2	-0.03 (-0.26)	0.79
Q3	-0.13 (-1.14)	0.26
Q6	-0.03 (-0.26)	0.79
Q7	-0.01 (-0.06)	0.95
<u>Accounting Based Manipulation</u>		
Q4	-0.07 (-0.57)	0.57
Q5	-0.22 (-1.88)	0.07
Q8	-0.12 (-1.07)	0.28
Q9	-0.18 (-1.61)	0.12
Q10	-0.02 (-0.20)	0.84

**Table 5: Regression Analysis Examining Relationship between PS and Ethicality Scores for Managers and CAs**

<b>Panel A: Analysis of Manager Data</b>		
	B (t)	p-value
<u>Operations Based Manipulation</u>		
Q1	0.39 (4.27)	<0.01*
Q2	0.40 (4.35)	<0.01*
Q3	0.46 (5.20)	<0.01*
Q6	0.06 (0.55)	0.58
Q7	0.60 (7.53)	<0.01*
<u>Accounting Based Manipulation</u>		
Q4	0.40 (4.32)	<0.01*
Q5	0.36 (3.82)	<0.01*
Q8	0.46 (5.21)	<0.01*
Q9	0.64 (8.40)	<0.01*
Q10	0.52 (6.14)	<0.01*
<b>Panel B: Analysis of CA Data</b>		
	B (t)	p-value
<u>Operations Based Manipulation</u>		
Q1	0.21 (1.82)	0.07
Q2	0.12 (1.03)	0.31
Q3	0.11 (0.97)	0.33
Q6	0.12 (0.11)	0.91
Q7	0.02 (0.16)	0.87
<u>Accounting Based Manipulation</u>		
Q4	0.24 (2.14)	0.03*
Q5	0.17 (1.46)	0.15
Q8	0.09 (0.76)	0.44
Q9	0.01 (0.04)	0.97
Q10	0.17 (1.45)	0.15

**CAs**

The means reported in Table 1 indicate that the CAs rated the accounting based manipulations to be significantly more unethical than operations based manipulations (mean = 7.96 versus mean = 3.22;  $t = -80.75$ ;  $p < 0.001$ ). This result is consistent with prior research (Bruns and Merchant, 1990; Merchant and Rockness, 1994; Fischer and Rosenzweig, 1995).

The results of the regression analysis in Table 4, Panel B indicate that there is no significant relationship between the CAs SD scores and average ethicality ratings. This result indicates that

the CAs ethicality ratings are not affected by their ability to self-deceive or rationalize their actions. Similarly the results in Table 5, Panel B indicate that the CAs PS scores were significantly related to ethicality ratings of only one earnings management scenario. This result again indicates that the CAs traits do not affect their ethicality ratings. Both H1 and H2 are not supported for the CAs. The results also indicate that there is a significant negative correlation between the CAs' SD and PS scores ( $r = -0.49$ ;  $p < 0.01$ ).

