

# Principles and Influence in Codes of Ethics: A Centering Resonance Analysis Comparing Pre- and Post-Sarbanes-Oxley Codes of Ethics

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**ABSTRACT.** This study examines the similarities and differences in pre- and post-Sarbanes-Oxley corporate ethics codes and codes of conduct using the framework of structuration theory. Following the passage of the Sarbanes-Oxley (SOX) legislation in 2002 in the United States, publicly traded companies there undertook development and revision of their codes of ethics in response to new regulatory requirements as well as incentives under the U.S. Corporate Sentencing Guidelines, which were also revised as part of the SOX mandates. Questions that remain are whether these new or revised codes are effective means of communicating changed ethical foci and attitudes in organizations. Centering resonance analysis (CRA) is used to identify differences and similarities across time and industries by analyzing word networks of 46 pre- and post-SOX corporate codes of ethics. Analyses focus on content and structure of generated word networks as well as resulting factors that emerged from the texts. Results are interpreted from the structuration perspective that content and structure of codes are constrained and enabled by system structures while they function to produce and reproduce those structures. Results indicate that corporate codes of ethics are formal discourses of ethics, laws, and control. Code structure has changed across time, with an increased emphasis on compliance in post-SOX codes. Implications for research and practice are discussed in light of findings.

**KEY WORDS:** codes of ethics, organizational discourse, Sarbanes-Oxley, structuration theory

## Introduction

The corporate scandals that began with Enron's collapse in 2001 have dominated the news with a

focus on various companies' unethical conduct. The social outcry against unethical business conduct led to the enactment of the Public Accounting Reform and Investor Protection Act, commonly known as the Sarbanes-Oxley (SOX) Act of 2002. SOX imposed dramatic and detailed changes on corporate governance and also requested changes in Section 8 of the U.S. Federal Sentencing Guidelines, commonly called the "Corporate Sentencing Guidelines," regarding requirements for application of the mitigation of penalties provisions.<sup>1</sup> The result of these reforms has been the development of codes of ethics specific to financial officers as well as codes of ethics for employees accompanied by evidence of training in those codes. Corporations that did not have codes of ethics developed such documents pursuant to SOX mandates. Corporations that already had formal codes of ethics changed them in response to the altered business and regulatory environments. However, a critical question remains regarding these reforms: Have new legislation, tightened governance, and revised codes created businesses with better cultures for fostering legal compliance and ethical choices?

The ultimate test of the impact of changes on an organizational ethical culture is the direct measurement of behavior change. However, one must also be able to ascertain changes in codes of ethics as they are designed to guide such behavior. One approach to investigating the impact of SOX on organizational ethics is to analyze how formal codes of ethics have changed since its enactment. The role of corporate codes of ethics as modes of formal organizational discourse is demonstrated by numerous studies that have examined codes in order to increase understanding of

their terms, content, purpose, function, and effects (e.g., Adams et al., 2001; Carasco and Singh, 2003; Cassell et al., 1997; Farrell and Farrell, 1998; Gaumnitz and Lere, 2004; Lere and Gaumnitz, 2003; Schwartz, 2001; Stevens et al., 2005; Valentine and Barnett, 2002). Further, as a form of organizational discourse, code content and structure provide indications of corporate values, processes, and structures. Additionally, these documents are designed and interpreted within larger social systems and must be understood as operating within those systems.

The purpose of this study is to analyze corporate codes of ethics as organizational discourse within the historical context of the enactment of the SOX Act. Since this legislation requires public companies to issue codes of ethics for senior financial officers, the enactment of SOX is an appropriate marker for analyzing changes in overall corporate codes of ethics. SOX does not specifically mandate changes in codes of ethics (other than the specific provisions related to financial reporting), but changes in the U.S. Sentencing Guidelines serve as potential drivers for ethics codes modifications. Additionally, changes to ethics codes might have been spurred by insights and concerns reflected in the ad hoc report that accompanied the mandates. Prior to SOX and the guidelines changes, the existence of a code of ethics, an ethics hotline, and the presence of a compliance/ethics officer were the gold standard in terms of company best practices (Trevino et al., 1999). However, following the changes in the guidelines pursuant to SOX, the focus of the mitigating factors changed from "compliance" to "culture." The rote checklist of components will no longer suffice for lack of culpability because managers and organizations are held accountable for both dissemination and understanding among employees. It is no longer the existence of an ethics program but its efficacy that is the justifying factor under the Sentencing Guidelines for organizations.

The release of a memo from the U. S. Deputy Attorney General, "Principles of Federal Prosecution of Business Organizations," also has been an impetus for post-SOX change (Thompson, 2003). The Justice Department memo outlines factors that determine whether an organization had an effective compliance program, factors that federal prosecutors use to decide whether to investigate, charge, or negotiate a plea with the organization. The

Thompson memo lists current best practices, not simply the basic components of a compliance program. The Thompson memo draws a clear distinction between compliance programs of the past and those post-SOX that will be counted as mitigation or used in the decision not to prosecute:

Prosecutors should therefore attempt to determine whether a corporation's compliance program is merely a "paper program" or whether it was designed and implemented in an effective manner. In addition, prosecutors should determine whether the corporation has provided for a staff sufficient to audit, document, analyze, and utilize the results of the corporation's compliance efforts. In addition, prosecutors should determine whether the corporation's employees are adequately informed about the compliance program and are convinced of the corporation's commitment to it. (sec. VII, paragraph 4)

The certification of the underlying integrity of the organizational processes requirement along with the new incentives under the organizational guidelines have resulted in examination of organizational integrity, ethics, and programs designed to develop and enhance both.

