

A BEHAVIORAL SCIENCE ANALYSIS OF SARBANES-OXLEY'S CERTIFICATION REQUIREMENTS—THE RIGHT KIND OF DETERRENCE?

Betty Joan Thurber *

I. INTRODUCTION

In response to the many infamous corporate scandals that marked the early 2000s,¹ Congress enacted the Sarbanes-Oxley Act of 2002 (hereinafter “Sarbanes-Oxley”).² As a specific remedy for the perceived lack of strong corporate governance and officer accountability that contributed to the downfalls of various notable public companies, Sarbanes-Oxley dictates that public company Chief Executive Officers (“CEOs”) and Chief Financial Officers (“CFOs”) must personally certify their company’s financial statements.³ Stiff criminal penalties exist for those who fail to make or err in making such certifications.⁴

While the certification requirements are intended, among other things, to increase the personal responsibility of key executive officers for the corporation’s financial disclosures and to deter corporate officials from fraudulently portraying their companies’ financial goings-on, this portion of Sarbanes-Oxley may not well serve its intended purpose. Specifically, the certification requirements may cause otherwise qualified and suitable officers and directors to refuse or terminate service. This comment investigates those two related contentions by reference to behavioral psychology as well as legal research and scholarship. Part I begins with a brief discussion of the major events that led to the enactment of Sarbanes-Oxley. It then compares and contrasts the “new” Sarbanes-Oxley officer certification requirements

* Management Analyst, Presidential Management Fellow, Department of Veterans Affairs, Loan Guaranty Service; J.D., University of Tennessee College of Law, 2005; B.A., University of Georgia, 2002. The author would like to thank Joan Heminway for her friendship, support, and expertise, and Bill Thurber for his advice and inspiration.

¹ For a good discussion of these scandals, see, e.g., Jeffrey D. Hern, *Delaware Courts’ Delicate Response to the Corporate Governance Scandals of 2001 and 2002: Heightening Judicial Scrutiny on Directors of Corporations*, 41 WILLAMETTE L. REV. 207 (2005).

² Sarbanes-Oxley Act of 2002, Pub. L. No. 107-204, 116 Stat. 745 (2002) (codified at 15 U.S.C. §§ 7201-66).

³ 15 U.S.C. § 7241 (2005).

⁴ See 18 U.S.C. § 1350 (2005).

with similar officer responsibilities found in the Securities Exchange Act of 1934,⁵ as amended (“Exchange Act”), as it existed before Sarbanes-Oxley. Part II defines and examines selected concepts from the field of behavioral psychology as they relate to matters of corporate governance and securities regulation. Part III synthesizes these concepts with legal research and scholarship and draws related conclusions about the effect of Sarbanes-Oxley’s certification requirements on corporate officers’ employment decisions.

II. SETTING THE STAGE

A. Events Leading Up to the Enactment of Sarbanes-Oxley

The late 1990s will go down in business history as one of the greatest periods of economic growth and technological development in the United States. Change was widespread and included extensive use of the Internet in conducting business transactions (resulting in many new computer-related industries and businesses) and the explosion of the telecom market.⁶ Such exhilarating financial times “invariably attract[ed] to investing millions of people who lack[ed] business knowledge, and to business thousands of people who lack[ed] moral scruples.”⁷ These factors created an economic climate in which actual successes were inflated and legal and ethical constraints were all but ignored.⁸ As one commentator notes, “[t]he spirit of the times over[came] the spirit of the rules.”⁹ In the spring of 2000, investors began to realize that a financial bubble had developed and burst; stock market indexes plunged, the market idled, and the general investor complacency of the previous years began to wane.¹⁰ Then the September 11, 2001, terrorist attacks in the United States caused massive insecurities across economic, political, and various other

⁵ 15 U.S.C. §§ 78a-78nn (2002).

⁶ Lawrence A. Cunningham, *The Sarbanes-Oxley Yawn: Heavy Rhetoric, Light Reform (And It Just Might Work)*, 35 CONN. L. REV. 915, 923 (2003).

⁷ *Id.*

⁸ *Id.*

⁹ *Id.*

¹⁰ *See id.*

fronts; and increasing threats of war against Iraq fostered a pervasive and continual unease throughout the business and investing communities.¹¹

The “Big Four Frauds”¹²—Enron, Global Crossing, Qwest, and WorldCom—came into the public light against this economic and historical backdrop. Enron was accused of concealing its less-than-perfect finances with special purpose entities and questionable (to say the least) accounting practices, which resulted in the company filing for bankruptcy and causing billion dollar losses for outside investors and company employees.¹³ Global Crossing was investigated for using improper “swap deals” to exaggerate sales and was forced to seek protection in bankruptcy.¹⁴ Qwest got the Securities and Exchange Commission’s (“SEC”) attention after it admitted to improperly accounting for over a billion dollars in “swap deal” revenues.¹⁵ Finally, WorldCom confessed to overstating profits and obscuring expenses of more than seven billion dollars, a gross embellishment that caused the company to file the then-largest bankruptcy in United States history.¹⁶

When Enron’s situation first began to unravel, President Bush and others were able to attribute the debacle to “a few rotten apples.”¹⁷ However, as the number of “rotten apples” appeared to increase with each corporate scandal, and as these corrupt business practices moved to the forefront of the media, Congress became subject to more and more pressure to respond to the cries for reform.¹⁸ The result was Sarbanes-Oxley.¹⁹ President Bush claimed that its enactment would create “a new ethic of personal responsibility in the business community.”²⁰ More

¹¹ *Id.* at 923-24.