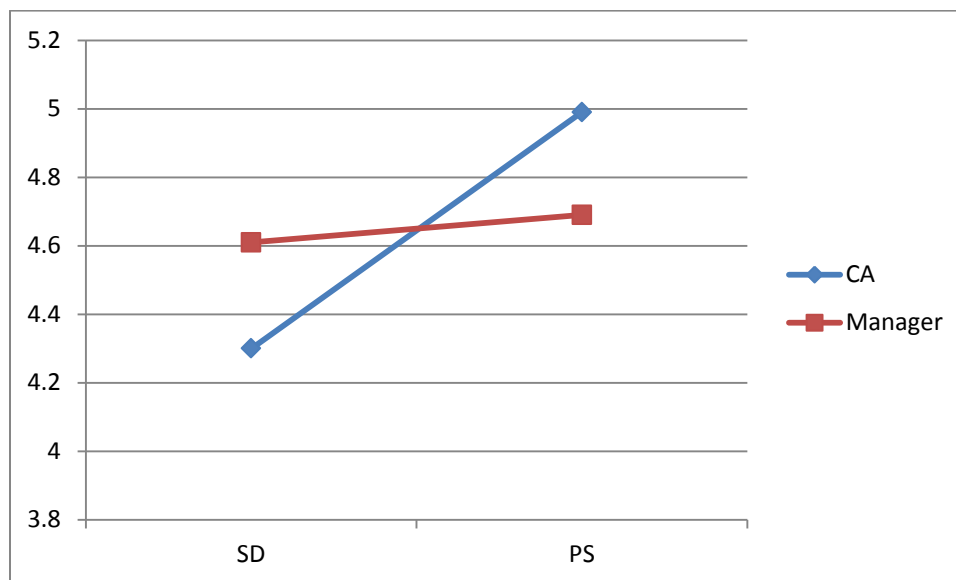
Based on the above results it can be inferred that the CAs traits do not have any effect on their ethicality ratings. Further analysis of the data (not tabulated) indicates that compared to the managers, the CAs have a significantly lower ability to self-deceive (4.61 versus 4.29;  $F = 10.73$ ,  $p < 0.001$ ) and also that the CAs are significantly more skeptical than the managers (5.00 versus 4.70;  $F = 34.97$ ,  $p < 0.001$ ) (Figure 2). Additionally, the results of the ANOVA in Table 6 along with the average ethicality scores in Table 1 indicate that there are no significant differences in ethicality ratings of CAs and managers for the operations based manipulations (these manipulations are considered less unethical by prior research also). However, CAs perceive the accounting based manipulations (Table 6, Table 1, Figure 1) to be significantly more unethical than the managers. These results indicate that the CAs are relatively more skeptical and less self-deceiving than the managers and also that they do not let their personal traits affect their professional judgment. These results could be driven by the fact the CAs are trained to have a questioning mindset while conducting audits and their professional training also puts emphasis on promoting and maintaining ethical standards. Therefore, even though the results do not support H1 and H2, the fact that the CAs professional judgments are indifferent to their trait characteristics and also that they are more sensitive to unethical earnings management tactics,

augers well from a governance perspective (the CAs are considered to play a key role in preventing earnings manipulation and fraud).

**Table 6: ANOVA Examining Difference in Ethicality Scores between CAs and Managers**

<b>Panel A: Operations Based Manipulations</b>					
		df	Mean Square	F	Sig.
Q1	Between Groups	1	0.072	0.192	0.661
	Within Groups	178	0.373		
	Total	179			
Q2	Between Groups	1	0.640	1.790	0.183
	Within Groups	178	0.358		
	Total	179			
Q3	Between Groups	1	0.093	0.151	0.698
	Within Groups	178	0.619		
	Total	179			
Q6	Between Groups	1	0.121	0.326	0.569
	Within Groups	178	.372		
	Total	179			
Q7	Between Groups	1	0.051	0.043	0.835
	Within Groups	178	1.184		
	Total	179			
<b>Panel B: Accounting Based Manipulations</b>					
		df	Mean Square	F	Sig.
Q4	Between Groups	1	10.594	13.268	<0.01*
	Within Groups	178	0.799		
	Total	179			
Q5	Between Groups	1	6.051	8.327	<0.01*
	Within Groups	178	0.727		
	Total	179			
Q8	Between Groups	1	22.552	32.878	<0.01*
	Within Groups	178	0.686		
	Total	179			
Q9	Between Groups	1	26.875	37.245	<0.01*
	Within Groups	178	0.722		
	Total	179			
Q10	Between Groups	1	34.236	45.536	<0.01*
	Within Groups	178	0.752		
	Total	179			



**Figure 2: Difference in SD and PS scores between CAs and Managers**

## CONCLUSION

This study was conducted to investigate if the behavioral traits of individuals could act as a predictor of their decision-making ability in a business context. More specifically we examine if two traits namely SD and PS would be able to predict individuals' perceptions of the ethicality of certain earnings management techniques. This study adds to our understanding of earnings management behavior and investigates how individuals' predispositions may play an important role in understanding such behavior. The study was conducted using two types of participants. The first set consisted of corporate managers, and the second set consisted of practicing Chartered Accountants.

The overall results of the study indicate that company managers who possess a relatively greater (lower) ability to self-deceive are likely to perceive the various earnings management technique

as relatively less (more) unethical. Similarly, managers who are relatively more (less) skeptical tend to perceive the various earnings management techniques to be relatively more (less) unethical. These results suggest that individuals possessing behavioral traits that enable them to reduce cognitive dissonance (e.g. SD) caused by their self-serving actions are more likely to perceive earnings management to be less unethical. Similarly individuals that possess behavioral traits that make them question their actions (e.g. PS) tend to perceive earnings management to be more unethical. The results also indicated that there was a strong negative relationship between the participants SD scores and PS scores (Figure 2) which suggests that these two behavioral traits are mutually opposite and individuals possessing more of one will automatically possess less of the other.