Indeed, post-SOX changes and guidelines indicate that codes are part of a foundation of an ethical culture. Codes are viewed as an important form of organizational discourse, which is crafted, implemented, and interpreted within particular social and organizational systems. Putnam and Fairhurst (2001) note that discourse can be viewed as "a perspective for understanding organizational life" that "provides a unique way to focus on the subtle aspects of organizing" (p. 79). Also, organizational documents are forms of discourse useful for understanding various organizational phenomena (Corman et al., 2002). Using structuration theory as a foundation, codes are not viewed as one-way "injections" of corporate principles but rather as recursively structuring acts of organizational communication. That is, codes are understood as being *instantiations*, or exemplifications, of larger structures of meaning, norms, and authority while they also function to produce and reproduce those structures. To develop this argument, the following section provides a discussion of structuration theory as it relates to this topic and provides the research questions and hypothesis. Following this review, a study is

reported that analyzes 46 pre-SOX and post-SOX codes as statements of ethics and laws as well as forms of control. Finally, results are discussed with implications for theory and practice.

### **Theoretical foundation: the role of codes of ethics in organizations**

Studies of how ethics codes influence behavior have produced mixed results (Carasco and Singh, 2003). These mixed findings are not surprising if codes are viewed as one form of organizational discourse situated in complex social systems and interpreted by individuals in particular contexts. Rather than taking a functionalist approach to codes by examining how they “act on” organization members, a much more productive approach is to interrogate how codes exemplify system structures. According to Giddens (1984):

Analyzing the structuration of social systems means studying the modes in which such systems, grounded in the knowledgeable activities of situated actors who draw upon rules and resources in the diversity of action contexts, are produced and reproduced in interaction (p. 25).

For the purposes of this project, then, codes are viewed not as isolated documents that either work or do not work in organizations, but as instantiations of the structuration of systems.

The rules and resources to which Giddens (1984) refers constitute structures. Three structural dimensions exist within systems that constrain and enable action: *signification* (involving meaning), *legitimation* (involving norms), and *domination* (involving authority) (Giddens). As codes are discussed herein as discourse, an examination of the recursive relationship between codes and structures focuses on this discursive nature. All codes use language to convey meaning to organization members and other audiences. The language used within the codes is constrained and enabled by larger structures of signification, or meaning. For example, the use of legal terms to describe expectations of behavior is constrained and enabled by common understandings of those terms. At the same time, the very act of using such legal terms in codes reproduces the meaning of those terms and their legitimate presence

in corporate language. As Giddens points out, structural dimensions exist concurrently, and an analysis of signification requires an analysis of other dimensions as well. Also, the use of terms is an issue of legitimation, and terminology in codes is constrained and enabled by norms surrounding such use. Again, the act of using legal terms reproduces those same norms. Finally, the use of legal terms is inherently tied to issues of authority and power. When legal terms are put into codes, those codes gain the authority associated with law, and that authority is again reproduced through such use.

As instantiations of structures, codes also have a relationship to other organizational action, but perhaps not in the way expected by those designing and implementing the codes. Specifically, the *duality of structure* indicates that “all structural properties of social systems...are the medium and outcome of the contingently accomplished activities of situated actors” (Giddens, 1984, p. 191). Codes, then, are *part* of the structuration of systems and therefore influence behavior by reproducing structures that constrain and enable action. This means that any particular employee might not articulate that he or she necessarily chooses a particular action because “the code says so”; rather, the code in itself reproduces the structures that constrain and enable that employee’s actions (Stevens et al., 2005). This structurationist perspective pervades the remainder of the discussion that focuses on the nature of codes of ethics in corporations.

### **Statements of ethics and laws**

Formal codes of ethics are given various titles, including codes of ethics, codes of conduct, and operating principles (Cassell et al., 1997). Regardless of their title, however, codes purport to have a similar purpose – to articulate the ethical principles and practices valued by the organization. Carasco and Singh’s (2003) study of 32 multinational corporations reports that ethical responsibility was the basis of 38% of codes they analyzed. Conrad (1993) notes that organizations use discourse to inculcate their core values and their ethical codes. However, Cassell et al. argue that code content is likely to reflect the ways of thinking of those designing the code rather than the organization as a whole. Several

scholars and practitioners have focused on this aspect of codes, noting that codes are visible and public statements of organizational values that can make values come alive for members and positively influence the ethical environment of organizations (Business for Social Responsibility, 2004; Cassell et al. 1997; Di Stefano, 2004; Schwartz, 2001; Valentine and Barnett, 2002).

Although the purported purpose of codes of ethics concerns statements of ethics, they also reflect other organizational processes. Valentine and Barnett (2002) conclude from their study of sales professionals that codes might lead employees to believe that their companies care about ethics regardless of the reality, functioning as a form of “impression management” (p. 198). This conclusion coincides with the Business for Social Responsibility (2004) suggestion that companies might implement ethics codes to enhance their reputation and create a cohesive corporate culture. Clearly, a code of ethics is more than simply a statement of ethical principles.

In addition to providing a statement of ethical principles and perhaps creating a desired impression, corporate codes of ethics have a predominantly legal focus (Business for Social Responsibility, 2004; Carasco and Singh, 2003; Lere and Gaumnitz, 2003; Valentine and Barnett, 2002). Lere and Gaumnitz note in their review of previous studies that often there are only vague references to ethics in codes, but lengthy lists of laws and compliance requirements. Such lists and requirements reflect an adherence to the compliance model noted above that is grounded in the pre-SOX sentencing guidelines mandates for establishing that companies undertook dissemination of and training in principles of law. As most individuals in organizations are predisposed to obeying laws, Lere and Gaumnitz argue that a legal emphasis in code content might be one of the reasons that organization members do not report a strong code-behavior relationship. People would obey the law anyway, so codes really do not provide any new or unique information to them. Carasco and Singh found a similar emphasis on laws in their study, with legal responsibility identified as the basis of 31% of codes.