¹² *Id.* at 926.

¹³ MATTHEW B. ROBINSON, JUSTICE BLIND? IDEALS AND REALITIES OF AMERICAN CRIMINAL JUSTICE (2d ed. forthcoming 2005), available at <http://www.justiceblind.com/new/bandits.htm>.

¹⁴ *Id.*

¹⁵ *Id.*

¹⁶ *Id.*

¹⁷ Cunningham, *supra* note 6, at 924.

¹⁸ *See id.* at 924-27.

¹⁹ *Id.* at 927.

²⁰ President George W. Bush, Remarks by the President on Corporate Responsibility (July 9, 2002), <http://www.whitehouse.gov/news/releases/2002/07/print/20020709-4.html> (last visited Sept. 22, 2005).

specifically, the Chairman of the House Judiciary Committee claimed that the certification requirements included in Sarbanes-Oxley would “make CEOs directly responsible for the integrity of their company’s financial statements....”²¹ In light of these comments, Sarbanes-Oxley’s stated purpose is “[t]o protect investors by improving the accuracy and reliability of corporate disclosures....”²² Whether or not the law will achieve this objective still remains to be seen.

B. Officer Certification Requirements—Then and Now

One way to analyze Sarbanes-Oxley’s efficacy is to compare it to the previous regulations. Certification as a means of securing accountability is not a new concept. The Exchange Act requires each public company to file an annual report on Form 10-K and quarterly reports on Form 10-Q;²³ “[b]oth of these reports include financial information, management discussion, and analysis of that information, as well as financial statements.”²⁴ Before 1980, the law required only the corporation to sign the Form 10-K.²⁵ Post-1980 guidelines, however, require that, in addition to the corporation, the CFO (or Chief Accounting Officer), CEO (or Chief Operating Officer), and a majority of the board of directors must sign the Form 10-K;²⁶ the CFO and one other duly authorized officer must sign the Form 10-Q.²⁷ But do these pre-Sarbanes-Oxley Exchange Act requirements truly create personal responsibility? The fact that Congress included the certification requirements within Sarbanes-Oxley indicates that legislators at least questioned whether the previous signature requirements fostered the exercise and assumption of adequate responsibility.

²¹ 148 CONG. REC. H4685 (daily ed. July 16, 2002) (statement of Rep. F. James Sensenbrenner, Jr., Chairman, House Comm. on the Judiciary).

²² Sarbanes-Oxley Act of 2002, Pub. L. No. 107-204, 116 Stat. 745 (2002) (codified at 15 U.S.C. §§ 7201-66).

²³ See 15 U.S.C. § 78m(a) (2000); 17 C.F.R. § 240.13a-13.

²⁴ Lisa M. Fairfax, *Form Over Substance?: Officer Certification and the Promise of Enhanced Personal Accountability under the Sarbanes-Oxley Act*, 55 RUTGERS L. REV. 1, 16 (2002).

²⁵ *Id.* (citing Amendments to Annual Report Form, Securities Act Release No. 6231, Exchange Act Release No. 17,114, [1937-1982 Transfer Binder] Fed. Sec. L. Rep. (CCH) ¶ 72,301, at 62,812 (Sept. 25, 1980) (amending signature requirement for annual report)).

²⁶ *Id.*

²⁷ *Id.* (citing General Instruction G to Form 10-Q, 5 Fed. Sec. L. Rep. (CCH) ¶ 31,031, at 22,023 (Nov. 15, 2002)).

This Congressional uncertainty had a rational basis. The pre-Sarbanes-Oxley signature instructions require officers to sign periodic reports on behalf of the corporation.²⁸ These instructions, combined with the fact that officers' signatures appear next to (or above) their corporate titles, suggest that officers are not signing in their individual or personal capacities and that it is the corporation that is actually liable for the information contained in the reports.²⁹ This argument, however, may not carry much weight. Research into liability under the pre-Sarbanes-Oxley signature requirements indicates that "courts subject an officer who signs a periodic report with knowledge of its inaccuracies to both primary and secondary liability."³⁰ Likewise, in certain jurisdictions, "an officer's intricate involvement in, or knowledge of, a fraudulent scheme subjects him to primary liability even when he does not sign the fraudulent document at issue."³¹

Regardless of the arguable similarities between the old and new regimes, Sarbanes-Oxley's new, more specific certification requirements "expand[] officer responsibility to all of the periodic reports, and ties an officer's inaccurate certification to personal, criminal liability."³² These certifications, however, do not take the place of the signature requirements found in the Exchange Act; they are additive and "represent an explicit acceptance" of a corporate officer's personal responsibility.³³

In section 302 of Sarbanes-Oxley, "Congress sets the floor for the SEC's certification rules and establishes a framework for the internal monitoring structures."³⁴ Under that section, the CEO and CFO must certify in each annual or quarterly report that they reviewed the report, that the report "does not contain any untrue statement of a material fact or omit to state a material fact," and that the

²⁸ *Id.* (citing General Instruction D to Form 10-K, 5 Fed. Sec. L. Rep. (CCH) P 31,102 at 22,062-22,063 (Nov. 15, 2002); General Instruction G to Form 10-Q, 5 FED. SEC. L. REP. (CCH) ¶ 31,031, at 22,023 (Nov. 15, 2002)).