The results associated with the CAs suggest that their predispositions or behavioral traits have no effect on their ethicality ratings. Further, CAs possess a significantly lower ability to rationalize and a significantly higher level of PS than the managers. Additionally, there were no differences between the CAs and Managers ethicality ratings for operations based manipulations that are considered to be relatively less unethical by prior research and more importantly which do not violate GAAP. However, the CAs perceived all the accounting based manipulations (which are considered more unethical and which could also be interpreted as violations of GAAP) to be significantly more unethical than the managers.

The results related to the CAs highlight two differences in their behavior in comparison to the managers: First, there is a lack of relationship between SD and PS scores and ethicality ratings for the CAs and second, they score significantly less on the SD scales and significantly higher on

the PS scales in comparison to the managers. We infer that these results could be a result of the CAs being trained to have a questioning mindset while conducting audits and also their professional training which puts emphasis on promoting and maintaining ethical standards.

Practice implications arise from the theory of motivation and information processing in which self-deception is imbedded as a construct. This theory argues that self-deception is a non-conscious or automatic process motivated by the need to protect positive self-esteem (Paulhus, 1984). It is not a process consciously controlled by an individual. Hence, self-deception enables good people to do bad things and still feel good about themselves. It prevents individuals from seeing the error in their ways (Peterson et al., 2003).

However, research regarding similar processes involved in other social phenomena such as prejudice argues that these automatic processes can be countered by controlled processes (e.g., Devine et al., 2002). Hence, good people can be taught how to counter those automatic processes that might lead them astray. A key strategy is creating awareness. The results associated with the CAs provide support to this notion. Managers could be made aware of behavioral traits that could mitigate or accentuate self-serving or unethical actions and which in turn could enable them to control such actions in decision-making scenarios.

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## REFERENCES

- Argyle, M. and Little, B. R.: 1972, 'Do Personality Traits Apply to Social Behavior?' *Journal for the Theory of Social Behavior*. 2: 1-35.
- Audi, R.: 1988, 'Self-deception, Rationalization and Reasons for Acting', In *Perspectives on Self-Deception*, edited by B.P. McLaughlin and A. Rorty, 92-120. Berkeley and Los Angeles, CA: University of California Press.
- Batson, C., D. Kobryniewicz, J. Dinnerstein, H. Kampf and A. Wilson: 1997, 'In a Very Different Voice: Unmasking Moral Hypocrisy', *Journal of Personality and Social Psychology*. 72: 1335-1348.
- \_\_\_\_\_, E. Thompson, G. Seufferling, H. Whitney and J. Strongman: 1999, 'Moral Hypocrisy: Appearing Moral to Oneself Without Being So', *Journal of Personality and Social Psychology*. 77: 525-537.
- Beasley, M. S., J. V. Carcello, D. R. Hermanson and T. L. Neal: 2010, 'Fraudulent Financial Reporting: 1998-2007, an Analysis of U.S. Companies', Commissioned by *The Committee of Sponsoring Organizations of the Treadway Commission (COSO)*.
- Boush, D. M., M. Friestad, and G. M. Rose. 1994. Adolescent skepticism toward TV advertising and knowledge of advertiser tactics. *The Journal of Consumer Research*. 21(1): 165–175.
- Bunge, M. 1991. 'A Skeptic's Beliefs and Disbeliefs', *New Ideas in Psychology*. 9(2): 131–149.
- Burnyeat, M. 1983. *The Skeptical Tradition*. Berkeley, CA: University of California Press
- Bruns, W. Jr. and K. Merchant: 1990, 'The Dangerous Morality of Managing Earnings', *Management Accounting*. 72(2): 22-25.
- Carcello, J. V., and D. R. Hermanson: 2008, 'Fraudulent Financial Reporting: How Do We Close the Knowledge Gap?', *Working Paper, University of Tennessee and Kennesaw State University*.
- Clark, R. A., and R. E. Goldsmith. 2005, 'Market Maven: Psychological Influences', *Psychology and Marketing* 22(4): 289–312.
- Coleman, J.: 2001, *The Criminal Elite: Understanding White Collar Crime*. 5th Ed. New York: Worth Publishers.
- Dechow, P. M. and D. J. Skinner: 2000, 'Earnings Management: Reconciling the Views of Accounting Academics, Practitioners, and Regulators', *Working paper, University of California, Berkeley and The University of Chicago*.