Previous research on codes leads to the first two research questions posed in this study that relate to examination of how the structure and content of codes represent statements of ethics and laws:

### **RQ1**

To what extent are ethical principles represented as central concerns in corporate codes of ethics?

### **RQ2**

To what extent are legal requirements represented as central concerns in corporate codes of ethics?

As mentioned earlier, codes are part of larger social systems, and their language and form are constrained and enabled by social structures. As such, current codes might reflect an increase in the legal emphasis since the passage of SOX increases the legal aspects of corporate governance. SOX places specific corporate governance procedures, particularly as they relate to accounting and reporting procedures, and more specifically, with detailed provisions or separate codes related to financial reporting. Some scholars argue that emphasizing laws and policies distracts organization members from focusing on their own morality, governance structures, and decision processes (Deetz, 2003; Farrell and Farrell, 1998). Still, one would expect the SOX legislation to increase such an emphasis, if only for purposes of achieving the related benefits under the U.S. Sentencing guidelines. Furthermore, one would expect that additional legal governance requirements would result in more complex codes that discuss specific procedural issues. The following hypothesis is offered regarding the influence of SOX on corporate codes of ethics:

*H1: Pre-SOX and post-SOX codes of ethics differ significantly in content and structure.*

### **Forms of formal control**

It is evident from the discussion above that codes of ethics serve multiple purposes for organizations and their members. As statements of ethics or laws, codes can be viewed as discursive instantiations of structures involving the meaning of ethical principles, social and organizational norms of behavior, and structures that constrain and enable the use of

authority. However, several scholars also argue that codes of ethics are overt forms of formal control (e.g., Carasco and Singh, 2003; Cassell et al., 1997; Farrell and Farrell, 1998). As such, they function as “mechanisms...which have been consciously and purposefully designed by someone in order to try to control the organizational behavior of others” (Cassell et al., 1997, p. 1081).

As formal control mechanisms, codes are vehicles for individuals high in organizational hierarchies to communicate those values and behaviors that they expect organization members to adopt and practice. In essence, they are formal discursive attempts to encourage conformity by specifying what is considered right and wrong within organizations and how stated ethical norms should influence everyday organizational behavior (Cassell et al., 1997; Farrell and Farrell, 1998). As such, many codes of ethics emphasize statements about compliance and enforcement procedures over issues of personal integrity or decision-making abilities (Carasco and Singh, 2003; Cassell et al., 1997; Farrell and Farrell, 1998). For example, Carasco and Singh report that 75% of codes analyzed in their study mentioned enforcement or compliance procedures but personal integrity regarding misconduct was rarely mentioned (p. 88). Schwartz (2001) identified several metaphors for codes based on perceptions reported by organization members, and many of these metaphors reflect a control orientation: “rule-book,” used to clarify behavior; “fire alarm,” used to report violations; and “club,” used to enforce compliance (p. 255).

Of course, it might be argued that without enforcement mechanisms codes of ethics lack potency. Perhaps the very presence of enforcement procedures allows organization members to use codes for their own benefit. Schwartz (2001) notes that many organization members in his study view the control features of codes as enabling devices, as exemplified in the following metaphors: “sign-post,” used as a guide for consultation; “mirror,” used as a way to confirm acceptable behavior; “shield,” used to challenge or resist unethical requests; and “smoke detector,” used to warn against unethical behavior. These metaphors indicate that the controlling nature of codes can both enable and constrain behavior within organizations. The third research question examines the organizational

structural or formal control feature of corporate codes of ethics:

### **RQ3**

How is organizational control represented in corporate codes of ethics?

### **Unique issues versus boilerplate issues**

Given that codes of ethics are situated within organizational systems as well as social systems, their content should reflect both organizational and social issues. Lere and Gaumnitz (2003) argue that codes should address issues that are unique to organization members’ particular experiences in order to impact attitudes and behavior. However, acknowledging that corporations operate within social systems that are often the same or similar to those of other organizations, one would expect that codes would contain certain common features as instantiations of larger social structures. The final research question is posed to examine how codes across industries are similar and different:

### **RQ4**

How do corporate codes compare across industries, in terms of structure and content?

### **Method**

This study uses centering resonance analysis (CRA) to examine the content and structure of corporate codes of ethics. CRA is a text analysis method that uses linguistics theory to create word networks of nouns and noun phrases in order to represent main concepts, their influence, and their interrelationships (Corman et al., 2002; McPhee et al., 2002). Face and representational validity for this text analysis method are reported in Corman et al. McPhee et al. note that CRA networks “direct our attention to highly influential words, where ‘influential’ means they facilitate the connection of meaning among many different words, across very different parts of



the overall word network” (p. 278). Using network theory, influence is measured as betweenness centrality of a word, or how often that word is “between” other words. This measurement indicates the likelihood of a word being the shortest link in the network connecting any other two words (McPhee et al., 2002, p. 276). That is, CRA considers a word to have more influence within a text if it ties other words together in the text network and mediates meaning (Corman et al.). Previous text analysis of codes has relied on frequency counts of words or phrases, which does not take into account the influence of words in relationship to other terms in codes (Carasco and Singh, 2003; Farrell and Farrell, 1998; Gaumnitz and Lere, 2004). Using CRA extends current knowledge of ethics codes by analyzing both content and structure of codes.

Additionally, this method of analysis allows for a systematic investigation of code content and structure across industries and across time. CRA provides an analysis of how two or more texts are similar or different in their structure and content. Word networks that have the same words or word phrases in similar influential positions within texts are said to *resonate* with each other (Corman et al., 2002). This is an important feature for systematically analyzing whether corporate codes from the two time periods differ significantly, as well as how codes within industries are similar and different.