²⁹ *Id.* at 17.

³⁰ *Id.* at 42.

³¹ *Id.*

³² *Id.* at 18.

³³ *Id.* at 19.

³⁴ Alyson M. Bagley, Note, *The Sarbanes-Oxley Act Leap of Faith: Why Investors Should Trust Corporate Executives and Accountants*, 37 SUFFOLK U. L. REV. 79, 89 (2004).

report and the financial statements therein “fairly present in all material respects the financial condition and results of operations” of the company.³⁵

Section 906 of Sarbanes-Oxley amends Title 18, Chapter 63 of the United States Code and requires that a written statement by the CEO and CFO to accompany each periodic report. That statement must certify that the report “fully complies” with the requirements of the Exchange Act “and that information contained in the periodic report fairly presents, in all material respects, the financial condition and results of operations” of the corporation.³⁶ Section 906 also provides criminal penalties for noncompliance: a knowing violation potentially carries with it a one million dollar fine and a prison term of ten years, and a willful violation may result in a five million dollar fine and twenty years in jail.³⁷

On the surface, then, the certification requirements found in Sarbanes-Oxley appear to differ from pre-existing requirements in three key ways: “First, the new certification makes officers personally liable for the documents they sign.... Second, at least for CEOs, the certification extends liability to documents they did not previously have to sign. Third, the certification provision clearly ties any violations to criminal sanctions.”³⁸ An impassioned discussion sparked among scholars and practitioners alike in the wake of these new requirements; people wanted to know whether the certification requirements (and the rest of Sarbanes-Oxley, for that matter) were mere scare tactics or actual reform. While that question is not the one specifically addressed in this article, a few assumptions seem fairly sound. Sarbanes-Oxley’s certification guidelines close some significant interpretational loopholes regarding executive officer liability, and they compel officers to pay attention to their potential liability and their company’s financial and operating information in a manner that the Exchange Act signature requirements did not.³⁹ The direct threat of criminal penalties, however, might be the most significant difference between Sarbanes-Oxley and its predecessors. Because “businessmen and women want to avoid jail at any cost,” they will be less likely to violate the requirements if there is “a reasonable likelihood that they will go to jail rather than get probation, home detention, or some other ‘alternative to incarceration.’”⁴⁰

³⁵ 15 U.S.C. § 7241 (2002).

³⁶ 18 U.S.C. § 1350 (2002).

³⁷ *Id.*

³⁸ Fairfax, *supra* note 24, at 20.

³⁹ *See id.* at 47.

⁴⁰ *Id.* at 51 (quoting *Penalties for White Collar Crime: Hearing Before the Senate Comm. on the Judiciary*, 107th Cong. P. 220 (2002) (statement of Hon. Michael Chertoff)).

III. DIGGING DEEPER

A. Why a Behavioral/Psychological Analysis is Instructive

Human behavior creates a need for and plays a significant role in many legal issues. Only in the past two decades, however, have legal scholars focused on and utilized behavioral research and analysis in their work.⁴¹ The materials are relatively new, and behavioral investigations often stand in direct contrast to the more often-cited economic analyses.⁴² For many, however, legal analyses using behavioral psychology provide welcome relief from, and a sharper analytical tool than, more traditional modes of legal analysis, including economic analysis. Moreover, because corporations are complex, hierarchical, multi-tiered organizations incorporating and affecting numerous individuals and groups with various traits, an understanding of human behavior and its relationship to rules and standards is likely to lead to important observations about law, including legislation such as Sarbanes-Oxley.

B. Risk Psychology—A Brief Background

Before delving into the precise contentions that either support or oppose the hypothesis that Sarbanes-Oxley's certification requirements will cause officers and directors to refuse or terminate service, a general understanding of the psychology of risk is helpful. While some may think of risk merely in terms of extreme activities such as bungee jumping or skydiving, it is, in fact, a fundamental factor in almost all human decisions. Most traditional definitions of risk involve "the possibility of loss or injury" or "a dangerous element or factor."⁴³ In addition, the definition of risk focuses on a lack of certainty and predictability.⁴⁴ In all walks of life, decision

⁴¹See Donald C. Langevoort, *Behavioral Theories of Judgment and Decision Making in Legal Scholarship: A Literature Review*, 51 VAND. L. REV. 1499, 1502 (1998).

⁴²*Id.* at 1501 n.5.

⁴³ARI KIEV, *THE PSYCHOLOGY OF RISK: MASTERING MARKET UNCERTAINTY* 13 (2002).