- Devine, P., E. Plant, D. Amodio, E. Harmon-Jones and S. Vance: 2002, 'The Regulation of Explicit and Implicit Race Bias: The Role of Motivations to Respond Without Prejudice', *Journal of Personality and Social Psychology*. 82 (5): 835-848.
- Endler, N. S.: 1973, 'The Person versus the Situation – a Pseudo Issue?', *Journal of Personality*. 41 (2): 287-304.
- Festinger, L.: 1957, *A Theory of Cognitive Dissonance*. Evanston, IL: Row, Peterson.
- Fischer, M, and K. Rosenzweig: 1995, 'Attitudes of Students and Accountants Concerning the Ethical Acceptability of Earnings Management', *Journal of Business Ethics*. 14: 433-444.
- Fogelin, R. J. 1994. *Pyrrhonian Reflections on Knowledge and Justification*. New York, NY: Oxford University Press
- Ford, G. T., D. B. Smith, and J. L. Swasy. 1990, 'Consumer Skepticism of Advertising Claims: Testing Hypotheses from Economics of Information', *The Journal of Consumer Research* 16(4): 433–441.
- Gilbert, D., and E. Jones: 1986, Exemplification: 'The Self-representation of Moral Character', *Journal of Personality*. 54(3): 593-615.
- Hogan, C., Z. Rezaee, R. Riley, Jr. and U. Velury: 2008, 'Financial Statement Fraud: Insights from the Academic Literature', *Auditing: A Journal of Practice & Theory*. 27 (2): 231-252.
- Hookway, C. 1990. *Scepticism*. New York, NY: Routledge.
- Hurt K. R.: 2010, 'Development of a Scale to Measure Professional Skepticism', *Auditing: A Journal of Practice and Theory*. 29 (1): 149-171
- Johnson, O. A. 1978. *Skepticism and Cognitivism*. Berkeley, CA: University of California Press, Ltd.
- Kaplan, S.: 2001a, 'Ethically Related Judgments by Observers of Earnings Management', *Journal of Business Ethics*. 32 (4): 285-298.
- Kaplan, S.: 2001b, 'Further Evidence on the Ethics of Managing Earnings: An Examination of Ethically Related Judgments of Shareholders and Non-shareholders', *Journal of Accounting and Public Policy*. 20: 27-44.
- Kieffer, S., and J. Sloan III: 2009, 'Overcoming Moral Hurdles: Using Techniques of Neutralization by White Collar Suspects as an Interrogation Tool', *Security Journal*. 22: 317-330.

- Koslow, S. 2000. 'Can the truth hurt? How honest and persuasive advertising can unintentionally lead to increased consumer skepticism.' *The Journal of Consumer Affairs* 34 (2): 245–268.
- Kruglanski, A. W. 1990. *Motivations for Judging and Knowing: Implications for Causal Attribution. The Handbook of Motivation and Cognition. Foundation of Social Behavior.* New York, NY: Guilford Press.
- Kurtz, P. 1992. *The New Skepticism: Inquiry and Reliable Knowledge.* Buffalo, NY: Prometheus Books.
- Lanyon, R.: 1993, 'Development of Scales to Assess Specific Deception Strategies on the Psychological Screening Inventory', *Psychological Assessment*. 5: 324-329.
- Lanyon, R.: 2004, 'Favorable Self-presentation on Psychological Inventories: An Analysis', *American Journal of Forensic Psychology*. 22: 53-65.
- Lanyon R. and A. Carle: 2007, 'Internal and External Validity of Scores on the Balanced Inventory of Desirable Responding and Paulhus Deception Scales', *Educational and Psychological Measurement*. 67 (5): 859-876.
- Linn, M. C., T. de Benedictis, and K. Delucchi: 1982, 'Adolescent reasoning about advertisements: Preliminary investigations' *Child Development* 53: 1599–1613.
- Lom, P. 2001. *The Limits of Doubt: The Moral and Political Implications of Skepticism.* Albany, NY: State University of New York Press
- McGuire, W. J. 1968. Personality and susceptibility to social influence. In *Handbook of Personality Theory and Research*, edited by Borgatta, E. F., and Lambert, W. W., 1130–1187. Chicago, IL: Rand McNally
- Mangleburg, T. F., and T. Bristol: 1998, 'Socialization and Adolescents' Skepticism toward Advertising', *Journal of Advertising* 27(3): 11–21.
- Merchant, K. and J. Rockness: 1994, 'The Ethics of Managing Earnings: An Empirical Investigation', *Journal of Accounting and Public Policy*. 13: 79-94.
- McGinn, M. 1989. *Sense and Certainty: A Dissolution of Scepticism.* New York, NY: Basil Blackwell, Inc.
- Murphy, P. and T. Dacin: 2011, 'Psychological Pathways to Fraud: Understanding and Preventing Fraud in Organizations', *Journal of Business Ethics*, 101(4): 601-618
- Murphy, P.: 2012, 'Attitude, Machiavellianism, and the rationalization of misreporting', *Accounting, Organizations and Society*, 37 (2012): 242-259