#### *Analysis of codes*

Pre-SOX codes of ethics or conduct were obtained by contacting Human Resource Managers, Compliance Officers, or executives in similar positions in 100 public companies. From the original pool of 32 corporate codes received, nine were not available for this analysis due to mergers, acquisitions, or bankruptcies. Post-SOX codes of the remaining 23 companies were obtained from their corporate websites. All but one of the companies have headquarters in the United States, and all but one of the corporations have international operations. Table I lists the companies included in this study by industry and pseudonym.

The pre- and post-SOX codes for each company were converted to text files in order to use the Crawdad Text Analysis System version 1.2 (Crawdad

TABLE I  
Companies by industry and pseudonym

Industry	Pseudonym
Agriculture/Food Services	Food One
	Food Two
	Food Three
Airlines/Automotive	Transportation One
Business Services	Service One
Computing & Technology	Technology One
	Technology Two
	Technology Three
	Technology Four
	Technology Five
Consumer Products/Retail	Consumer One
	Consumer Two
	Consumer Three
Defense	Defense One
	Defense Two
Energy/Utilities	Energy One
Financial	Financial One
Heavy Industry/Manufacturing	Industry One
	Industry Two
	Industry Three
	Industry Four
	Industry Five
Pharmaceuticals	Pharmaceuticals One

Technologies, 2005). This conversion produced 334 single-spaced pages of text for analysis. Initial analyses produced word networks for each code. Network properties for each code were analyzed, including size (number of nodes/words) and density (number of connections compared to the number of possible connections). Additionally, codes were compared with each other for resonance, or how much the content and structure of codes were similar to each other.

The top 100 most influential words were identified for each code and then all codes were analyzed together for common influential words. Influence values range from 0 to 1, with a value of 0.01 considered significant and a value above 0.05 considered very significant (Crawdad Technologies, 2005). The 100 most influential words then were used as variables, with the 46 corporate codes constituting the units of analysis. Influence values of words for each code were treated as scores on the variables.

Finally, a series of exploratory factor analyses was conducted for the word variables using the Principal Components method and VARIMAX rotation. No stable factor solution was produced using all of the codes, so the analysis was continued by separating pre-SOX codes from post-SOX codes. This procedure resulted in two stable factor solutions. The final pre-SOX solution includes eight factors that explain 72.02% of the variance, and the final post-SOX solution includes eight factors that explain 65.26% of the variance. These levels were deemed acceptable for this analysis (Hair et al. 1998). Several of the top 100 most influential words dropped out of the factor solutions due to weak factor loadings and communalities, and those terms are noted in Tables II and III. Table II provides the pre-SOX factor solution and Table III provides the post-SOX factor solution.

## Results

### *Statements of ethics or laws*

The first two research questions focus on the ethical and legal content of corporate codes of ethics. To summarize, this analysis supports previous research by indicating that codes of ethics serve to exemplify both ethical principles and legal requirements. Factor analyses indicate that many areas covered in codes combine ethical and legal emphases. Law is prominent throughout the texts, but many ethical terms are also influential in connecting meaning throughout codes. By way of summary, all codes included introductions that frame the documents as statements of corporate ethics or values. An example of such a statement from the introduction to the Pharmaceuticals One code is: "The communication of this code is part of our ongoing effort to ensure a workplace and workforce that are fully committed to honesty, fairness and integrity." Similar introductory statements are present in codes across industries, indicating that companies make a concerted effort to frame their documents as statements of organizational ethics and values. Many of the top 100 words represent ethical statements, as indicated by the first factors listed in Tables II and III, "Values and Principles." An interesting feature of these factors is

that they comprise different sets of terms, although the terms clearly factor around a set of guiding principles for organizations. For instance, a comparison of the tables reveals that the terms "ethics" and "ethical" appear in the first factor for post-SOX codes but not for pre-SOX codes.

Another indication of a focus on ethics is the factor labeled "Decision Factors" in both sets of codes. As with the Corporate Principles factor, different terms constitute this factor for the two sets of texts. However, they both include "personal" and "time," as well as many other terms that indicate situations where organization members might be faced with ethical decisions.

The "Stakeholder Relations" factor contains terms that indicate how influential references to various stakeholders are within these texts. In pre-SOX codes, this factor also includes the term "ethics;" however, in the post-SOX codes that term is not in this factor. Interestingly, "law" is in this factor for post-SOX codes, but that term fell out of the final solution for the pre-SOX codes. However, "legal" is in this factor for pre-SOX codes. There are several common words within these factors between the two sets of codes, as indicated in Tables II and III. The Stakeholder Relations factor illustrates the blurring of lines between "ethics" and "law." This factor includes terms representing both concepts, with a noticeable change in emphasis from ethics to law between the two time periods.

Several factors that emerged can be interpreted as having an emphasis on laws. Although the term "law" had a very significant mean influence value (0.05) across all codes, the actual term is not reflected in pre-SOX factors. Other law-related terms are, however, as indicated in the tables. For example, two pre-SOX factors, "Socio-Political Constraints" and "Regulatory Compliance" contain references to laws, regulations, and government. Similar post-SOX factors of "Compliance Contexts," "Compliance Procedures," and "Regulation Contexts" all contain legal terms that indicate an emphasis on law in the later codes.