⁴⁴*Id.*

making “involves choosing between alternative courses of action,” and risk is inherent “in any course of action where the outcome is uncertain.”⁴⁵

Every individual has a different tolerance for risk. Psychology scholars disagree about whether risk tolerance originates from a person’s biological make-up, his or her personality traits, various demographic and environmental factors, or a combination of all of the above.⁴⁶ Regardless of its origins, risk tolerance “can be defined as *the extent to which a person chooses to risk experiencing a less-favorable outcome in the pursuit of a more-favorable outcome.*”⁴⁷ In that sense, risk tolerance measures on a continuum “a trade-off...from minimizing unfavorable outcomes to maximizing favorable outcomes.”⁴⁸ If a person would rather minimize unfavorable outcomes, he or she is probably risk-averse; on the other hand, if an individual consistently leans toward maximizing favorable outcomes, he or she is likely a risk-seeker. In other words, “[r]isk-averse people appear to be motivated by a desire for *security*, whereas risk-seeking people appear to be motivated by a desire for *potential*. The former motive values safety and the latter, opportunity.”⁴⁹ Risk aversion, which places higher value on security, is far more common in society.⁵⁰ A risk-averse individual, however, is not unaware of the factors that motivate a risk-seeking individual; competing motivations exist to some extent in all people, “but with potential much less important than security and aspiration for risk-averse people and security much less important than potential and aspiration for risk-seeking people.”⁵¹

Despite the fact that most individuals tend to fall toward the risk-averse end of the continuum, some studies have shown that educated people in professional occupations, which may include corporate officers and directors, have increased risk tolerance because they are more knowledgeable about the decisions they are making and the consequences of those decisions, thus reducing the “fear of the unknown” that may push people toward the risk-averse end of the spectrum.⁵² Will Sarbanes-

⁴⁵ GEOFF DAVEY, THE INVESTMENT THINK TANK 334 (2004), available at http://www.risk-profiling.com/Downloads/Think_Tank.pdf.

⁴⁶ *Id.* at 342-44; see also Paul Roberts, *Risk*, <http://cms.psychologytoday.com/articles/pto-19941101-000027.html>.

⁴⁷ Davey, *supra* note 45.

⁴⁸ *Id.* at 334-35.

⁴⁹ Lola L. Lopes, *Between Hope and Fear: The Psychology of Risk*, in 20 ADVANCES IN EXPERIMENTAL SOCIAL PSYCHOLOGY 255, 275 (Leonard Berkowitz ed., 1987).

⁵⁰ *Id.* at 276.

⁵¹ *Id.*

⁵² Davey, *supra* note 45, at 346.

Oxley negate or mitigate that increased risk tolerance, or are corporate executives so confident in their abilities that they will continue to be risk seekers? One cannot find the answer to these questions merely by discussing the elementary conceptions and terminology of risk. Rather, one must also consider the decision-making biases that arise when dealing with cognitive psychology. Before delving into such biases, however, one must first understand the larger psychological context into which they fall.

C. Rational Choice Theory vs. Bounded Rationality

“At the most basic level, rational choice theory posits the existence of principals who articulate ends that are beyond rational reproach.”⁵³ Even more simply, “rationality is understood as suiting means to ends....”⁵⁴ There are various conceptions of rational choice theory, differentiated by “how specific and precise the predictions of the theory are.”⁵⁵ More specifically:

On the left side of the spectrum are “thin” conceptions of rational choice theory—that is, conceptions in which the theory is relatively undemanding and in which it is relatively easy for the behavior of actors to be consistent with the theory. On the right side of the spectrum are “thick” conceptions of the theory—that is, conceptions with more robust behavioral predictions that are more easily falsifiable by empirical evidence.⁵⁶

The thinnest version of rational choice theory is the “definitional version,” in which “everything confirms the rationality of behavior, and nothing refutes it.”⁵⁷ In order of increasing thickness, there is also the “expected utility version” (economic decision making is the result of some sort of cost-benefit analysis, whether explicit or implicit),⁵⁸ the “self-interest version” (if one can determine which course of action

⁵³ Mark Kelman, *Law and Behavioral Science: Conceptual Overviews*, 97 NW. U. L. REV. 1347, 1358 (2003).

⁵⁴ Russell B. Korobkin & Thomas S. Ulen, *Law and Behavioral Science: Removing the Rationality Assumption from Law and Economics*, 88 CAL. L. REV. 1051, 1061 (2000).

⁵⁵ *Id.* at 1060.

⁵⁶ *Id.* at 1060-61.

⁵⁷ *Id.* at 1061-62.

⁵⁸ *Id.* at 1062-63.

will result in the most benefits for the decision maker, one can predict the decision maker's course of action),⁵⁹ and the "wealth maximization version" (decision makers will always attempt to improve their financial welfare).⁶⁰

Getting back to basics, rational choice theorists' general contention is that "each principal's precise course of action should be predictable if we know her ends in sufficient detail."⁶¹ A great deal of behavioral science material, however, calls nearly all of basic rational choice theory into question.⁶² Even more relevant is the fact that "[n]one of the conceptions of rational choice theory discussed above is optimal for the purpose of understanding how actors will respond to the incentives that the law creates."⁶³ Thin versions of rational choice theory are useful for observing behavior in reverse (in other words, by observing the ends, we can then reason backwards to understand the means); however, these methods of analysis are not helpful to legal policymakers, who "need to predict future behavior under various legal scenarios, not merely understand past actions in hindsight."⁶⁴ Thick versions of rational choice theory can be useful for legal policymakers because they can "generate predictions about how actors will respond to alternative legal regimes...."⁶⁵ Evidence indicates, however, that decision makers often act inconsistently with self-interest and base decisions on "norms that are often socially constructed and sometimes evolutionarily adaptive."⁶⁶

Bounded rationality was born from this tension. Human beings are inherently limited; therefore, "[t]o deal with limited memories we make lists. To deal with limited brain power and time we use mental shortcuts and rules of thumb."⁶⁷ Herbert Simon coined the term "bounded rationality," which "captures the insight that actors often take short cuts in making decisions that frequently result in choices that fail to satisfy the utility-maximization prediction."⁶⁸ In other words, "[e]ven

⁵⁹ *Id.* at 1064.