- Obermiller, C., and E. R. Spangenberg: 1998, 'Development of a scale to measure consumer skepticism toward advertising' *Journal of Consumer Psychology*, 7(2): 159–186.
- Paulhus, D.: 1984, 'Two-component Models of Socially Desirable Responding', *Journal of Personality and Social Psychology*. 46: 598-609.
- Paulhus D.: 1986, 'Self-deception and Impression Management in Test Responses', In A. Angleitner and, J. Wiggins, *Personality Assessment Via Questionnaire*. (pp. 143-165). New York: Springer-Verlag.
- Paulhus D.: 1991, 'Measurement and Control of Response Bias', In J. Robinson, P. Shaver, and L. Wrightsman, *Measures of Personality and Social Psychological Attitudes*. (pp. 17-59). New York: Academic Press.
- Pennelhum, T.: 1966, 'Pleasure and Falsity', In *Philosophy of Mind*, edited by Stuart Hampshire, 261. New York, NY: Harper and Row.
- Perols, J. L. and B. A. Lougee. 2011. The relation between earnings management and financial statement fraud. *Advances in Accounting* 27(1): 39-53.
- Peterson, J., C. DeYoung, E. Driver-Linn, J. Séguin, D. Higgins, L. Arseneault, et al.: 2003, 'Self-deception and Failure to Modulate Responses Despite Accruing Evidence of Error', *Journal of Research in Personality*. 37 (3): 205-223.
- Popkin, R and A. Stroll. 2002. *Skeptical Philosophy for Everyone*. New York, NY: Prometheus Books.
- Ross, L., and R. Nisbett: 1991; *The Person and the Situation: Perspectives of Social Psychology*. New York: McGraw-Hill.
- Sanford, D.: 1988, 'Self-deception as Rationalization', In *Perspectives on Self-Deception*, edited by B. McLaughlin and A. Rorty, 157-169. Berkeley and Los Angeles, CA: University of California Press.
- Stough, C. L. 1969. *Greek Skepticism*. Berkeley, CA: University of California Press, Ltd.
- Sykes, G. and D. Matza: 1957/2003, 'Techniques of Neutralization', In Cullen, F. and R. Agnew. (eds) *Criminological Theory: Past and Present*. 2nd Edn. Los Angeles, CA: Roxbury Publishing: 135 – 141.
- Tsang, J.: 2002, 'Moral Rationalization and the Integration of Situational Factors and Psychological Processes in Immoral Behavior', *Review of General Psychology*. 6 (1): 25-50.
- Webster, D. M., and A. W. Kruglanski: 1994. 'Individual Differences in need for Cognitive Closure. *Journal of Personality and Social Psychology*, 67(6): 1049–1062

Wells, J.: 2004, 'New Approaches for Fraud Deterrence', *Journal of Accountancy*, February 2004.

Zyglidopoulos, S., P. Fleming and S. Rothenberg.: 2009, 'Rationalization, Overcompensation and the Escalation of Corruption in Organizations', *Journal of Business Ethics*. 84: 65-73.