The answers to Research Questions One and Two necessarily are linked. Factor analyses indicate that codes clearly merge around issues of both ethics and law, with some factors including aspects of both. The first factors identified in both solutions, and

TABLE II  
Pre-SOX code of ethics factors

Factor	Term	Factor Loading
Values and principles	Company	-0.420
	Business	0.623
	Good	0.875
	Action	0.514
	Conduct	0.706
	Appropriate	0.701
	Value	0.533
	Report	0.745
	Responsibility	0.774
	Management	0.751
	Environment	0.623
	Supervisor	0.899
	Integrity	0.790
	Responsible	0.948
	Procedure	0.883
	Manager	0.939
	Resource	0.855
	Safety	0.912
	Guide	0.954
Socio-political constraints	Activity	0.693
	Competition	0.866
	Political	0.915
	Economic	0.946
	Antitrust	0.867
	Job	0.570
	National	0.767
Decision factors	Obligation	0.917
	Employee	0.492
	Code	0.616
	Payment	0.666
	Personal	-0.547
	Officer	0.808
	Foreign	0.754
	Situation	-0.495
	Time	-0.559
	Violation	0.721
	United States	0.804
	Right	-0.440
	Applicable	0.750
	Data	0.659
Business practices	Purpose	0.646
	Financial	0.609
	Practice	0.437
	Ethical	0.849
	Communication	0.591

TABLE II  
(Continued)

Factor	Term	Factor Loading
Stakeholder relations	Commitment	0.663
	Transaction	0.914
	Entertainment	0.644
	Social	0.945
	Asset	0.964
	Customer	0.743
	Product	0.749
	Supplier	0.774
	Standard	0.569
	Ethics	0.422
	Corporation	0.463
	Employment	-0.472
	Legal	0.611
	Sexual	-0.612
Regulatory compliance	Fair	0.527
	Condition	-0.521
	Price	0.446
	Export	0.443
	Government	0.578
	Compliance	0.618
	Security	0.724
	Use	0.437
	Regulation	0.634
	Federal	0.611
Corporate resources	International	0.695
	Basic	-0.474
	Industry	-0.471
	Individual	0.456
	Record	0.765
	Confidential	0.685
	Concern	0.425
	Question	0.631
	Representative	0.632
	Person	0.622
Compliance contexts	Information	0.595
	Service	0.456
	Gift	0.538
	Material	0.695
	Public	0.758
	Environmental	0.815
	Local	0.553

*Note.* Top influential words removed from final factor solution – interest, country, U.S., guideline, sale, director, control, corporate, work, party, policy, basis, decision, and law.



TABLE III  
Post-SOX code of ethics factors

Factor	Term	Factor loading
Values and principles	Action	0.571
	Financial	-0.466
	Compliance	0.503
	Standard	0.868
	Value	0.728
	Ethics	0.847
	Ethical	0.460
	Environment	0.460
	Supervisor	0.521
	Concern	0.764
	Right	0.585
	Commitment	0.569
	Obligation	0.644
	Basic	0.913
	Industry	0.740
Stakeholder relations	Law	0.562
	Customer	0.679
	Supplier	0.539
	Appropriate	0.593
	Fair	0.560
	Question	0.699
	Entertainment	0.444
	Price	0.524
	Data	0.479
	Policy	0.589
	US	0.601
	Control	0.786
Corporate resources	Code	0.405
	Security	0.510
	Management	-0.601
	Officer	0.540
	Economic	-0.488
	Environmental	-0.592
	Communication	-0.484
	Resource	-0.591
	National	-0.584
	International	-0.624
	Social	-0.659
	Purpose	0.564
	Interest	0.542
	Sale	0.747
	Director	0.561
Compliance contexts	Company	-0.708
	Activity	0.667
	Gift	0.629
	Responsibility	0.766

TABLE III  
(Continued)

Factor	Term	Factor loading
Business practices	Legal	0.573
	Regulation	0.511
	Foreign	0.434
	Integrity	0.527
	Job	0.522
	Employee	-0.458
	Information	-0.536
	Product	0.617
	Practice	-0.681
	Report	-0.734
	Confidential	-0.785
	Condition	-0.699
	Local	0.561
	Asset	-0.568
	Country	0.640
Compliance procedures	Basis	0.591
	Business	0.507
	Good	0.585
	Government	-0.534
	Conduct	0.527
	Record	0.478
	Federal	-0.694
	Procedure	-0.441
	United States	-0.738
	Manager	0.522
	Applicable	-0.691
Decision factors	Competition	0.680
	Personal	0.519
	Material	0.636
	Use	0.427
	Time	0.665
	Responsible	-0.478
	Transaction	0.610
	Party	0.553
	Decision	0.549
Regulation contexts	Service	0.450
	Individual	0.575
	Payment	0.572
	Corporation	0.741
	Political	0.565
	Violation	0.713
	Export	0.819

*Note.* Top influential words removed from final factor solution – safety, guideline, sexual, antitrust, representative, guide, corporate, situation, public, employment, and person.

therefore accounting for the greatest amount of variance, are those that focus on guiding corporate values and principles. This indicates a clear emphasis on ethics in these texts. However, several factors after the initial category blend both ethical and legal terms, as indicated in Tables II and III. Factors that include emphases on regulations, compliance, laws, and government indicate that these codes indeed are written to convey relevant laws and regulations to organization members.

An analysis of the influence values for terms that convey ethical and legal emphases further illustrates the co-influence of ethics and law in these texts. There are 11 terms with significant influence values (above 0.01) that specifically refer to an ethical emphasis: good (0.02), standard (0.01), appropriate (0.01), value (0.01), ethics (0.01), responsibility (0.01), ethical (0.01), integrity (0.01), responsible (0.01), right (0.01), and fair (0.01). Seven terms with high or very high influence values specifically refer to a legal emphasis: law (0.05), policy (0.03), code (0.02), government (0.01), U.S. (0.01), legal (0.01), and regulation (0.01). Clearly, many terms indicate an ethical emphasis, although three of the terms that indicate a legal emphasis have higher influence values within the texts. One would expect to see the centrality of “policy” and “code,” since those words are often included in the title of the documents, with corresponding references throughout the texts. “Law,” in particular, seems to be quite influential in connecting meaning throughout these codes, with an influence value considered extremely significant (Crawdad Technologies, 2005).