⁶⁰ *Id.* at 1066.

⁶¹ Kelman, *supra* note 53, at 1360.

⁶² *Id.* at 1361.

⁶³ Korobkin & Ulen, *supra* note 54, at 1066-67.

⁶⁴ *Id.* at 1067.

⁶⁵ *Id.* at 1069.

⁶⁶ *Id.* at 1070.

⁶⁷ Christine Jolls et al., *A Behavioral Approach to Law and Economics*, 50 STAN. L. REV. 1471, 1477 (1998).

⁶⁸ Korobkin & Ulen, *supra* note 54, at 1075.

when the use of mental shortcuts is rational, it can produce predictable mistakes.”⁶⁹ These mental shortcuts and rules of thumb are commonly called biases and heuristics, and they can have a significant impact on human decision making. For the purpose of this article, there are certain biases that might be particularly visible in an individual deciding whether or not to accept corporate executive employment.

D. Heuristics that Support the Hypothesis that Sarbanes-Oxley Certification Will Deter Officers and Directors from Serving

1. The Availability Bias

This heuristic posits that individuals “tend to base [their] judgments of frequency on ‘the ease with which instances of occurrences can be brought to mind.’”⁷⁰ In other words, in making decisions, people use the information that is most readily available to them. When someone drives slower and more carefully after seeing an automobile accident on the side of the road, or when someone makes a doctor’s appointment after learning of a public figure being diagnosed with a serious illness, the availability bias is at work.⁷¹

Tversky and Kahneman conducted an experiment involving the effects of the availability bias in 1973; in the trial, subjects were asked to estimate the frequency of occurrence of certain types of words.⁷² For example, when asked which were more frequent in the English language, words “that start with the letter ‘r’ or have ‘r’ as the third letter, individuals tend to say the former, even though the latter are much more common.”⁷³ Just as it is easier to generate a word by knowing its first letter as opposed to its third, and just as it is easier to recite the alphabet forward as opposed to backward, it is easier to make judgments and decisions based on readily accessible information. However, as was demonstrated in the Tversky and Kahneman

⁶⁹ Jolls et al., *supra* note 67, at 1477.

⁷⁰ Jeffrey J. Rachlinski, *The Uncertain Psychological Case for Paternalism*, 97 NW. U. L. REV. 1165, 1170 (2003) (quoting Amos Tversky & Daniel Kahneman, *Judgment Under Uncertainty: Heuristics and Biases*, 185 SCI. 1124, 1124 (1974)).

⁷¹ HOWARD RACHLIN, JUDGMENT, DECISION, AND CHOICE: A COGNITIVE/BEHAVIORAL SYNTHESIS 60-61 (1989).

⁷² Reid Hastie & Bernadette Park, *The Relationship Between Memory and Judgment Depends on Whether the Judgment Task is Memory-Based or On-Line*, 93PSYCHOL. REV. 258, 258 (1986).

⁷³ Rachlinski, *supra* note 70, at 1170.

experiment, decision making that too heavily incorporates the availability bias may result in error.

How does the availability bias impact an analysis of Sarbanes-Oxley's certification requirements? As mentioned in Part I, the government and the media exposed significant corporate fraud and malpractice during the early part of the twenty-first century. Shop talk became public scandal; reports that had been "buried in the business section of top newspapers for years now became front-page news everywhere and feature stories on broadcast and cable television shows."⁷⁴ In addition to the extensive media coverage, the fact that the companies involved in many of these scandals were considered longstanding, well-respected, household names (for example, Rite Aid Corporation and Xerox Corporation)⁷⁵ did not help the growing perception that missteps in corporate governance could cause the demise of even the most secure jobs and the most solid companies. When even the perfectionist domestic diva Martha Stewart ended up in the line of fire for violations of federal securities laws, the "average Joes" of the world began shaking in their proverbial boots.

Despite the fact that some time has gone by since the passing of Sarbanes-Oxley, it is fairly easy to see how the availability bias might come into play in terms of potential officers and directors. Over the past few years, Americans have seen, heard, and read about the criminal trials of a host of corporate executives. People watched intently as Ms. Stewart was escorted to the correctional facility that would be her not-so-lavish home for five months. When contemplating an offer of employment as CEO or CFO of a publicly traded company, an individual would certainly weigh the probability of winding up in a similar scenario. Depending upon the individual's risk tolerance, having vividly negative information so readily accessible might discourage an otherwise qualified person from taking on executive responsibilities. After all, "no one want[s] to be the next Enron."⁷⁶

2. The Vividness Bias

This heuristic is closely related to the availability bias. It theorizes that individuals generally "perceive as more dangerous risks that are based on emotionally interesting information rather than more probative abstract data."⁷⁷ Stated another

⁷⁴ Cunningham, *supra* note 6, at 925.

⁷⁵ *Id.*

⁷⁶ Bagley, *supra* note 34, at 94.

⁷⁷ Robert Prentice, *Enron: A Brief Behavioral Autopsy*, 40 AM. BUS. L.J. 417, 443 (2003).

way, people overestimate the probability and frequency of demonstrably intriguing events, while they underestimate that of less interesting occurrences. This bias helps to explain why certain individuals are more afraid of flying than driving: even though a person is far more likely to be involved in a dangerous automobile accident, stories about plane crashes are more emotionally compelling. Therefore, in making decisions, people might overemphasize the likelihood of an airline crash and devalue that of a more commonplace mishap.

The vividness bias could be important to a potential officer or director in deciding whether or not to serve (although, of course, this subtle cognitive process probably takes place without the individual's conscious knowledge). An individual might misinterpret the emotional tolls of the Enron era as a sign of probability of reoccurrence. Proportionately, however, very few corporate executives face the possibility of sanctions for violations of Sarbanes-Oxley or related laws and regulations. Also, while those reading this article might understand that Sarbanes-Oxley's requirements differ only slightly from previous statutes in most regards (thus indicating that conscientious executives need only "keep up the good work," so to speak), someone framing his or her employment decision based upon recent disturbing events might be overinfluenced by his or her knowledge of the portion of Sarbanes-Oxley that enhances criminal liability.

3. The Saliency Bias

Almost indistinguishable from the previous two biases, the saliency heuristic involves the fact that "people tend to perceive as more dangerous risks that are illustrated by colorful, dynamic or other distinctive stimuli."⁷⁸ Much like vivid risks, the public generally overestimates salient risks (such as terrorism or cancer) because they receive very broad media coverage.⁷⁹

Just as with the availability and vividness biases, the overestimation of risk that is inherent in the saliency bias could affect an individual contemplating executive employment. For example, the sight of Adelphia Communications CEO John Rigas being hauled away in handcuffs surely resonated in the collective memories of American corporate executives, as would the vast amount of attention that the media heaped upon the business world in general during the early part of the twenty-first century. Such prominent and memorable images could certainly cause a candidate for executive employment to overvalue the risks of serving.

⁷⁸ *Id.*

⁷⁹ *Id.*

**E. Heuristics that Oppose the Hypothesis that Sarbanes-Oxley Certification
Will Deter Officers and Directors from Serving**

1. Cognitive Conservatism

Also known as “decision simplification,” this bias occurs as a result of busy individuals (potentially including corporate executives) needing to process overwhelming amounts of information in order to manage the chaos of their lives.⁸⁰ Cognitive conservatism is a “bias against revision,” in which people “construe information and events in such a way as to confirm prior attitudes, beliefs, and impressions.”⁸¹

Motivationally, cognitive conservatism, though it occurs unconsciously, serves to reduce stress.⁸² People have a tendency to build “positive schemas,” and “[r]evising a schema is anxiety-provoking, especially if it opens up a host of troubling possibilities.”⁸³ Instead of dealing with the strains (whether they are intellectual, emotional, physical, or psychological) of disconcerting scenarios and distressing information, individuals subconsciously opt to minimize the threat of troubling information by “dismissal or explanation in conformity with the existing schema.”⁸⁴ Because cognitive conservatism causes people to ignore most risks (under this theory, it takes a fairly significant risk to induce schema modification), “we can predict that most managers will systematically underestimate external threats to success.”⁸⁵

Cognitive conservatism could be a significant influence on the decision making of a potential corporate officer or director. Even though there are arguably some increased risks associated with the Sarbanes-Oxley certification requirements (namely, stiffer criminal penalties for noncompliance than in previous regulations), an individual who is intent on serving as an executive in a publicly traded company

⁸⁰ Donald C. Langevoort, *Organized Illusions: A Behavioral Theory of Why Corporations Mislead Stock Market Investors (and Cause Other Social Harms)*, 146 U. PA. L. REV. 101, 135 (1997).

⁸¹ *Id.*

⁸² *Id.* at 135-36.

⁸³ *Id.* at 136.

⁸⁴ *Id.* at 137.

⁸⁵ *Id.* at 137.

might discount or overlook those risks altogether because they stand in the way of his or her career success. He or she might also invoke a “but that would never happen to *me*” frame of mind in order to incorporate the possible risks while simultaneously discounting their probability, thus maintaining a positive schema. If cognitive conservatism is heavily at work; only the most colorful, relevant, and probable events will make it through the bar against revision.

2. Cognitive Dissonance

The cognitive dissonance theory predicts that, once a decision is made, “attitudes and beliefs will shift to preserve consistency.”⁸⁶ Also called “commitment,” and a close theoretical relative of cognitive conservatism, cognitive dissonance is tantamount to a psychological explanation for the familiar personality trait of stubbornness; once a person takes steps toward a particular objective, the likelihood of a change decreases greatly.⁸⁷ Cognitive dissonance also accounts for why salespeople commonly pester potential buyers until they give in; retailers and sales representatives “know well that once a person takes a few steps toward some purchase or deal, the likelihood of agreement increases.”⁸⁸

In terms of the business world, “management literature strongly suggests that once executives have committed to a course of action, their subsequent survey of information is strongly biased to bolster their choice—especially when their choice is public....”⁸⁹ An individual who had already cognitively or emotionally committed to serving as a corporate officer or director prior to the adoption of Sarbanes-Oxley is a prime example of how cognitive dissonance might work. The individual has already made a decision (to accept executive employment), and he or she will vehemently resist any evidence that the decision was hasty, ill-advised, or just plain wrong. Instead, he or she will search for (and, consequently, overemphasize) signs that the decision was proper.