#### *Forms of formal control*

The third research question addresses the extent to which codes reflect forms of formal organizational control. Tables II and III indicate that codes contain factors that reflect attempts to control everyday practices within organizations. Both sets of codes have a factor labeled “Business Practices,” which contains the word “practice” in both sets of codes. As with other factors, pre- and post-SOX codes have different terms that converge around this theme, although there is a clear emphasis on job-related

practices. For the pre-SOX texts, this factor also includes the term “ethical.” Both sets of codes also contain factors related to “Corporate Resources,” which contain terms that provide employees with resources with which to make ethical decisions and/or engage in ethical conduct. Additionally, factors identified above as having legal emphases also indicate emphases on formal control. In pre-SOX codes, the Regulatory Compliance factor includes the terms “compliance,” and “regulation,” among others. The Socio-Political factor includes such terms as “activity,” “job,” and “obligation,” which also indicate a theme of control of daily work activities. The post-SOX factor of Compliance Contexts includes control-related terms such as “activity,” “regulation,” and “job,” and the Compliance Procedures factor includes terms such as “conduct,” and “procedure.”

Influence values of control-related terms also indicate that codes convey attempts to formally control ongoing organizational practices. Eleven of the 100 most influential words across codes are control-related and have significant influence values: “activity” (0.02), “action” (0.02), “conduct” (0.02), “payment” (0.01), “practice” (0.01), “compliance” (0.01), “work” (0.01), “use” (0.01), “procedure” (0.01), “job” (0.01), and “transaction” (0.01). The high influence values of activity, action, and conduct indicate that these control-related terms connect meaning throughout the texts and provide evidence that these documents are written with an emphasis on formal control of everyday business practices. Furthermore, the control-related terms have influence values similar to ethics-related and law-related terms, indicating a somewhat equivalent emphasis on ethical principles, legal requirements, and everyday practices.

The answer to Research Question Three, then, is that these documents represent formal organizational control by emphasizing everyday work practices in juxtaposition with ethical principles and legal requirements. Tables II and III indicate that several factors reflect the convergence of ethical, legal, and control terms. The factor analyses and influence values support previous research that indicates that formal codes of ethics at least hold the potential for formal organizational control.

### *Impact of SOX*

To test Hypothesis One, pre- and post-SOX codes for each company were analyzed in terms of size and density of word networks. Figures 1 and 2 provide a visual depiction of pre- and post-SOX word networks for Transportation One. One set of networks is presented here as an illustration, in consideration of space. Each noun or noun phrase is a node in a network. Words in black boxes are terms with the highest significant influence values in the network (0.1 and above) and words in gray boxes have very significant influence values (0.05). All words represented in networks have influence values above 0.015 so that the networks displayed only include those terms that are influential at a significant level and are inter-connected throughout documents. Dark lines indicate strong connections between terms and weaker connections are represented with lighter lines. Pre-SOX code networks ranged in size from 183 to 1354 ( $M = 586.13$ ,  $SD = 287.33$ ) and densities (the number of connections among nodes compared to the number of possible connections) ranged from 0.026 to 0.608 ( $M = 0.014$ ,  $SD = 0.005$ ). Post-SOX networks ranged in size from 150 to 1028 ( $M = 682.04$ ,  $SD = 237.92$ ), with densities ranging from 0.009 to 0.101 ( $M = 0.019$ ,  $SD = 0.02$ ). Network density ranges from 0 to 1, with larger values indicating highly connected networks. Density values of these networks are quite low. *T*-tests were conducted to determine if there was a significant difference in size and density of pre- and post-SOX codes. There was no significant difference in number of nodes between the two time periods,  $t(44) = -1.23$ , n.s. Likewise, there was no significant difference in density between the two time periods,  $t(44) = -1.04$ , n.s. Because statistical tests such as *t*-tests rely upon larger sample sizes than this study includes, the non-significant findings could be explained by lack of statistical power. Therefore, further analyses were conducted to test Hypothesis One.

Content and structure of codes were further analyzed by examining resonance values between pre- and post-SOX codes. Resonance values can range from 0 to 1, with values above 0.6 considered strong (Crawdad Technologies, 2005). The pre- and post-SOX documents for Industry Two had extremely high resonance values when compared

with each other (0.90), indicating that the two documents are practically identical for this company. Four sets of company codes strongly resonated: Energy One (0.70), Consumer One (0.70), Consumer Three (0.67), and Defense One (0.60). These resonance values indicate that there were very few changes in structure or content in documents between the two time periods. The remaining 18 sets of codes had small or extremely small resonance values, indicating significant changes in the structure and content of their codes after the enactment of SOX.

Finally, the factor analysis indicates that documents from the two time periods are significantly different. No stable factor solution could be produced when using all 46 codes, yet stable solutions emerged when the codes were separated by time and analyzed in two groups. Although the factor solutions provided in Tables II and III are similar, the terms within factors are not similar enough to provide an overall solution of codes across time. For example, the term "law" did not strongly load onto any factor in the pre-SOX codes, yet it adequately loaded onto the Stakeholder Relations factor for the post-SOX codes. Furthermore, the terms "ethics" and "ethical" appear in the Business Practices and Stakeholder Relations factors in pre-SOX codes, but they appear in the first factor, Values and Principles, in post-SOX codes. An examination of the two factor solutions indicates that companies conveyed similar themes in codes before and after the enactment of SOX, but those themes are composed of different terms in the two time periods.

The above analyses indicate that Hypothesis One is partially supported. Although the size and density of word networks were not significantly different over time, the remaining analyses indicate significant differences for a majority of company codes between the two time periods. With the exception of five of the 23 companies, corporations included in this study made significant changes after the enactment of the SOX Act in their corporate codes of ethics. These changes are reflected in the lack of resonance between pre- and post-SOX codes for 18 of the companies. Furthermore, these changes are evident by differences in factors that emerged in codes for the two time periods. Post-SOX codes show a greater emphasis on law and compliance than pre-SOX codes, and the term "ethics" emerged as a

value/principle in the later codes but not the earlier codes.

### *Unique versus boilerplate issues*

To address Research Question Four, codes were examined for resonance values across industries. A similarity matrix was generated that identified resonance values for all codes. Other than the strong resonance values of pre- and post-SOX codes for some companies discussed above, codes were not identified as being significantly similar to each other. A cluster analysis was conducted to examine similarities across industries. Five clusters emerged, with the first four clusters each representing pre- and post-SOX codes of Industry Two, Energy One, Consumer One, and Consumer Three, as would be expected based on resonance values reported above. However, the fifth cluster contained the remaining 38 codes, with a cluster resonance value of 0.08. The weak resonance of this cluster indicates that these codes are dissimilar across industries as well as across companies within the same industry (in addition to the within-company differences noted above). Consumer One and Consumer Three are in the same industry, but codes of these companies converged into different clusters, indicating within-company but not within-industry similarities.

An analysis of the top 100 most influential words across codes supports the above findings. The top five most influential words across codes are evident

in the networks illustrated in Figures 1 and 2, and their mean influence values are listed here: “company” (0.36), “employee” (0.11), “business” (0.10), “information” (0.07), and “law” (0.05). Influence values for words drop dramatically after these top very influential words, indicating that these terms likely reflect boilerplate issues across industries. That is, codes across industries are strongly influenced by emphases on these terms. One might expect that “company” would be central, as this term was also substituted for company names during the analysis. Since all documents were created for use by employees, the centrality of “employee” is also logical. Likewise, “business” would be expected to link meaning throughout codes, as all organizations are for-profit corporations. However, the prevalence of “information” and “law” over ethical terms within these codes of ethics is interesting. Although this project includes documents from across ten diverse industries, all codes reflect an emphasis on information and law. Other significantly influential terms (influence values above 0.01) were identified above, but analyses indicate that such terms are not situated similarly in code networks. It is interesting that “company” and “business” appear in the Corporate Principles factor in pre-SOX codes but not in post-SOX codes.

To summarize, several boilerplate issues are commonly addressed in ethics codes across industries, such as the central placement of the company, a strong emphasis on employees and business, and the prominence of issues related to information and law.

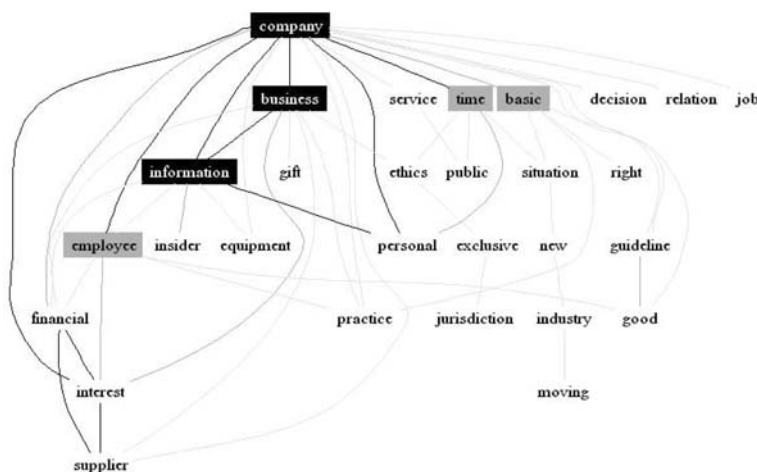


Figure 1. Pre-SOX work network for Transportation One.

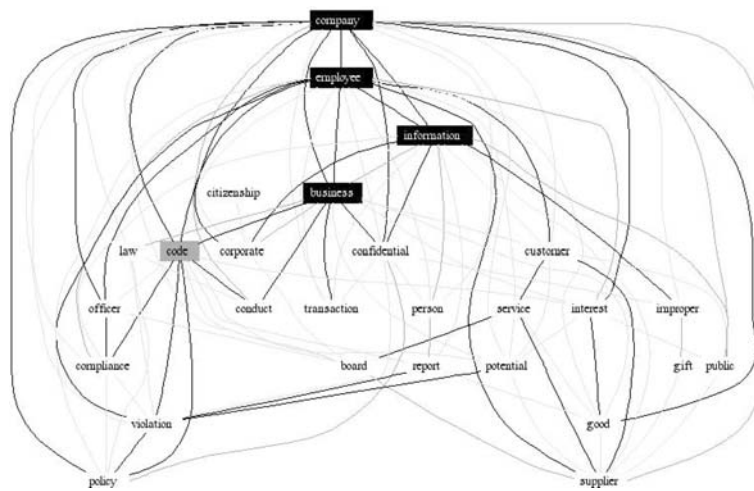


Figure 2. Post-SOX word network for Transportation One.

The resonance and cluster analyses do not indicate any other significant similarities in terms of content and structure within or across industries.

## Discussion

This study was conducted to analyze corporate codes of ethics as one form of organizational discourse, situated in particular organizational and social systems. Previous research indicates that codes are designed to be statements of ethics, statements of legal responsibilities, and forms of formal control within organizations. Results of this analysis support these conclusions. Influential terms within corporate codes clearly converged into factors that reflect themes of ethics, laws, and practices. However, a majority of code themes and terms that are influential in connecting meaning throughout the documents represent legal requirements and control of daily work practices. By taking both structure and content into account, results indicate that codes across industries and across time emphasize laws, regulations, and compliance procedures.

It was expected that the enactment of the SOX Act would affect the content and structure of codes for public companies that fall under the new regulations. Results indicate that a majority of the companies included in this study made significant changes to their codes after SOX went into effect. Although many of the significant terms are similar

across time periods, the texts are quite different (with a few exceptions) in the way content is conveyed. For instance, the terms “ethics,” “ethical,” and “compliance” converge around separate themes in pre-SOX codes but these terms converge around the Values and Principles theme in post-SOX codes. As forms of organizational discourse, these codes exemplify a social system that has a heightened awareness of ethics in the wake of widespread corporate misdeeds and governance requirements. Likewise, codes implemented post-SOX highlight the importance of compliance and law more prominently than do pre-SOX codes, with more compliance-related themes emerging in the later codes.