⁸⁶ *Id.* at 142.

⁸⁷ *Id.*

⁸⁸ *Id.*

⁸⁹ *Id.*

3. Self-Serving Biases

The self-serving biases, which include the three related ideas of overoptimism, overconfidence, and egocentrism, are “the loosest and least well-defined of the...biases that legal scholars commonly use, but they might be the most important.”⁹⁰ Overoptimism “consists of overestimating one’s capabilities,” overconfidence “consists of overestimating one’s ability to predict outcomes,” and egocentrism “consists of overstating the role that one has played in events in which one has participated.”⁹¹

Self-serving biases, whatever form they may take, are familiar constructs; whenever it is possible to do so, “people naturally ‘see what they want to see.’”⁹² People want to see “something that is in their self-interest, not a threat to either their self-esteem or career prospects.”⁹³ Therefore vast majorities of people, when surveyed, display overoptimism in describing themselves as “better than average.”⁹⁴ Research suggests that probability estimates for results are often miscalculated and indicates that individuals tend to exaggerate their contributions to conversations (examples of overconfidence and egocentrism, respectively).⁹⁵ Despite the strong correlation between these self-serving biases and general psychological welfare,⁹⁶ individuals with strong self-serving biases do not live in a constant idyllic state of unawareness.⁹⁷ Rather, “[o]verconfidence in one’s own judgment magnifies the undesirable consequences of erroneous judgment.”⁹⁸

Self-serving biases are especially powerful in those “individuals [who] possess some expertise.”⁹⁹ How might such biases affect potential corporate executives? Overoptimism could cause a person to unrealistically analyze his or her abilities in

⁹⁰ Rachlinski, *supra* note 70, at 1173.

⁹¹ *Id.* at 1172.

⁹² Langevoort, *supra* note 80, at 144.

⁹³ *Id.*

⁹⁴ Rachlinski, *supra* note 70, at 1172.

⁹⁵ *Id.*

⁹⁶ *Id.*

⁹⁷ Langevoort, *supra* note 80, at 144.

⁹⁸ Rachlinski, *supra* note 70, at 1173.

⁹⁹ *Id.* at 1172-73.

terms of, for example, attention to detail or time management (both are important skills for officers and directors generally, and they are particularly crucial in terms of Sarbanes-Oxley certification). Overconfidence might result in an individual underestimating the probability that he or she will fail in various corporate duties, thereby creating the all-too-common “not *me*” attitude of denial. Egocentrism could generate the illusion in an individual that the company or organization could not live without him or her, despite the obvious untruth and unreasonableness of that belief. More generally, self-serving tendencies might cause a person to accept executive employment regardless of the additional risks and challenges inherent in a post-Sarbanes-Oxley environment.

IV. CONCLUSION

Just as the psychological impact of Sarbanes-Oxley’s certification requirements cannot be determined from a brief discussion of risk-taking behavior, neither can it be gleaned from broad-strokes coverage of various decision-making heuristics and biases. Each individual is just that—an individual. Risk tolerance and behavioral biases interact to different extents and with different results as the person and the situation changes. For example:

The temporal interplay between initial overoptimism (leading one to underestimate the risk of later dilemmas at the beginning of a course of action) and the commitment bias [i.e., cognitive dissonance] (leading toward continuation once those first steps are completed)—an optimism-commitment “whipsaw”—is an especially interesting explanation for why otherwise good people often find themselves responsible for bad behavior.¹⁰⁰

Although such behavioral analysis necessitates a case-by-case study to craft any definitive answers, one may draw some general conclusions. One such conclusion is that a major law such as Sarbanes-Oxley will have some influence on the community it is meant to influence (namely, business professionals, whether they are accountants, corporate attorneys, or officers and directors). Whether the effect will be deterrence or arrogance depends on each individual’s risk tolerance and the interaction among the various cognitive biases. It seems fairly safe to hypothesize that if either of these two extremes—deterrence or arrogance—is the result of Sarbanes-Oxley, the consequences will be short-lived; with many of the biases

¹⁰⁰ Langevoort, *supra* note 80, at 147.

described in this comment, potency reflects the recentness and intensity of external factors.

It will undoubtedly be intriguing to continue following corporate governance during the post-Sarbanes-Oxley era and to note whether the law, combined with the negative media attention garnered by certain key individuals, will deter fraudulent practices in the business world or deter qualified people from joining the corporate fold. Whether the world will witness another Enron or Martha Stewart is yet to be seen. However, in terms of future lawmaking; good, constructive legal policy must recognize behavioral science as an important consideration and respond to the myriad cognitive processes that occur every day in each individual.

V. AFTERWORD

One of the primary tenets of legal education and scholarship is that the law constantly changes. Even in the few months that have passed since the initial completion of this article, new information has significantly impacted and helped to develop the theories discussed in the previous pages. It would be extremely cumbersome to detail every piece of relevant data; however, a few events and contentions are worth comment.