The structuring properties of codes can be examined in light of these results. Corporate codes of ethics are constrained and enabled by social structures of meaning, norms, and authority. Furthermore, codes of ethics recursively produce and reproduce those structures. The content and structure of these codes reflects this duality of structure. For example, the prevalence of terms such as “company,” “employee,” “business,” “information,” “law,” and “policy” indicate central themes of codes and are instantiations of social structures involving how verbiage in codes is to be interpreted, what norms are in place, and the role of law as authority in organizational behavior. At the same time, the significant influence and prevalence of these terms in codes reproduce those same structures,



reflecting a social system that places ethics within the realm of legal requirements and compliance regulations, promotes company interests, and values formal control of organizational behavior.

The strong influence of “information” across industries and time indicates social and organizational systems that place information centrally in policy and practice. Understood within the broader social system, this emphasis both reflects and reproduces a system that values information and practices that protect information. That is, even in codes of ethics we see evidence of an “information society.”

Codes in this study lacked unifying themes for ethical behavior. Word networks of codes in this study were loosely connected with very low-density values. Although “company” was central to most of them, low-density values indicate that codes do not contain unifying concepts that convey strong, consistent messages to organization members. As a form of organizational discourse, codes can be used for multiple purposes. However, the ability of codes to actually function as purposeful forms of organizational discourse regarding ethical issues might be hampered by a lack of unifying ethical themes that organization members can relate to and incorporate in everyday action.

These codes are situated in a particular social context, a context that includes numerous corporate scandals and increased legislation of corporate governance. Previous research has critiqued codes of ethics or conduct for not effectively influencing behavior, either because of vague language or because of exhaustive lists of compliance expectations. Perhaps a more fitting critique is that codes do not influence behavior because they are discursive instantiations of a system that does not encourage reflexivity on the part of the organization members in terms of ethical principles such as honesty, integrity, responsibility, and respect. Codes clearly highlight ethical concerns in the Values and Principles factors, yet a majority of themes and influential terms identified in these codes reflect a pre-occupation with procedures, regulations, and laws. In other words, while values, integrity, and ethics are highlighted up front in these documents, the majority of content focuses on following specific policies, regulations, laws, and practices. If designers of corporate codes of ethics want to encourage *ethical* behavior and decision-making in their organizations,

they should consider critically evaluating the structure and content of their codes for how *ethical principles* are represented as central themes that connect various sections of codes.

As with all textual analyses, this study is limited due to the lack of input from organization members. Results of the project would be enhanced if organization member perceptions of code structure and content were compared to CRA networks and word influence. This comparison would improve our understanding of how such formal organizational discourse is interpreted by intended audiences.

## Conclusion

This study builds upon previous research by analyzing codes of ethics as forms of organizational discourse. Codes are discursive instantiations of larger structures of meaning, norms, and authority, which at the same time reproduce those structures as they are designed, implemented, and interpreted within particular contexts. Results of this study may be used by scholars in organizational communication and management to further explore the relationships among ethics, business, and society. Analyses of other forms of organizational and public discourse regarding ethics, laws, and policies would contribute to a deeper understanding of the relationship between social structures and business ethics in modern society.

Results of this study have practical implications as well. The results of the study are informative for organizations that are in the midst of attempting cultural changes as a way of meeting the sentencing guidelines and prosecution standards post-SOX. The analysis of post-SOX codes establishes the level of change undertaken as organizations begin to transform their compliance programs with greater levels of detail. At least one basic portion of compliance has undergone significant change as a result of legislative and regulatory reforms.

Designers of corporate codes of ethics can look to the CRA method as a tool for analyzing their codes and other forms of organizational discourse. When decision makers are considering such organizational documents, they can use CRA networks to evaluate coherence of texts and influential concepts to assist them in revisions that will contribute to meeting

organizational goals. CRA networks of various forms of organizational discourse can be compared as well, providing information about how messages are consistent or inconsistent in different forms of organizational communication. Codes can be powerful forms of organizational discourse that reach a variety of stakeholders inside and outside corporations, but results of this study indicate that they are loosely connected documents that emphasize law and control more than they emphasize ethical principles. Practitioners can use this information to critically evaluate how codes reflect organizational values and goals and to consider the messages that are being conveyed in current codes.

Individuals in a variety of disciplines and industries have posed questions about business ethics and ethical business. Previous research provides some insight into the nature of codes of ethics in the larger scheme of organizational life, and this study builds upon that research by situating codes as one form of organizational discourse within social systems. It is clear from this study that corporations, particularly in the post-SOX time frame, are at least attempting to make ethics a central concern of everyday practices. What is also clear, however, is that corporate codes of ethics reflect a social system that seeks to promote ethical behavior by emphasizing legal requirements, regulatory procedures, and formal control of behavior. Continued investigations of formal and informal organizational discourse will provide further insight into how organizations and their members reconcile issues of ethics, laws, and practices.

## Note

<sup>1</sup> At the same time that the Sentencing Commission was revising its organizational guidelines, the U.S. Supreme Court issued a series of three opinions that have resulted in additional changes to the guidelines. In particular, the criminal convictions of Arthur Andersen and Frank Quattrone were reversed on issues regarding organizational culpability and appropriateness of sentence of an individual in an organization under investigation, respectively. See *United States v. Booker*, 125 S. Ct. 738, 756 (2005); *Blakely v. Washington*, 124 S. Ct. 2531, 2537 (2004); *Apprendi v. New Jersey*, 530 U.S. 466, 490 (2000). The effect of the cases

was additional changes in the organizational sentencing guidelines as well as more stringent proof requirements for both findings of guilty and imposition of sentences.

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