Perhaps the most important and widely publicized addition to Sarbanes-Oxley's brief history is the recent acquittal of Richard M. Scrushy. In June of 2005, a jury found the HealthSouth Corp. founder and CEO not guilty of 36 charges, including one under Sarbanes-Oxley (specifically, the prosecution claimed that Scrushy "'willfully' certified a securities filing in August 2002 that he knew to be fraudulent").¹⁰¹ Even before the verdict was official, Sarbanes-Oxley "was getting mixed reviews from companies, lawyers and shareholders."¹⁰² Most criticism centered around the perceived imbalance between compliance costs and restoration of investor confidence.¹⁰³ Once the acquittal was announced, the floodgates of criticism truly opened. The media claimed that the result of Scrushy's trial "cast a shadow on the Sarbanes-Oxley law in its first test"¹⁰⁴ and that it was a "high profile

¹⁰¹ Chad Terhune, et al, *Sarbanes-Oxley fails in first trip to the jury room*, at <http://www.globeinvestor.com/servlet/ArticleNews/print/GAM/20050629/RSARBOX29> (last visited Sept. 15, 2005).

¹⁰² John W. Schoen, *Anti-fraud law fails first major court test*, at <http://www.globeinvestor.com/servlet/ArticleNews/print/GAM/20050629/RSARBOX29> (June 29, 2005).

¹⁰³ *Id.*

¹⁰⁴ Terhune, *supra* note 101.

failure for the Sarbanes-Oxley Act.”¹⁰⁵ Legal commentators said that the “jury’s rejection of the first attempt by the government to prosecute a top executive under the law could cause prosecutors to tread more carefully in bringing such cases against other CEOs”¹⁰⁶ and that the jury’s failure to convict Scrusby under Sarbanes-Oxley “means that ‘the utility of the criminal certification statute will be very much undermined.’”¹⁰⁷ Nonetheless, the lead prosecutor in the case averred that “[j]ust because you have a not-guilty on Sarbanes-Oxley, it doesn’t mean the statute loses any of its teeth.”¹⁰⁸ The Justice Department remains “fully committed” to the principles and enforcement of the law.¹⁰⁹

More generally, recent literature indicates that CFOs are being pushed out the door by the increased costs—both financial and otherwise—of regulatory compliance.¹¹⁰ Many CFOs blame the rigorous demands of Sarbanes-Oxley for their feelings of burnout and deflation. Thus it is not terribly surprising that “[t]otal turnover among the CFOs of Fortune 500 companies rose 23% during 2004 from a year earlier.”¹¹¹ Financial officers seem to feel more like “numbers cruncher[s]” rather than “the chief executive’s consigliere,” contributing to a decline in the strategizing, advising, and just plain fun that may have originally drawn them to their posts.¹¹² Consequently, many CFOs are moving toward more operations- or management-oriented positions, and some are ducking out of the publicly-held-company scene altogether.¹¹³

How do these new developments affect this article? More specifically, do recent revelations make it more or less likely that professionals will be deterred from serving as corporate executives? The Scrusby verdict, for example, may activate some self-serving biases (particularly overconfidence) in corporate executives. Consequently, individuals may jump to the conclusion that, because the HealthSouth

¹⁰⁵ Schoen, *supra* note 102.

¹⁰⁶ Terhune, *supra* note 101.

¹⁰⁷ Schoen, *supra* note 102 (quoting Michael Zuppone, former head of the S.E.C.’s Northeast regional office).

¹⁰⁸ Terhune, *supra* note 101.

¹⁰⁹ *Id.*

¹¹⁰ Erin White, *Call It Sarbanes-Oxley Burnout: Finance-Chief Turnover Is Rising*, WALL ST. J., Apr. 5, 2005, at B4.

¹¹¹ *Id.*

¹¹² *Id.*

¹¹³ *Id.*

leader was acquitted of all charges, the certification requirements of Sarbanes-Oxley are a mere formality and no consequences will result from their ignorance or malfeasance. On the other hand, the fact that many frustrated CFOs are deserting their posts for less Sarbanes-Oxley-affiliated positions may indicate that the increased appetite for risk once demonstrated by business professionals is waning in light of complex and potentially damaging regulatory responsibilities.

One thing is clear—that nothing is clear. It is still unknown what overall effect, positive or negative, the vast number of reform measures promulgated by the Sarbanes-Oxley Act have had on United States corporate boards and upper-level business professionals. The law and its aftermath have forever changed the corporate atmosphere, and it may take decades to truly understand and appreciate the scope of such a major overhaul of business practice and procedure. While many executives believe that their managements have been relatively unaffected by Sarbanes-Oxley, a large percentage of industry insiders “believe the Sarbanes-Oxley Act should be revisited by Congress to correct some of the act’s unintended consequences.”¹¹⁴ Whether one of those unintended consequences is the deterrence of qualified individuals from serving in executive capacities still hinges on complex psychological processes that have yet to be fully explored in the context of corporate law.

¹¹⁴ *Peeves & Plaudits*, CORP. BOARD MEMBER, Special Issue 2004, http://www.boardmember.com/issues/archive.pl?article_id=12064.